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Number of research papers published per teacher in the Journals as notified on UGC CARE list for the year 2019

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79	EXTRACTIVE TEXT SUMMARIZATION USING DEEP NATURAL LANGUAGE FUZZY PROCESSING	NEELIMA G., VEERAMANICKAM M.R.M., GORBACHEV S., KALE S.A.	COMPUTER SCIENCE ENGINEERING	INTERNATIONAL JOURNAL OF INNOVATIVE TECHNOLOGY AND EXPLORING ENGINEERING	2019	106

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86	ELECTRONIC GOVERNANCE OF HOUSING PRICE USING BOSTON DATASET IMPLEMENTING THROUGH DEEP LEARNING MECHANISM	LAXMI LYDIA E.	COMPUTER SCIENCE ENGINEERING	INTERNATIONAL JOURNAL OF RECENT TECHNOLOGY AND ENGINEERING	2019	113

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Analysis of breast cancer detection and classification in early stage from digital mammogram(Article)

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Abstract

Breast cancer nowadays acts as one of the most prevalent life threatening diseases among women. Early detection of breast cancer helps to improve the prognosis of cancer and in treatment planning. Mammography is the well-known technique for detection of breast cancer. Unnecessary biopsy is time-consuming as well as increases the anxiety of patient. Computer-Aided Diagnosis (CAD) is becoming an important tool for detection and characterization of cancer and also reduces the expenditure of unnecessary biopsy. CAD plays a crucial role as second reader for detection of breast cancer in clinical practice. This paper develops a CAD model capable of locating the suspicious region. The proposed method consists of four steps: Preprocessing, segmentation, feature extraction and classification. After segmentation of cancerous region, it is characterized by the hybrid extraction methods i.e. statistical features using first-order histogram and Gray Level Co-occurrence Matrix (GLCM) and Principal Component Analysis (PCA). Classification results of these two methods are compared and high accuracy obtained from GLCM according to the best angle choosing. Based on the classification result, normal and cancerous mammograms have been classified. © Rushing Water Publishers Ltd. 2019.

Author keywords

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The E-Commerce Sales Application of Brick

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Abstract: Batara is a company engaged in the production and sale of bricks. The high quality makes Batara Partner has many customers. The e-commerce application will greatly help Batara partner to add more customers. Where the purpose of this research itself is to build e-commerce applications that can provide information both for the company and the customers themselves. The methodology used to design this system was the RUP methodology, which is an iterative, architecture-centric, and used case driven software development approach. With the construction of this system can expand sales promotions and facilitate customers who are outside the city to make transactions easily.

Keywords: *E-Commerse, Batara Partner, RUP Methodology.*

1. INTRODUCTION

1.1 Background

Today, technological developments are progressing very rapidly and have a very important role, especially in the business world. Business people can make transactions on a basic online through internet media anytime and anywhere with people all over the world to save time and money.

Batara partner is a company engaged in the production and sale of bricks. However, with the system running, there are still many problems that occur both on the

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Web-Based Sales Information Systems in Cellular Shop

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Abstract: The promotion management and managing data that is done manually vulnerable to the weaknesses, such as errors and delays in sales, recording customer data, recording ordering data and storing data manually will be difficult when the data is needed. This condition is also experienced by Bastian cell.Therefore Ecommerce is a new paradigm in thebusiness world that uses online services. Many items can be offered through e-commerce such as selling mobile phones and mobile accessories online by using the web. With this system, the customers do not have to come to the store and can order it at any time without a time limit.Mobile Sales Information System and Web-based Mobile Accessories on Bastian Cell were designed by using Macromedia DreamWeaver, PHP, MySql, Xampp, and Photoshop. By designing this website online, it is expected to attract thecustomer interest and can be an effective sales medium.

Keywords: *Information System, Web, Bastian cell.*

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Implementation of 5-stage 32-bit microprocessor based without interlocked pipelining stages(Article)(Open Access)

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Abstract

Many processors have evolved in the past century; Out of which, Reduced Instruction set Computing (RISC) processors are well known for their ease of use. The next in line was the Microprocessor without Interlocked pipelining stages (MIPS) RISC based architecture. Less number of instructions, good amount of registers makes these processors a boon to use. Often times, MIPS processors loose the battle against their contenders due to lack of speed. Hence, there is a sheer necessity in designing a more robust system that has all the advantages of MIPS. Over time, there have been designs that could solve the power drawbacks and the area optimizations. However, performance criterion is mostly neglected. This paper emphasizes on the performance metric of pipelined 32-bit MIPS microprocessor. This processor supports RISC architecture and has been designed under Harvard architecture. Pipelining technique is used to solve the problem of low performance and achieve smaller execution times. The processor has four pipes. Pipes are the structures which store data. Pipes can be viewed as register banks. These pipes are generally used to store the intermediate data. The design contains various modules like ALU, Instruction fetch register, Execution unit, Memory, Program counter (PC). Verilog HDL has been used to implement the design. The software used is Xilinx ISE for design and ISIM simulator has been used for simulation purposes. The applications of this MIPS microprocessor are abundant. MIPS microprocessor can be used to carry out the fundamental tasks and an application specific core/IP/processor can be designed and combined with MIPS. This facilitates in meeting the goals of high performance, lower time-to-market and cost-effectiveness. Some application specific uses can be for music systems, PDA, Image processing etc. © BEIESP.

Author keywords

ISIM simulator | MIPS | Pipeline | RISC architecture | Verilog HDL.

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Document details - Effect of hub radius on rotational stability of functionally graded timoshenko beams

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Effect of hub radius on rotational stability of functionally graded timoshenko beams(Article)(Open Access)

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Abstract

This work is concerned to examine the rotational stability of functionally graded cantilever Timoshenko beams. Power law with various indices as well as exponential law were used to find out the effect of hub radius parameter on the stability of both functionally graded ordinary (FGO) beam. Floquet's theory was used to establish the stability boundaries. The governing equation of motion was followed by Hamilton's principle and solved by Finite element method. Dependence of Bulk modulus on thickness of beam was studied using both power law and exponential distribution. The influence of hub radius parameter was found to be enhancing the stability of FGO beams. It has further been confirmed that the effect of hub radius with exponential distribution of constituent phases renders better stability compared to power law distribution of the phases in the functionally graded material(FGM). ©BEIESP.

Author keywords

Exponential law | FGO beam | Hub radius | Power law | Stability

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Document details - Zr-substituted cobalt oxide nanoparticles: structural, magnetic and electrical properties

Journal of Materials Science: Materials in Electronics

Volume 30, Issue 22, 1 November 2019, Pages 20088-20098

Zr-substituted cobalt oxide nanoparticles: structural, magnetic and electrical properties(Article)

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Abstract

In the present communication, the effect of Zr substitutions in cobalt oxide ($Zr_xCo_{3-x}O_4$, where x = 0.01, 0.05, 0.1, 0.3 and 0.5) nanoparticles over their structural, magnetic and electric properties have been investigated. The nanoparticles were produced by single step microwave refluxing method. The crystallite size was found to be diminishing with increased Zr concentration. All the samples displayed weak ferromagnetic behavior. The continuous decrease of M_S value of Co_3O_4 nanoparticles was noticed upon an increase in the Zr substitutions. AC conductivity and dielectric measurements were carried out in the frequency ranging from 10 kHz to 20 MHz. The samples with the highest zirconium concentration, i.e. x = 0.5 have shown relatively moderate conduction as well as dielectric properties.

Indexed keywords

Engineering controlled terms: Crystallite size | Dielectric properties | Nanomagnetics | Nanoparticles | Zirconium compounds

Engineering uncontrolled terms: Ac Conductivity | Cobalt oxide nanoparticles | Dielectric measurements | Ferromagnetic behaviors | Frequency ranging | Magnetic and electric properties | Magnetic and electrical properties | Microwave refluxing

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Prasad, N.K.; Department of Metallurgical Engineering, Indian Institute of Technology (BHU), Varanasi, India;

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Teber, A. , Sarac, M.F.
Electrical, Magnetic, Microstructural, and Characteristic Properties of Zirconium-Substituted Co0.5 Ni0.5 Zrx Fe2– x O4 Spinel Ferrite Nanostructures
(2023) Arabian Journal for Science and Engineering

Reena, R.S. , Aslinjensipriya, A. , Infantiya, S.G.
Deciphering the role of pristine and Ni ions substituted Co3O4 nanoparticles with altered structural, magnetic and dielectric traits towards elevated photosensing and photocatalytic activity
(2023) International Journal of Environmental Analytical Chemistry

Mayakannan, M. , Gopinath, S. , Vetrivel, S.
Structural, morphological, optical properties of Zr- doped Co3O4 nanoparticles
(2022) Particulate Science and Technology

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Document details - Superparamagnetism in Bi_{0.95}Mn_{0.05}FeO₃ – Ni_{0.5}Zn_{0.5}Fe₂O₄s... multiferroic nanocomposites

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Superparamagnetism in $Bi_{0.95}Mn_{0.05}FeO_3 – Ni_{0.5}Zn_{0.5}Fe_2O_4$ multiferroic nanocomposites(Article)

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Abstract

Multiferroic nanocomposites of $x.Bi_{0.95}Mn_{0.05}FeO_3 + (1-x).Ni_{0.5}Zn_{0.5}Fe_2O_4$, for x values of 0, 0.2, 0.4, 0.5, 0.6, 0.8 and 1, have been fabricated using sol-gel autocombustion and solid state methods. Structural and microstructural studies reveal the formation of parent phases of perovskite and spinel, while ensuring proper mixing of two phases by showing clear grain growth in the composites, respectively. Magnetic (M-H loop) measurements show that there is an enhanced magnetic order in the nanocomposites. Besides, the investigated nanocomposite materials exhibit superparamagnetic behaviour with small coercivities in the order of 3–29 Oe in all the samples. This may be due to strong influence of both the phases on one another to modify the anti-ferro magnetic (AFM) order in manganese doped bismuth ferrite. The observed magnetic behaviour was attributed to nanoparticle nature of the composites. In order to ensure the same, crystallite sizes were estimated using Langevin distribution function as well as X-ray diffractometry (XRD), which lie in the range between 28.51 and 55.43 nm, and the obtained results show a good agreement between them. The interpretations of these results are obviously evolved from the structural contributions for ferroelectricity, antiferromagnetic spin spiral cycloid structure around the FeO_6 octahedra, weak ferrimagnetic exchange interactions between the cations located at A- and B-sites and the possible interplay between different ferroic orders. © 2019 Elsevier B.V.

Author keywords

Crystallite size | Langevin distribution | Magnetic moment | Multiferroics | Nanocomposites | Superparamagnetism

Indexed keywords

Engineering controlled terms: Bismuth compounds | Crystallite size | Distribution functions | Grain growth | Magnetic moments | Manganese compounds | Nanocomposites | Nanomagnetics | Nickel compounds | Perovskite | Sol-gels | Superparamagnetism | X ray diffraction analysis | Zinc compounds

Engineering uncontrolled terms: Antiferromagnetic spins | Bismuth ferrites | Langevin distributions | Magnetic behaviour | Multiferroics | Sol-gel auto-combustion | Solid state method | Superparamagnetics

Engineering main heading: Iron compounds

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Article

An PSO-SFLA Based Ensemble Link Weighted Triple Quality Algorithm to Improve the Performance of Clustering over Categorical Data Clustering

October 2019

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International Journal of Engineering and Advanced Technology (IJEAT)
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Assessment of Wavelets Transform based Processing of Features of Forearm Muscle Signals for Prosthesis

M. Karuna, Sitaramanjaneya Reddy Guntur

Abstract- People who have lost forearm are suffer from hand mobility limitations due to trauma, disease or defect, Prosthesis arm help those people to do their daily actions. Researchers have been focused on developing artificial hand. In this regard, better processing of features of electromyographic (EMG) signal has a significant role from residual forearm muscle. To achieve this, Wavelet Transform (WT) technique has been applied because it is acceptable with the characteristics of EMG as a nonstationary signal. Results have shown that db5 wavelet decomposition performs best denoising at fifth level in other wavelets comparison. Furthermore, the ratio of Signal to Noise (S/N) and the error of percentage (PE) are calculated to evaluate the eminence and the usefulness features of EMG.

Key Words: EMG, WT, Decomposition, Denoising, feature extraction, feature selection.

I. INTRODUCTION

EMG signal detected at the surface of the skin which determines the electrical current produced in fibres of muscle [1]. The main application of this research is to identify the various patterns of sEMG signal for controlling the prosthesis [2-3].

Noises are created in the EMG signal due to various sources such as the hardware for amplification, digital processing for analog to digital conversion and cables used for acquiring data as well as activity of motors at distance from detection area. Preprocessing of signal from muscle fibres acts an important role in realm of clinical and rehabilitation applications. Some methods to remove noise from the detected EMG signal have been emphasized by Cram et al. [4]. The major drawback of identifying the intentional movement is the inadequate consequences under the environment of presented noises, particularly when the random noise frequency characteristics. According to the literary sources, many researchers have suggested noise removal techniques from EMG signals by using digital filters [5].

Even though above filters can decrease the considerable noise, and also traces distortion in the EMG signal [6]. In recent research, the denoising WT theory is found very efficient in processing of denoise [7-10].

Therefore, signal decomposition, noise reduction from sEMG signal [11] using wavelets presented as shown in Fig.1. Moreover, an important requirement is to differentiate various EMG signals accurately for controlling prosthesis is effective extraction of features.

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The techniques based on the extraction of feature have been effectively used for recognising different forearm muscle movements [12].

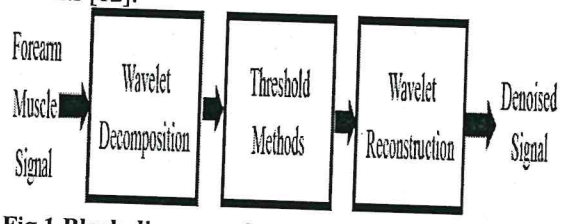

Fig.1 Block diagram of wavelet denoising process

In the present work were examined the effectiveness of denoising forearm muscle signals, with Stationary wavelet transform (SWT) and db5 at fifth level of decomposition of EMG signal by calculating the S/N values of the noise eliminated signals and Percentage Error (PE). In addition to that, a relative study was realized to picturize the efficiency of EMG features. The robustness of this approach depends on the better feature extraction.

II. METHODOLOGY

The four healthy male subjects were instructed to perform the wrist actions such as extension, flexion, pronation and supination. EMG detector used to collect EMG signals of forearm muscles, in which outputs for the signals, gain was adjusted to 60dB and bandwidth is limited to 20 Hz-500Hz with the help of main amplifier and filter.The sEMG signal was recorded by placing surface electrodes (Ag-AgCl) on the right forearm muscles such as flexor carpi radialis and extensor carpi radialis longus of a subject [13]. The equal distance of 2 cm is maintained between electrodes. One electrode is placed on the center of the muscle structure and other one is at the end. The third electrode was positioned on parts having no muscles on being bony. For each motion four datasets were collected. Recognitions of intentional movement through EMG signals have traced out markable results, since the last half a century period as a solution for dexterous prosthetic control to perform multifunctions.

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Article

Execution of Natural Random Forest Machine Learning Techniques on Multi Spectral Image Compression

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Show all 6 authors

Citations (15) References (24)

Abstract

Multispectral Image Compression (MSIC) is an ebb and flow commanding test theme in explore consideration. Satellite correspondences, radars, detecting territory advances are constantly observing the earth, space and condition. In the aggressive world sources, for example, control, stockpiling, additionally performing capability remain limitedly accessible. In this procedure multi otherworldly picture handling strategies and techniques prerequisite is vital like geological data, optical data, calamity checking water wells etc. So, Image quality pressure, assaults, histogram levelling, AI factual parameters should be improving. Existing strategies essentially dependent on grid-based demonstrating, DWT systems division techniques, low position tensor deterioration, however they are neglect to find the distinctive strip segments. Like, AI additionally didn't take care of the issues of otherworldly excess, sub groups evacuating models. In this exploration we are utilizing characteristic irregular woods AI model (NRFML). This model pack and train the multi phantom picture, at conclusive looking at the parameters like MSE, PSNR, NCC, SSIM.

Document details - A dual security scheme based on DWT for personnel authentication

International Journal of Engineering and Advanced Technology

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A dual security scheme based on DWT for personnel authentication(Article) (Open Access)

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Abstract

A biometric identification system that audits the presence of a person using real or behavioral features is safer than passwords and number systems. Present applications are mostly recognize an individual using the single modal biometric system. However, a single characteristic sometimes fails to authenticate accurately. Multimodal biometric technologies solve the problems that exist in the single biometric systems. It is very hard to identify images with low lighting environments using facial recognition system. By utilizing fingerprint recognition, this issue can be better addressed. This paper presents a dual personnel authentication system that incorporates face and fingerprint to improve security. For face identification, the Discrete Wavelet Transform (DWT) algorithm is used to acquire features from the face and fingerprint pictures. The technique used to integrate fingerprint and face is decision level fusion. By adding fingerprint recognition to the scheme, the proposed algorithm decreases the false rejection rate (FRR) in the face and fingerprint recognition and hence increases the accuracy of the authentication. © BEIESP.

Author keywords

Biometric system | Discrete wavelet transform (DWT) | Eigen values | Eigenfaces | Face recognition | False rejection rate (FRR) | Fingerprint recognition | Fusion

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Sivananthamaitrey, P.; Electronics and Communication Engineering, Vishnu Institute of Technology, Bhimavaram, India

Document details - Optoelectronic properties of hybrid diodes based on vanadyl- phthalocyanine and zinc oxide nanorods thin films

Optical Materials

Volume 96, October 2019, Article number 109348

Optoelectronic properties of hybrid diodes based on vanadyl- phthalocyanine and zinc oxide nanorods thin films(Article)

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Abstract

Herein, we report the optoelectronic properties of hybrid diodes fabricated using vanadyl phthalocyanine (VOPc) and zinc oxide nanorods (ZNR) with the configuration: ITO/ZNR/VOPc/MoO_3/Al. Vertically aligned ZnO nanorods were grown using a simple aqueous solution (AS) method as a function of growth temperature. The correlation between the morphology of ZNR films and the optoelectronic properties of the ZNR/VOPc hybrid devices was investigated. The results show that the hybrid diodes with ZNR films grown at 120 °C offer the best optoelectronic properties. The higher photocurrent responsivity, $R_{ph,}$ (16.28 A/W) was achieved for devices with ZNR films grown at 120 °C. This value is 25 times higher than the R_{ph} value obtained for the devices made with ZnO nanoparticle films that were reported earlier. © 2019

Author keywords

Charge transport | Hybrid photodiodes | Impedance spectroscopy | Mobility | Responsivity

Indexed keywords

Engineering controlled terms: Aluminum compounds | Carrier mobility | Charge transfer | Diodes | II-VI semiconductors | Morphology | Nanorods | Thin films | Vanadium compounds | Zinc oxide | ZnO nanoparticles

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Document details - Multifaceted watermarking of medical images using SWT and SVD

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Multifaceted watermarking of medical images using SWT and SVD(Article)

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Abstract

Radiological image transmission over network is extensively increased. A slight alteration of the image may lead to faulty diagnosis. To better address this problem, a high capacity watermarking technique with tamper localization capability for various medical image modalities is proposed. Two equal sized watermarks as that of cover image has been embedded. Stationary Wavelet Transform (SWT) followed by Singular Value Decomposition (SVD) is employed to embed patient data as one of the watermarks for ownership identification. Tamper detection and localization is accomplished by embedding a fragile watermark using Least Significant Bit (LSB) replacement method. Experimental results prove that this approach attains excellent robustness and significantly better imperceptibility while precisely locating the invisible tampers in the image. This approach is evaluated against state of the art techniques and verified to be outperformed. This scheme not only focuses on robustness and imperceptibility but also maximizes embedding capacity in addition to tamper localization that constitutes this method a multifaceted watermarking scheme. © 2019 SERSC.

Author keywords

LSB Replacement | Medical image watermarking | Singular value decomposition | Stationary wavelet transform

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Evaluation of Big Data Analytics in Medical Science

Iwan Kurniawan Subagja, Nurhadifah Amaliyah, Ulpen Hiermy, Budi Tri Rahardjo, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen

Abstract: In medical science the concept of big data is very important because in the diseases prevention outcome prediction of co-morbidities, mortality and it save the cost of medical treatment it can used. In the evolution of healthcare research and practices the continuously growing field of analytics of big data has play a pivotal role. To analyze, accumulate, assimilate and manage huge volume of structured, disparate and unstructured data that produced by recent system of healthcare, it provide the tools. To inform providers about most effective and efficient treatment pathways and to revamp the health care delivery process the big data of healthcare has the potential. Both insurers and health care providers are incenting by Value-based purchasing programs. To estimate the efficiency and quality of care to find the new ways to leverage health care data defined the insures. During routine health care in data collection current advances in the form of EHR (Electronic Health Records), for clinical application in biological discoveries medical device data have created major opportunities.

Keywords : Big data, healthcare, clinical application, medical treatment.

I. INTRODUCTION

It can referred that big data is a field that that treats approaches to investigate, methodically separate data from, or generally manage informational indexes that are too huge or complex to be managed by customary information preparing application programming. For certain advanced data analytics methods, predictive analytics and user behavior analytics the term big data used. These methods from data extract the value and sometimes to a specific size of data set [1].

The big data concept is not new although anyway the manner in which it is characterized is always showing signs of change. Different endeavors at characterizing big data basically portray it as an accumulation of information components whose type, speed, size and complexity need one to adopt, invent and seek new software mechanisms and hardware so as to effectively visualize, store and analyze the data [2-4].

From volume-based business to value-based business the current healthcare industries are moving. To be more efficient and productive from nurses and doctors it requires an overwork. In many nations several healthcare information systems are proposed to obtain the best care and services for the patients. On using of large amounts and electronic health records (EHRs) of complex biomedical data these models for preventive medicine, personalized, predictive and participatory medicine are based [5].

For big data in industry of healthcare several sources incorporate medical examinations results, hospital records, devices and patients medical records that are a piece of internet of things. Relevant to public healthcare the biomedical research additionally produces a significant segment of big data. In order to determine significant data this data needs proper analysis and management [6].

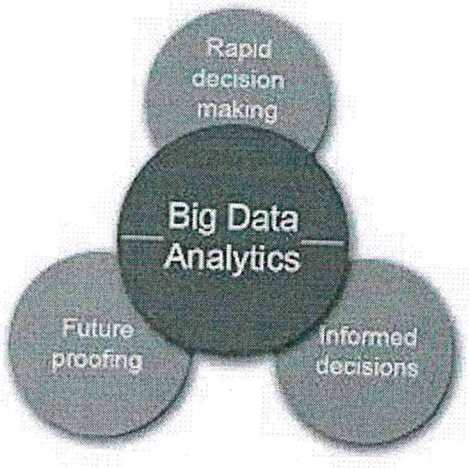

Figure 1: Big Data Analytics

II. BIG DATA ANALYTICS IN MEDICAL SCIENCE

To information revolution and embrace digitization many organizations deliberate and conscious deliberate. However the job of big data in medication appears to be nearly to urge associations to wind up included.

For better treat disease and diagnose in medical the role of big data is one where it can construct better predictive models and health profiles around individual patients. In the pharmaceutical industry and medicine the main limitations is the comprehension of the science of disease. Big data becomes an integral factor

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Medical Information Retrieval for Healthcare: The Challenges

Irmawati S., Muh. Hidayat Cakrawijaya, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen

Abstract: The Medical Information Retrieval (MIR) refers to collect datasets from research agencies, institutes, medical clinical or data from research organizations like hospitals etc and use this information for further experiments for the betterment to get new solutions for the complex health diseases. The purpose of such kind of information retrieval system is to improve the healthcare system, diagnose the disease in less time and try to provide better alternate treatment solutions to the patients. Today the internet has connected the whole world and it is very easy for the medical research organizations to exchange the medical data and exchange the test results. They are not required to do the same experiments again which has already done in any of the country. The research or healthcare research organizations can perform the next level of experiments with the help of collected medical information from the researchers of one country. Even the countries can share the medical information and they can combine do the medical experiments with the retrieved information. However in this research it is tried to study the importance of Medical Information Retrieval and its methods and it is also studied how it is useful in Healthcare. In this study it is noted that there are several challenges the research have to face. Because the different countries have different languages. The medical terms are different in different countries so that sometimes it is difficult to synchronies the retrieved information from different sources. One biggest challenge is that it is not possible to get the accuracy of the data.

Keywords : Medical Information, Information Retrieval Methods (IRM), Information for healthcare system.

I. INTRODUCTION

The one of the biggest issue with Medical Information Retrieval system for the researchers and the medical institutes is that they should have the proper knowledge to understand the data and should have capabilities to convert the data according to the information required for healthcare system. The Medical information retrieval is the process to improve the healthcare and get the required helpful information from the available explosive amount of available data for healthcare domain. The Medical Information Retrieval (MIR) alludes to gather datasets from research offices, establishments, therapeutic clinical or information from research associations like emergency clinics and so on and utilize this data for further tests for the improvement to get new answers for the intricate wellbeing maladies.

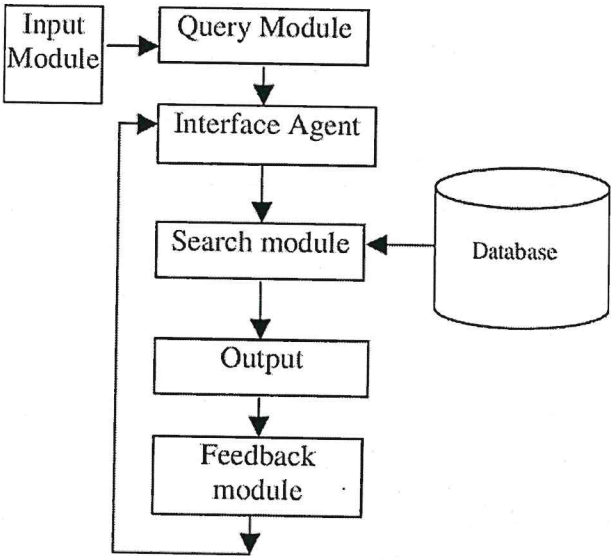

Figure 1. Medical Information Retrieval System Basis Model which acquired Agents, Clinical Data or Institutions Data and Stored in a Centralized Database.

The motivation behind such sort of data recovery framework is to improve the human services framework, analyze the infection in less time and attempt to give better substitute treatment answers for the patients. Today the web has associated the entire world and it is exceptionally simple for the therapeutic research associations to trade the medicinal information and trade the test outcomes. They are not required to do similar trials again which has just done in any of the nation. The examination or medicinal services look into associations can play out the following degree of trials with the assistance of gathered therapeutic data from the scientists of one nation. Indeed, even the nations can share the medicinal data and they can join do the therapeutic investigations with the recovered data. Anyway in this exploration it is attempted to think about the significance of Medical Information The patient data information retrieval example is shown in the figure below:

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Network Monitoring Tools and Techniques uses in the Network Traffic Management System

Wahyudin Rahman, Phong Thanh Nguyen, Muhamad Rusliyadi, E. Laxmi Lydia, K. Shankar

Abstract: Network Monitoring Tools, Vendors and software's domain is huge, without a doubt. For server IT monitoring and in an ever changing marketplace new utilities, tools and software are being invented pretty much consistently. We have experienced the same number of devices as we could discover and gathered together the best ones in simple to peruse position and featured their fundamental qualities and why it think they are in the top class of instruments to use in IT framework and business.

Keywords: Network Monitoring, tools, software, business, IT framework.

I. INTRODUCTION

For failing components or slow network monitoring is the utilization of a framework that continually screens a computer network. In case of outages or other problem it notifies the network administrator through SMS, email or other alerts. Monitoring of Network is the part of network management.

When problem is arrived than fix that network problem is not enough. Before occurring the problem the IT managers head off potential issues and proactively watch systems. This work measure performance, utilization and availability and also observes the traffic of network. Following features should offers by useful monitoring tools:

1. For sending alerts use a machine

2. In real time to detect outages have the ability

3. Integrations For network hardware integration, like NetFlow monitoring and SNMP

4. Network monitoring in real time

Top Network Monitoring Tools and Techniques

Some network monitoring tools and techniques are described as follows:

1. Solarwinds Network Performance Monitor

SolarWinds Network Performance Monitor is anything but difficult to arrangement and can be prepared in the blink of an eye. The apparatus consequently finds organize gadgets and conveys inside 60 minutes. Its basic way to deal with regulate a whole system makes it one of the least demanding to utilize and most natural UIs.

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Ontology Based Text Mining Framework for Vulnerability Assessment in Health and Social Care

Jamilah Nasution, Phong Thanh Nguyen, Muhamad Rusliyadi, E. Laxmi Lydia, K. Shankar

Abstract: The measure of advanced data that is made and utilized is gradually growing alongside the development of refined equipment and programming. What's more, true information arrive in a decent variety of structures and can be massively cumbersome. This has increased the requirement for great procedures that can find and uncover engaging realities and valuable data from these information. Text Mining (TM), which is an intricate procedure; has been effectively utilized for this reason. Text mining on the other hand alluded to as content data mining, pretty much identical to content examination, can be characterized as the way toward extricating great data from content. Text mining includes the way toward organizing the information, determining designs inside the organized information and in conclusion translation and disclosure of the yield. This paper gives overview on Text mining. Toward the end, this paper presents ontology system to adapt up to extreme social media textual data. We depict vulnerability assessment model intended to help patient management in health and social care. Such a framework isn't intended to supplant existing health and social assessment models but instead to supplement them by giving an all-encompassing image of the vulnerabilities looked by a given patient. Actually, it ought to be viewed as a screening tools for health and social care workers. One key part of the demonstrating structure is the capacity to give customized at this point multi-dimensional assessments of risk of dependent on fragmented data about the patient status, similar to the case in screening situations.

Keywords: Ontology, Information Retrieval, Text mining etc.

I. INTRODUCTION

Text mining, some of the time denoted to as text data mining, about equal to text analytics, refers to the way toward removing excellent data from text. Text mining as a rule includes the way toward organizing the input text inferring designs inside the organized information and to end with translation and thought of the yield. The word 'high - quality' in text mining by and large alludes to a mix of uniqueness, essentialness and intriguing quality. Text mining is huge zone in contrast with data recovery. Text mining forms as a rule incorporate report characterization, grouping the record, building metaphysics, assessment investigation, rundown, Information extraction and so on. On the opposite side, IR manages creeping, parsing and ordering and recovering records. With an iterative methodology, an association can utilize content examination to grow knowledge into the substance explicit qualities, for example, viewpoint, quality and criticalness of the information. Text mining can be characterized as the way toward getting data from text sources.

The amount of textual data is consistently developing. Regular data mining strategies are not adequate to assess unstructured data. So there is have to utilize some semantic methodologies. Text mining forms the unstructured information determines important data. What's more, along these lines, makes the data available to the different information mining methods, including statistical and AI.

II. ONTOLOGY FRAMEWORK

Figure demonstrates the diagrammatic perspective on our framework. There are two interfaces accessible in the framework. One for the client and another for the developer. Various modules of the structure are clarified as underneath:

- Database: All the information and data are taken care of in the database. The set away information is used to answer the user's question.
- Browser: Web Browser acts an interface among customer and Programmer. Customer can use OWL structure for addressing and designer can use SPARQL.
- OWL Ontology: In this part, rules are described and made. These principles portray unmistakable cosmology classes and interrelationships between them.
- Management Services: Different standards describe different classes and through classes we give administrations. Different sorts of administrations are open like Billing, Data Usage, and Authentication, etc.

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L2 Learners' Problems in Speaking English of Rural Background Engineering Students in Ap

Ganesh, D , Gomatam Mohana Charyulu , Syed Sadiq Hussain

ABSTRACT: In Indian education system, learning English language is a second language (L2) which is unavoidable and undividable apart from their mother tongue (L1). An intellectual, physical and emotional contribution is necessary to learn a second language successfully and to communicate a linguistic message. Especially, the rural area of engineering students used L1 (Telugu) as a way of communication tool in some of the engineering colleges as they are facing many challenges while speaking English as a second language (L2). The present study would investigate the causes, problems and difficulties faced by the rural area students who came to study engineering courses in VIIT (A) College in Visakhapatnam, AP. The researcher has used a questionnaire and semi-structured interviews for 40 students includeing 32 male and 8 female rural area students for data collection. The collected data analyzed statistically and graphically. In the data analysis, the results revealed the reasons for failure like due to less time to learn English in the classroom, inadequate encouragement from teachers, family and friends. It is also found that the Teaching of English language in bilingual method and late foundation of English medium studies in previous academics. This piece of writing also facilitates the researchers who aim to investigate similar problems in speaking skills for rural area engineering students. The study also presented some of the suggestions and recommendations to overcome the struggle for the language teachers and students.

KEYWORDS: Speaking skills problems, rural areas background, bilingual method, inadequate encouragement, late foundation in English medium, mass media assert

I. INTRODUCTION

Language is a weapon to communicate effectively in society. It is very difficult to consider a society without language. Language sharpens people's ideas, thoughts and controls their total day-to-day actions. The native language (L1) learns easily for native people, due to the favorable environment and by the great conscious of the language from the childhood stage. However, learning a second language (L2) require more conscious to acquire it and the exposure to the Second Language Acquisition (SLA). So many factors affect the process of learning a second language including attitude, self-confidence, motivation, classroom conditions, environment, family background, capable of student and availability of competent teachers. (Verghese, 2009)

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The students from the rural background even after their schooling and intermediate education they are unable to speak English language. According to geographical background L1 (Telugu) is used as a mode of communication by most of the rural students up to their intermediate level. But after entered into higher educational institute, teachers use English language to teach syllabus and also communicate with students in L2 (English). Though some of the students are studying English medium yet are not able to speak and write at least one sentence without grammatical errors. Students focus on English language only for marks and examination point of view only, not to study to the improvement of their speaking skills. However, to improve or speak L2 (English) language students must require regular practice and patience inside and outside of the classroom. Here inside the class means teachers and students, outside of the class means family members, friends and the environment.

Here the research question is

1. Why don't the 10 years schooling and two years intermediate make students' mastery over the English language?
2. What are the factors that make a problem in speaking English as L2?
3. The hypothesis answers are
4. While the students were studying in schools and colleges, less priority has given to English language.
5. If the language teacher does not competent in L2 then bilingual method is adopted in English classroom, though the method helps only for slow learners.
6. If a student from a rural area does not understand teaching in English then the teacher starts L1 to explain the topic.

According to Dr. Kannan (2009, ESP World, para.5) "Our examination system makes the students rote memorization rather than testing their analytical and creative skills". The speaking abilities of the students are in a weak state.Not only the weak also bright students who scored high in English written examination in intermediate are not able to communicate properly in English language. Different causes may be responsible for this problem, which the present study has tried to point out.

In this view, the English teachers are unable to help them, as they have to finish the academic syllabus in the given period. The schools and intermediate colleges' examinations system does not focus on the English language learning environment. If the management ready to consider the teaching in English language then most of the students face difficulties to understand due to the late foundation in English medium studies. Maybe rural areas' family educational and financial

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Extended Optimization Procedures for Static List based Task Scheduling Algorithms for HeDCS

K. Vijaya Kumar, E. Laxmi Lydia, P. Amaranatha Reddy

Abstract--- No matter how powerful a single system is efficient at processing, there are still reasons to Control the power of multiple computational units. The Distributed computational system performs scheduling tasks achievedby the processors to minimize the execution time in any application.Despite the problem in determining NP-Complete the execution time in Scheduling isminimized.This paper identifies, a specific different algorithm Sorted Nodes in Leveled DAG Division (SNLDD)based on Task-Scheduling. The fundamental principle of this algorithm is to partition the data as a Directed Acyclic Graph (DAG) two stages and categorize each task of every stage in decreasing order depending upon the estimated size. Outcomes of the proposed algorithm are processed using correlative analysis and productive outcome with respect to HEFT with CPOP is implemented among existing algorithms. With respect to the comparative analysis of the outcomes, the performance of the suggested algorithm with SPOPimplementsimprovedexecution in the aspect of speedup, effectiveness, complexity, and excellence. Further, a new algorithmic strategy SPOP and CPOP has been developed and executed in the proposed SNLDD in HEFT.

Keywords--- Task Scheduling, Sorted Nodes in Leveled DAG Division, Superior Performance Optimization Procedure, Heterogeneous Earliest Finish Time, Critical Path on Processor.

I. INTRODUCTION

Multiprocessor system in the Distributed Computing system is a system with more processors residingapart. Every Individualprocessor has its private, confidentialmemory, allowingsecurity. DataTransmission is transferred through message passing between the processors. The processing elements interact with each and every processor in order to accomplish the common outcome. *Distributed Computing systems support* the following aspects:

- Providing efficiency in communication delay, balancing of load, distributed algorithms for huge messages.
- Providing flexibility in terms of modularity, scalability, portability, and interoperability.
- Computational Consistency that gives correct outputs irrespective of time at which the computation is finished for the identical input conditions.
- Ensuring robustness in certain circumstances of security violations and also in flexibility failures.

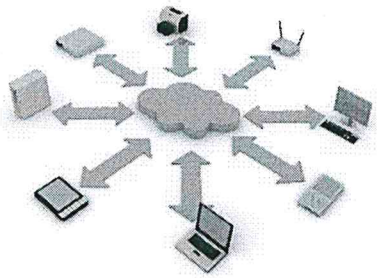

Figure 1: Distributed Computing Systems

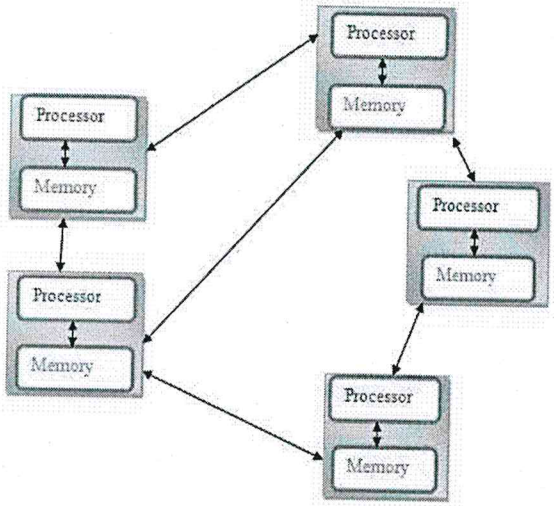

Figure 2: Sharing of results with different Processors

Task Scheduling

Task scheduling deals with the process of organizing tasks among processors and minimizesitslengthin scheduling, i.e, the time is taken to executeinevery task corresponds to the starting time ofthe initial task. Queries generated on the outcome is the selection of tasks to processors. Real-time task scheduling originallydeals withregulatingof order in which the different tasks are to be reserved up for implementation by the operating system. Every operating system depends on more than one task, schedules to prepare the schedule of application of different tasks it process to execute. Each task scheduler is identified by the scheduling algorithm it operated. A massive number of designed algorithms for scheduling, real-time tasks have been refined. Real-time scheduling

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Concept of Electronic Business: A Wider Range of Businesses Processes

Rahmi Rosita, M. Ruslianor Maika, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: *E-business (electronic business) is the conduct of business processes on the internet. These e-business processes include buying and selling products, supplies and services; servicing customers; processing payments; managing production control; collaborating with business partners; sharing information; running automated employee services; recruiting; and more.*

Keywords: *internet, electronic business, information sharing, managing product*

I. INTRODUCTION

For conducting the business use of internet, web, extranets, intranets or some combination of these elements refers to as Electronic business. It can say that Electronic business is similar as e-commerce but its work is beyond the simple sell or buy products and services online. Much wider range of business process is included in E-business like management of customer relationship, processing of electronic order and supply chain management. Therefore the process of E-business helps to companies for work more efficiently and effectively.

Figure 1: Electronic Business

II. LITERATURE REVIEW

Journals, for example, Harvard Business Review, Sloan Management Review, California Management Review, Business Horizons, Long Range Planning and the European Management Journal started to distribute articles on the business utilization of the Web, virtual commercial centers, e-retailing and B2B trade from around 1994.

In 1994 and 1005 Sviokla and Rayport, in 1996 Hagel, in 1997 Wurster and Evans exhibit what's going on and diverse about the Web and the open doors that it presents for organizations to advance in radical ways and to find new movement spaces.

In 1998 Ghosh, in 1999 Wurster and Evans, in 2000 Leteney and Chen, in 2001 Feeny, in 2001 Adner and Rangan considered reflection on how the Internet could be utilized to change focused systems, conceivably wrecking existing capabilities just as making new wellsprings of bit of leeway.

Features of Online Business

Features of Electronic business are given below:

1. Set up of E business is a very easy task
2. Risk of transaction
3. Flexible hours of business, employee can work according to his or her working time
4. No geographical boundaries are there
5. Less cost of marketing strategies
6. No personal interaction required
7. From anywhere, anyone can buy anything
8. From the government many online businesses get some kind of subsidies
9. As compare with traditional business much Cheaper
10. Seller and buyer connection not necessary
11. It takes time to deliver the product
12. Few integrity and security issues are there

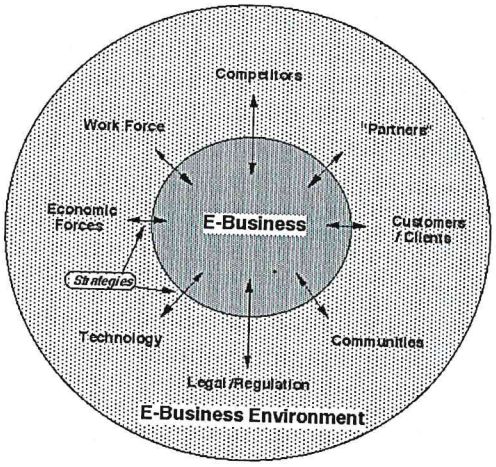

Figure 2: E business Strategies and Environment

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Role of Electronic Human Resources Management Systems in the Growth of Web Based Business

Mohd. Heikal, Eka Maya S.S. Ciptaningsih, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: *Activity of face to face human resource management is replacing with electronic human resource management (E-HRM) in many organizations. For creating operational and dynamic capabilities and on effectiveness of HRM contributes greatly the term E-HRM facilitates the functions of HRM. Within an organization it can consider that electronic human resource is the function of human resource that is focused with regulation, use and management of electronic processes and information. For web based business applications electronic human resource management plays an important role. As management is done through online is taking less resources and time.*

Keywords: *E-HRM, human resource management, organization, function, Web based.*

I. INTRODUCTION

With the continuous development of technology and science especially with the increment of usages of computer and internet it can see huge changes to our culture, economy and society. With the contribution of these approaches over the last few years in the field of human resource management a new technology developed that is known as electronic human resource management (E-HRM).

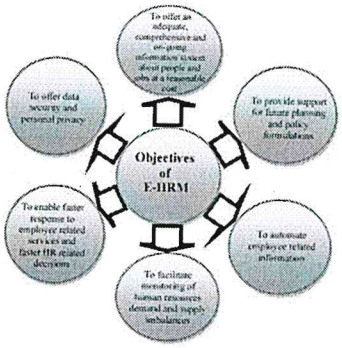

Figure 1: Objective of E-HRM

Electronic human resource is different from Human Resource Information System (HRIS) and E-HRM (Electronic Human Resource Management). In Electronic Human Resource Management by using web portal or intranet of organization the employees and management can access services and information related to human resource. Software of enterprise resource planning is consider as Human Resource Information System that use for streamlines functions of human resource like payroll.

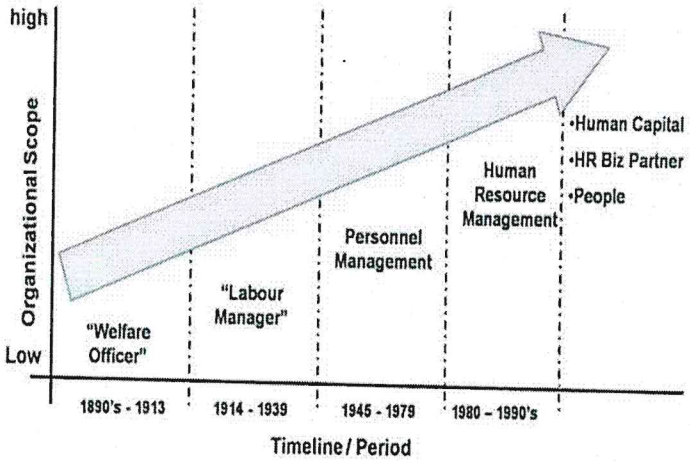

Figure 2: Evolution of E-HRM

II. TYPES OF E-HRM

Mainly 3 types of EHRM are there:

1. Transformational E-HRM: some activities of strategic HR like strategic re-orientation included in this type of EHRM. For achieving the HR goals from any number of these types an organization can choose for pursuing the policies of EHRM.

2. Operational E-HRM: administrative functions like employee personal data and payroll are come in this type of EHRM.

3. Relational EHRM: For supporting the process of business like performance management, training and recruitment relational EHRM is used.

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A wireless IOT system towards gait detection technique using FSR sensor and wearable IOT devices

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Abstract

Purpose – The recent advancement in gait analysis combines internet of things that provides better observations of person living behavior. The biomechanical model used for elderly and physically challenged persons is related to gait-related parameters, and the accuracy of the existing systems significantly varies according to different person abilities and their challenges. The paper aims to discuss these issues.
Design/methodology/approach – Deployment of wearable sensors in gait analysis provides a better solution while tracking the changes of the personal style, and this proposed model uses an electronics system using force sensing resistor and body sensors.
Findings – Experimental results provide an average gait recognition of 95 percent compared to the existing neural network-based gait analysis model based on the walking speeds and threshold values.
Originality/value – The sensors are used to monitor and update the predicted values of a person for analysis. Using IoT a communication process is performed in the research work by identifying a physically challenged person even in crowded areas.

Keywords Gait analysis, Body wearable sensors, Force sensing resistors
Paper type Research paper

Introduction

The interest in analyzing the physically challenged person in a particular area is to provide preference to that person and predict the nature of the walking style that will provide an immediate medical facility when they need. Many researchers' works in human identification systems, face recognition and gait recognition model for identifying a person but compared to human gait analysis had evident advantages over the others since it works without any interruption or interface of the subject cooperation. The basic model of gait analysis uses human walking styles so that it can be used in detection process more effectively from a long distance and can be used in surveillance application also in the public places. Figure 1 presents a basic walking style of a person from load response to pre-swing, while they walk the nodes used in walking styles are pointed in Figure 1(b), which is used for analysis.

The consequences in the analysis include the mobility, disability and, in particular, the disability in walking involves effects in a person walking style. The risk factor involving a person can be categorized into three categories such as fall detection, fall prediction, and fall prevention system. The fall detection system is used to notify the user in the case of fall occurrence, and it cannot provide any suggestion or notification to help users before they fall. The fall in this model is compulsory, and it just provides the information, so it is less effective than the other models. Many fall prediction models are available to estimate the nature of fall

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An Experimental Research on Vibration Evaluation of Laminated Hybrid Composite

Y.Seetha Rama Rao, R.Lakshmi, Ch.Siva Ramakrishna, A.Sampath Dakshina Murthy, K,V.SubbaRao

Conceptual: the prevailing studies pattern in composite is for the improvement of composite with carbon fiber. it is critical to dissect the vibration conduct of composite for powerful use in severa programs in order that they enjoy with one of a kind styles of stacking situation and exclusive types of vibration with various stacking association of filaments. CFRP has high solidness and slight-weight houses with the intention that their programs had been numerous. in any case, CFRP reviews a immoderate recurrence vibration. on this paper, the impact of basalt fiber hybridization to lessen vibration of carbon fiber pondered via test affiliation. The ends informed that the hybridization of basalt fiber to the carbon fiber and stacking succession have been impressively inspired and diminishes vibration. not unusual recurrence and damping share of half of breed overlaid composites have been received through wearing on exploratory modular research.

Watchwords: Hybrid composite, stacking affiliation, regular recurrence studies.

I. ADVENT

currently a-days building structures require high concord to weight percentage, excessive safety from disappointment for a advanced exhibition, life span and increment in variety of lifestyles cycles earlier than weak spot crack. So one-of-a-type examines were performed on unfastened vibration response of composite plates with exceptional burdens and fantastic components like temperature, bolster situations, fabric homes and overlay plot. The plates are displayed with stiffeners to have better incredible without growing which means loads.

II. LITRATURE EVALUATE

numerous creators utilized extraordinary structures for the beyond numerous years for highlight extraction. This segment will take a look at the strategies used by particular creators. Prasad et al. introduced trial and numerical consequences at the vibration of composite protected plate at diverse restriction situations. A limited detail (FE)- based definitely definition is set up for the plate making use of the essential request Reissner-Mindlin speculation, which incorporates the 2 filaments and metals of severa cloth residences in interchange layers [1]. Mishra et al. Displayed a test examination of the feature recurrence of composite Plate. The effect of diverse restrict conditions which includes loose–loose, cantilever, basically upheld, and completely braced end up given and notion approximately results of past examinations in writing any region handy [2],Mohanty et al. contemplated a limited element research for a composite plate with delamination of a woven fiber glass with epoxy [3]. Panda et al. decided the free vibration traits of woven fiber glass/epoxy delaminated doubly bended composite forums in a warm vicinity relying on the restricted thing technique. First-request shear disfigurement speculation is applied for a composite shell version with arrangement of mid-aircraft strip delamination at self-assertive areas. The commonplace frequencies of unfastened vibration of woven fiber composite shells decline with a selection in temperature and delamination area because of lower of solidness for all covers [4]. Faroughi et al. constructed up an iso-geometric approach depending on better request smooth Non-Uniform Rational B-Splines (NURBS) premise capacities for the strain, vibration and electricity examination of overlaid composites. lightweight fabric, as an example, FRP has been widely implemented in aeronautical, maritime, and automobile programs; however, the disadvantage of this framework is that FRPs are defenseless in the direction of impact damage. To defeat those negative factors, an change blend of substances has been utilized (aluminum and FRP). in addition, whilst a composite material is exposed to excessive temperature or adverse condition, it impacts the mechanical and adverse houses. One method to decorate the cloth excellent, even as supplying to this kind of situation, is to cowl every the surfaces of the composite cloth, with a layer of metal cloth [5].

Biswal et al. Explored hygrothermal influences on loose vibration of woven fiber glass/epoxy overlaid composite spherical and hollow shallow shells. numerous analyses are led for spherical and hole shell boards with numerous arch proportions and overlay succession under diverse limit conditions uncovered to uniform.distinction in temperature and dampness focuses for examination with FEM outcomes. it's far visible that The not unusual frequencies of loose vibration of included composite shells lessen with increment in uniform temperature and dampness fixation because of decrease of the solidness and increments with diminishing the ebb and glide proportions [6].

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Strategies of Successfully Managing Personal Finances for System Excellence

Ridwan, Sukarman, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen

Abstract: *Managing the money, saving and investing terms are come in to Personal finance. The term Personal finance includes mortgages, estate planning, investments, budgeting, insurance, banking and tax planning. The complete industry that provide any kind of financial services to households and individuals person often refers as Personal finance. The Personal finance management provides advises related to investment and financial opportunities. It needs to build an efficient personal finance management process for getting the system excellence. Strategies of personal finance are discussed in this paper.*

Keywords: *Managing money, investments, budget, banking, financial opportunities.*

I. INTRODUCTION

Activities of personal financial like investing, income generation, protection, saving and spending managed and planned by using Personal finance. It can summarize the process of managing the personal finances in a financial plan or budget. Most common and important aspects of financial management are described in this paper.

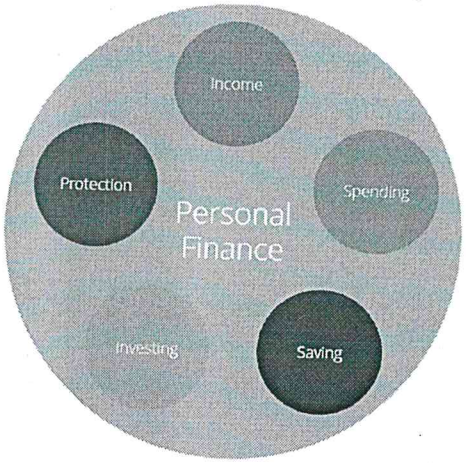

Figure 1: Personal Finance

II. PERSONAL FINANCE AREAS

1. Saving of Money

For future spending or investing the excess cash can be consider as saving of money. If what the person spend and what he earn as income there is any surplus the difference can be defined as saving or investments. Saving management is the crucial factor of personal finance. Basic types of savings are as follows:

a. Securities related to market of money
b. Cash in Physical form
c. Savings in bank accounts
d. Bank account checking

2. Income

A source of cash flow that receive by a person can refers as income, the income are used for supporting family and themselves. Basic types of income are including:

a. Pensions
b. Bonuses
c. Dividends
d. Salaries
e. Hourly wages

3. Investing

The purchasing of assets in the hope that it will give more money that previously invested can be consider as investment. It use as an expectation of generate a rate of return. All investment does not give always positive return so investment carries some risks. Some basic types of investing are as follows:

a. Commodities
b. Mutual funds
c. Private companies
d. Stocks
e. Real estate
f. Bonds
g. Art

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Examination of Business Transformation Strategy: Building Bridges between IT and the Business

Prety Diawati, Phong Thanh Nguyen, Muhamad Rusliyadi, E. Laxmi Lydia, K. Shankar

Abstract: *It can see that volatility of business cannot precedence. The transformation is not an option; it is imperative of business with cause of new technologies and, blurred industry boundaries, energy dynamics, globalization, regulation, digitalization or other factors. For staying ahead thinking companies launch transformations even when they retooling themselves or dominate a market. The objective of business transformations are always can deliver emulated results, sustainable and focused.*

Keywords: *Business transformation, control, digitalization, focused*

I. INTRODUCTION

In reality of economic the complete business industry is disrupted, so new concern for business organization is the actionable intelligence. In the information age core assets of business are information and data, they are the source of critical enablers and revenue.

So as to receive the rewards of new advancements, the following stage in that data age and the computerized change economy, associations should be prepared for quickening developments, higher business deftness and the expanding job of all types of information and data.

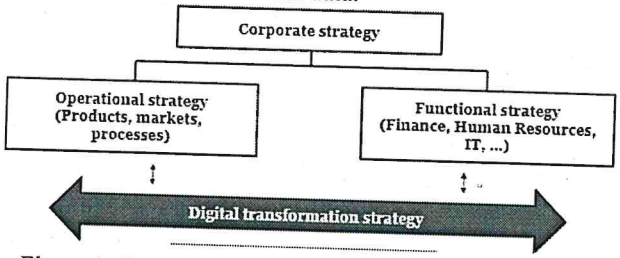

Figure 1: Corporate strategy and digital transformation strategy connection

In a business reality where 'the business', with a main (yet, non-select) job for promoting and the CMO, progressively takes choices on innovation spending plans, we see that it's regularly hard for IT and data the board experts, who are fundamental in advanced change, to communicate in the language of the CMO or different business officials, which customarily didn't have a place with their 'intended interest group'.

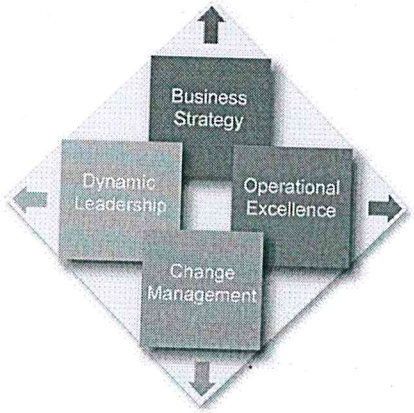

Figure 2: Business Transformation strategy

II. TRANSFORMATION BUILDING BLOCKS

Effective transformations might be generally uncommon, yet they do exist — and yours can prevail too. A change, in this unique situation, is a noteworthy move in an association's capacities and personality with the goal that it can convey significant outcomes, important to its motivation that it couldn't ace previously.

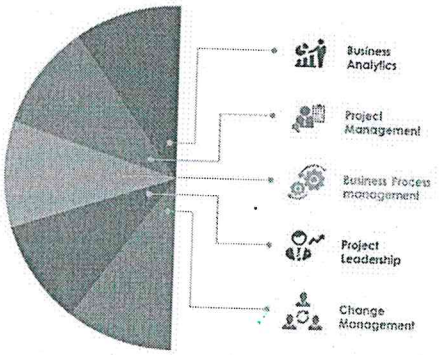

Figure 3: Business Transform Areas

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Factors Affecting the Stability of Functionally Graded Sandwiched Beams

S.N.Padhi, K. S. Raghu Ram, Jasti Kasi Babu, K Suresh, T.Rout

Abstract: In this paper few of the factors affecting the dynamic stability of a steel-alumina functionally graded sandwiched (FGSW) beam have been discussed. The equation of motion was derived using both Hamilton's principle and finite element method. Floquet's theory was used to separate the stable zone from the unstable. The effect of hub radius parameter and rotational speed on first mode and second mode instability region of FGSW beam have been studied following the power law and exponential law. The results indicated that increasing hub radius and rotational speed keeps the instability region away from load factor axis and hence remote the chances instability of the beam.

Index Terms: Exponential distribution, FGSW, load factor, Power law, Rotational speed, Hub radius, Stability.

I. INTRODUCTION

Composite materials have been playing an important role in the life of human beings since decades because of their ability to offer the desired properties.. Initially, bronze was frequently used which is actually an alloy of tin and copper. Bronze was first invented in 3700 BC, the era known as the Bronze Age [1]. Later on, a number of different alloys of metals and nonmetals were engineered for multiple purposes. The Metal Matrix Composites (MMCs) have been limited due to their higher cost and low fracture toughness as compared to metal alloys. Though MMCs are costly, they emerge as an important class of materials due to high specific strength and stiffness. Researchers found the utility of aluminium to be the second largest after steel. Aluminium and its metal matrix composite possess wide applications in various applications in aerospace industry, automobile industry, Constructions and even in kitchen utensils. Hybrid Al-MMC consist of two different materials, and one will be from organic origin along with the base material[2,9].The aluminium matrix is getting strengthened when it is reinforced with the hard ceramic particles like SiC, Al_2O_3 and B_4C etc. Aluminium alloys are still the subjects of intense studies, as their low density gives additional advantages in several applications.These alloys have started to replace cast iron and Bronze to manufacture wear resistance parts. MMCs reinforced with particles tend to offer enhancement of properties possessed by conventional routes[3,4]. As Glass fiber reinforced plastic (GFRP) composites possess high specific strength/stiffness, superior corrosion resistance, light weight, the GFRPs are widely used in engineering applications in the fields of aero industry, automobile applications and marine applications[5,7]. Epoxy resin can be produced with alkaline-treated fiber by hand-laying method. It also has been discovered that alkaline-treated composites with fiber load show outstanding tensile strength[6]. Coir fiber reinforced polymer resin composites with saturated ash particles is a new kind of promising composite material whose applications include Industrial Helmet, Dashboards of automobiles, Door panels, Light boards etc. Apart from these industrial applications some of the domestic applications are Decorative articles, Designer walls in hotels & malls , Welcome boards, etc [8].

The major disadvantage of composite materials is delamination at the interface. To overcome the drawback of conventional composite materials, a new breed of composite materials where the properties of the constituent materials required to be graded in space and further named as functionally graded materials (FGMs) which was first invented in 1984.

The research on functionally graded materials (FGMs) is rapidly growing because it can be a good replacement for the material of rotating beams. Timoshenko beam theory and classical Ritz method is employed to derive the governing equations. The equation of motion is derived using both Hamilton's principle and finite element method. Effects of various parameters such as rotating speeds, radius of hub and different functionally graded material properties on linear and nonlinear vibration characteristics are studied [10,13,15].

Recent investigations show that sandwich structures have much more advantages than the monolithic solid structure of the same materials and equal mass [11]. From a mechanics viewpoint, the main advantages of material property grading appear to be improving bonding strength, toughness, wear and corrosion resistance, and reduced residual and thermal stresses. The thermal stability of laminated functionally graded (FGM) circular plates of variable thickness subjected to uniform temperature rise is significantly influenced by the thickness variation profile, aspect ratio, the volume fraction index, and the core-to-face sheet thickness ratio. plates with clamped edge are more resistant to buckling than plates with simply supported edge [12]. The FGM sandwich construction commonly exists in two types: FGM facesheet–homogeneous core and homogeneous facesheet–FGM core.

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Varying Accuracy Configurable Multipliers integrated by Utilizing Quality 4:2 Compressors

S Aruna, M. Dheeraj, K. Srinivasa Naik

Abstract— In this paper, few 4:2 compressors which are having the flexibility to switch between two operating modes namely exact and approximate based on the requirement of the application, along with an exact compressor that has greater characteristics that the conventional compressor are put-forward. The approx. approach enables these twin-quality compressors to deliver high-speeds with low power consumption at the cost of reduced accuracy which enables them to be used in various solicitations of their importance. Each of these compressors has their own levels of accuracy with different delay, power dissipation and areal consumption values in the approximate mode as well as in the exact mode too. Usage of these configured compressors in the structure of the multipliers helps in further optimizing the properties of designing of multipliers. The efficiencies of these 4:2 compressors are evaluated in 8-bit Dadda multiplier in the 45nm standard CMOS technology by relating their parameters with those of the up-to-the-minute approximate Multipliers. Using a calling circuitry 16 & 32 (bit) dadda multipliers are also evaluated incorporating them with the proposed compressors. This comparative evaluation results indicate reduced delay and lowered power consumption at the cost of reduced accuracy in the inexact mode of the twin eminence compressors, whereas the EXACT compressor that has been designed showcases lowered power, improved speed and reduced area on silicon with precise accuracy in the results. Also, the effectiveness of the EXACT compressor is used to optimize a MAC unit which is used vastly for many solicitations.

Index Terms— Approximate operating mode-computing, 4:2Compressor, Accuracy, configuring, Delay(lag), Power.

I. INTRODUCTION

Integration (LSI, VLSI, and GSI) refers to devices assembled at very high densities resulting in advanced circuitry that can perform crucial operations of very high order. It has certain characteristics and constraints which are to be optimized in all its essential components for their designing and implementation such as Speed, Area on silicon, Power and Accuracy. Considering these optimization entities, any block that is highly used in VLSI design architecture must be optimized so that it should be advantageous and must follow these constraints.

Most electronic, Arithmetic solicitations are implemented using digital logic circuits. Summation and multiplication are extensively employed maneuvers in electronic and computer arithmetic, which be there employed by their respective blocks. Multiplication of data stays a mathematical manner Maneuver that at its modest is an abridged route of totaling an integer to itself for definite repetitions. A no. which is the multiplicand is added to itself a no. of times as quantified by another no., the multiplier to form a result. A fast Multiplication course consists of three steps: Partial Product Generation, Partial Product Reduction and Final stage-Addition. Amongst the various arithmetic components, the multiplier is one of the crucial components, which is extensively used in different solicitations such as multimedia handling and its tenders, Microprocessors, Microcontrollers…etc. According to the statistics more than 70% instructions in the microprocessors and most of the DSP algorithms perform addition and multiplication. Hence the demand of high speed and low power processing is highly necessary with the increasing need of Multipliers in operation. One of the techniques is, by reducing the number of operations, the switching speed can be increased and the power consumption can be lowered to a notable extent.

Multipliers are of many types based on their simplification and partial product gaining techniques such as Serial Multipliers, Parallel Multipliers, Bit Array Multipliers, and Column Compression Multipliers. Among these, the Column Compression Multipliers are highly utilized due to their maximum optimizing natures which are further under development. The usual process of multiplication of binary data is done as shown below in the Figure 1 (a) and its dot structure is shown in Figure 1 (b).

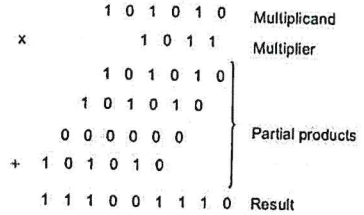

Figure 1 (a): Multiplication process

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Vibration Evaluation of Laminated Hybrid Composite using Finite Element

Y.Seetha Rama Rao, R.Lakshmi, Ch.Siva Ramakrishna, A.Sampath Dakshina Murthy, K.V.SubbaRao

Conceptual: the winning studies sample in composite is for the development of composite with carbon fiber. it's far crucial to break down the vibration behavior of composite for powerful usage in severa applications so that they experience with one-of-a-type types of stacking scenario and particular varieties of vibration with numerous stacking succession of filaments. CFRP s have immoderate firmness, and light-weight homes so their packages had been diverse. Be that as it may, CFRP s enjoy the ill effects of a high recurrence vibration. in this paper, numerical examinations have been finished to don't forget vibration behavior of composite overlaid shafts the use of ANSYS 18.1 programming. From the results, the effect of fiber stacking succession at the common frequencies are researched.

Catchphrases: pass breed composite, stacking grouping, modular research, loose vibration.

I. ADVENT

A composite is a cloth comprising of at the least substances which might be artificially made with divergent substances. A composite cloth likewise have to comprise synthetically amazing constituent ranges which may be isolated via way of an unmistakable interface. numerous composite materials are blanketed simplest levels, one is known as the network which frequently encompasses the alternative constituent, that's known as the scattered degree. The properties of the fortification stage (i.E., quantity component, form and length of debris, dispersion and route) signify the homes of the composite. the roles of grid in composite substances are to offer shape to the composite element, cozy the fortifications to the earth, flow burdens to fortifications and durability of material, together with fortifications. The manner of fortifications in composites is to get fine, firmness and different mechanical homes.

The most extensively recognized propelled composites are polymer community composites. these composites contain of a polymer thermoplastic or thermosetting fortified with the aid of fiber (everyday carbon or boron). those materials can be formed into an collection of sizes and styles. They supply super exquisite and firmness along protection from erosion. The purpose inside the lower back of these being most fundamental is their minimum try, immoderate fine and simple assembling standards. most in the primary carried out framework materials are polymeric. via and large the mechanical houses of polymers are insufficient for some number one capabilities. in particular their incredible and firmness are low contrasted with metals and pottery. these problems are crushed with the aid of strengthening particular substances with polymers. except the dealing with of polymer lattice composites want no longer include high weight and would not require immoderate temperature. Likewise hardware's required for assembling polymer lattice composites are extra sincere. for this reason polymer framework composites grew speedy and earlier than prolonged wound up widely identified for auxiliary applications.

half and half composites are similarly advanced composites whilst contrasted with conventional FRP composites. half and halves will have a couple of strengthening stage and a solitary lattice degree or unmarried fortifying degree with severa community degrees or one-of-a-type fortifying and numerous framework levels. they have got better adaptability at the same time as contrasted with specific fiber reinforced composites. typically it consists of a excessive modulus fiber with low modulus fiber. The excessive-modulus fiber gives the firmness and burden bearing traits, at the equal time as the low modulus fiber makes the composite extra harm tolerant and maintains the fabric fee low. The mechanical properties of a half and half of of composite can be fluctuated through converting quantity share and stacking grouping of diverse uses.

free vibration

unfastened vibration implies the motion of a structure with out a effective outdoor powers or bolster movement. The motion of hetero 2nd request differential condition of movement with out damping is introduced in situation 1.

$$m\frac{d^2u}{dt^2} + ka = 0 \qquad (1)$$

Free vibration is initiated by disturbing the system from its static equilibrium position by imparting the mass some displacement u(0) and velocity ů (0) at time zero, defined as the instant the motion is initiated : u = u(0), ů = ů(0) So, solution to the equation is obtained by standard methods:

$$U(t) = u(0)\cos\omega_n t + \frac{\dot{u}(0)}{\omega n}\sin\omega_n t$$

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Design and Simulation of UWB LFM Radar

Dr.A.NagaJyothi, Dr. T. Pavani , G. Thhiagarajan, G.V. Sai Swetha

Abstract: UWB radar signal generator requires advanced digital signal processing techniques. Direct analysis techniques often fail in designing such complex systems. Keysight SystemVue has enough models and integration capability to handle modern radar systems. A system design of UWB radar signal generator where LFM waveform is used as a source is considered and simulated using a platform in the SystemVue tool. This allows the users to reduce their system development time and cost, and also decreases the chances of unexpected system failures in the system development process.
In this paper models for signal generation transmission, reception, signal processing and measurements are used to design advanced UWB Radar. UWB Radar use low energy level for short range, high bandwidth communications.

I. INTRODUCTION

The majority of radars have narrow frequency range. This narrow frequency restricts the information capacity of the system. There is a need to expand the frequency range in order to increase information capacity. The solution to this is to increase the transmission time. Ultra Wide Band (UWB) technology uses pulses in the order of microseconds, covering a very wideband in the frequency domain [3.1 to 10.6GHz] with limited transmit power of -41dBm/MHz [1]. UWB radar can be used to monitor the traffic of vehicles, perimeter detection, and target identification and medical diagnosis. It has clutter rejection and is energy efficient device [2]. The advantages of UWB Radar are: The range measurement of the detection target is made more accurate, which results in improvement of radar resolution for all coordinates. It identifies the class and type of target, as the received signal carries information not only about the target but also its separate parts. It reduces the radar effects from rain, mist and aerosols, etc. As the effects on radar are reduced and stability is improved, so more uniform radar cross section is provided. Narrow antenna pattern is obtained by changing the radiated signal characteristics improving the radar's immunity, so that it can resist external narrowband electromagnetic radiation effects and noise. The radar "dead zone" is decreased, keeping the radar signal secret and makes it hard to detect [3].

II. PROBLEM FORMULATION

The system design of UWB radar having LFM based signal generator is taken up for simulation using SystemVue tool. The change of parameters is the chief hurdles in such designs. The SystemVue tool eliminates these hurdles and provides a user friendly approach. The LFM spectrum from the source can have a bandwidth of 50MHz. It is the objective of this Endeavor to maximize the bandwidth transmitting waveform. Such efforts can be simplified by the SystemVue tool so that
the maximum value of transmission range can be altered as per the requirement of the designer.

III. METHODOLOGY

Various aspects of design of UWB radars are investigated meticulously. The parameters of LFM waveform are judiciously selected considering the wide range offered by SystemVue. The selection of proper band pass filter amplifier as well as delay factors is critical for the overall improvement of design. Considering the importance of increase in transmitted bandwidth, simulation is carried out to maximize the same.

IV. LINEAR FREQUENCY MODULATION

This type of modulation employs sinusoidal waveforms whose instantaneous frequency increases or decreases linearly over time. Increasing the duration of a transmitted pulse increases its energy and improves target detection capacity. On the other hand, reducing the duration of a pulse improves the range resolution of the radar[4]. The LFM spectrum has a shape similar to a $\text{sinc}^2(x)$ function shown in Fig 1. It also contains an ideal spectrum with the same bandwidth. The matched filter response is the sinc function which is the autocorrelation function of the original signal. It is advisable to treat the spectrum as rectangular. (That is, being flat within the swept bandwidth)[5-6].

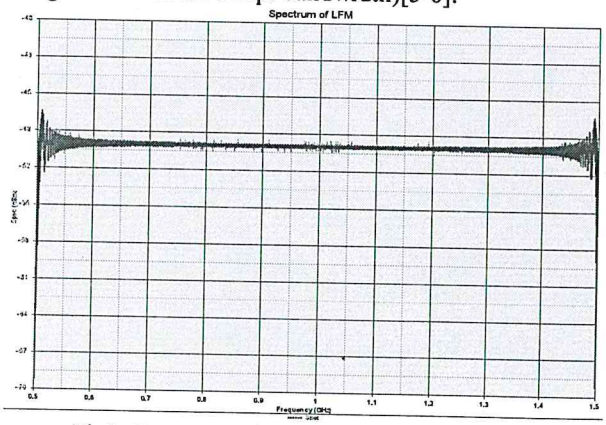

Fig1: Spectrum of LFM Waveform

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Fuzzy Logic Based Trajectory Tracking Controller

S.Ravi kumar, R.P Das, A.Sampath Dakshina Murthy, K.Sunil kumar

Abstract— shape autopilot of ship has been proposed based totally on fluffy reason. A non-direct numerical version for oil tanker is taken for assessment of parameters which shift with profundity. The presentation of proposed controller has been tested as for course by way of the usage of normal AI fluffy framework just as ANFIS

ANFIS based framework for designing autopilot of deliver has been proposed. A nonlinear medical model of an oil tanker is taken for assessment of parameters which shift with profundity. The presentation of proposed controller is to be tried for both converting and direction preserving mode

Index Terms— Autopilot, controller, Fuzzy logic, ship, Trajectory Tracking

I. INTRODUCTION

Mechanics of photo of ship constant non direct and shift with running situations, as an example, profundity of water and pace simply as outer, erratic additives like ocean flows and wind produced waves and circulation of winds. Nonlinear manage plans, for instance, yield complaint control, back venturing had been accounted for [1,2,3]. utilization of valid techniques are identified with the minute to be directed and again joined with hydrodynamics, precise model of marine car is difficult to determine. To defeat such troubles, fluffy cause and neural systems are helpful. Fluffy cause primarily based controllers have been advocated with the aid of severa scientists inclusive of Yang, et.al, Santos, et.al, Velagic, et.al[4,5,6]who proposed deliver autopilot for following via sugeno type fluffy framework Wu,y,et.al consolidated neural device and fluffy cause. essentially Di.move, et.al moreover displayed blend of both.

A large portion of the paintings mentioned did not receive profundity of water as a element furthermore, they proposed fluffy reason coordinated with exclusive systems. it is the purpose of this proposed to build up a fluffy motive controller working sturdy for numerous profundity of region [7].

Deliver factors

Mobility of marine automobiles is depicted via the factors which consist of both kinematics and energy. Kinematics are identified with precise pace wherein as electricity are identified with reaction while basic amounts are applied. The six degrees of opportunity are flood, influence, hurl, yaw, roll and pitch. The preliminary 3 directions and their time subsidiaries deliver the location and translational movement in x,y,z hub. the second one association of three guidelines are identified with direction and rotational moment of the marine vehicle

Model of Tanker

$x = Ax + Bu$ $x=[u,v,r]$ is a state vector A is the system matrix, B is the input matrix and $u=[\delta r]$ is input component (rudder deflection)

Fuzzy Logic Controllers (FLC)

It should have proper values for any reference angles from $\pm 3^0$ to $\pm 45^0$. It should give agreeable outcomes for predefined direction by giving arrangement of heading points. The ship should follow the ideal heading with great exactness. Increasingly finished, the distinction between wanted heading and real heading ought not surpass ±30. The control sign ought not achieve the greatest estimation of ±350

Inputs and outputs of control mechanism

States influenced by rudder minute which is identified with yaw and influence velocity.The wanted states are takesfrom second subsidiary and the fixed premix is to decrease the mistake [difference among wanted and real states].

Inputs: 1) Heading angle error (ψ_error).
2) Heading state error (r_error).
Output: Rudder deflection (δr)

Selection of ranges

Table 1. Universal sets for ranges of input

Input	Range
Heading_error	-3^0 to $+3^0$

Table 2. Output limits

Output	Range
Rudder deflection	-35^0 to $+35^0$

Starting from these values of range of I/O variables are obtained by trail and error (experience).

-ve to +ve => clock wise and anti clock wise => port to star board.

Universal sets of ranges of I/O variables
I/P Heading error (ψ_error) → -0.4^0 to $+0.4^0$
Heading rate error (r_error) → -0.01^0 to $+0.01^0$
O/P Rudder deflection δr → -0.8^0 to $+0.8^0$

A Type of Membership Function

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Simulation of Heat Dissipation Behaviour in Grooved Heat Pipe

K.S.Raghuram, S.N.Padhi, P.Harisha, S.Balaji ,K.Leela Kumar

Abstract: Having high and most effective thermal conductance value heat pipe is widely used for heat transformation. The heat pipe is having unique properties like compact size, light weight and indirect conductance. The heat pipe is used in the cooling of electronic components of computer applications, controlling of temperature in aerospace parts, excess heat recovery in exhaust gases of internal combustion engines. Heat pipes with rectangular cross section can be used for handling large heat transfer sections when weight and space are considered. The working medium that is entrapped in the heat pipe is under phase change from liquid to vapor and vice versa. The vapor condenses in the condenser region by removing heat to the sink and back to the evaporator passing through the porous wick using capillary pumping pressure for re-evaporation. There will be pressure drop in the wick and vapor channel volume. The simple theory of the heat pipe enumerates the capillary pressure in the wick should be more than the sum of the pressure drops in the vapor core and pressure drop in the wick.

Keywords: thermal conductivity, heat pipe, rectangular pipe, capilliary pump pressure.

I. INTRODUCTION

Heat pipe is designed to transport the heat energy from evaporator end to condenser end with minimum temperature gradient without any external power agent. A typical heat pipe is split into three parts as evaporator section, adiabatic section and condenser section. The overall performance of heat pipe depends on effectiveness of all the three sections.. The heat is inputted in the evaporator end of the heat pipe, the working fluid filled in the evaporator is heated until it gets vaporized. The large latent heat of evaporation in very small temperature difference enables the heat to be transported from one end to the other end and hence the heat pipe will obtain a low thermal resistance. The pressure difference between the evaporator and condenser makes the vapor to flow from evaporator to condenser and releases its latent heat of vaporization to become liquid again. The wicks inside the heat pipe force the liquid back to the evaporator from the condenser. The heat pipes are used in spacecraft, computer systems, solar thermal, cooking, Nuclear power conversion etc. A lot of research has been done to improve the performance of heat pipe. Huang et al.[1] studied on heat pipe coupled with air assisted PCM (PCM/HP-Air), heat pipe coupled with liquid assisted PCM (PCM/HP-Liquid) and found that the heat pipe coupled with liquid cooling exhibit excellent thermal performance for battery module, which is an effective and reliable method with relative longer working time and appropriate temperature. Poplaski et al [2] worked on performance of heat pipe with adding various nano particles such as Al2O3, CuO and TiO2 in the working fluid and observed that the thermal resistance of the heat pipe can me optimized by adding 83%, 79% and 76% of Al2O3, CuO and TiO2, respectively.

Many researchers have worked on decreasing the thermal resistance of heat pipe by changing the pipe material, working fluid, wicking structure so that heat energy can be effectivelt transported. Jouhara et al [3] have reviewed on different types of heat pipes, operating temperatures, usability and drawbacks. The mechanism of heat transfer taking place from evaporator to condenser is a complex phenomenon and depends on various factors. Senthilkumar et al [4] have discussed in their paper about the use of response surface methodology (RSM) to optimize the working parameters of the heat pipe with copper nano fluid as working fluid. Kumaresan et al [5] have found that addition of the CuO nanoparticles with working fluid and inclination of the heat pipe to the horizontal enhance the thermal performance of heat pipe.

Inclusion of high thermal conductivity particles with working fluid in nano shape to increase the flowability reasonably enhances the heat transfer process. Senthilkumar et al [6] have used the Taguchi method to optimize the working parameters of the heat pipe and found that all the working parameters heat input, tilt angle and flow rate have equal contribution towards the performance of the heat pipe. Jung-Shun Chen et al [7] have examined the cooling effect of Flat plate heat pipe (FPHP) with acetone as working fluid for different angle of inclinations and lengths of the pipe. Experiment showed that increase in pipe length increases the thermal resistance and increase in bending angle of pipe decreases thermal resistance. Maniraman et al [8] have reviewed on affecting parameters on operational characteristics of circular heat pipe. In a heat pipe the main outputs are the thermal resistance and heat transfer capability which can be tuned by choosing suitable working fluid, inclination of the pipe, filling ratio, thermal properties and heat input. Nandy Putra et al [9] have determined the effect of concentrations and the types of

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NUMERICAL INVESTIGATION OF NATURAL CONVECTIVE HEAT TRANSFER ON FLAT NARROW PLATES

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ABSTRACT

The Natural convective heat transfer rate in isothermal narrow plates are experimentally and numerically studied. In a 3-dimensional model if one dimension compared, less than other dimensions then heat transfer rate is read high in value and this can be calculated by experimentation two-dimensional flow analysis. The fluid properties are assumed constant, the change of density with the temperature generates buoyancy forces. Experimental natural convection heat transfer analysis is conducted on narrow plates placing in various positions to know its effect on convection and their particular co-efficient of heat transfer are known. Dimension less numbers such as Grashof's Number and Prandtl Number are vital in calculations. This experimentation helped in the study of convection of three different substances and their importance to be used in particular applications. The experimentation briefed the convection rate and concluded that Copper has high convection rate and Aluminium shows high convection rate when the dimensional thickness of Aluminium is half that of copper. Experiments showed that Aluminium can be cheaper substitute of copper in various applications. Analysis is done to know the heat flow pattern inside the solid.

KEYWORDS: Nusselt Number, Prandtl Number, Grashof Number, Ambient Temperature&Dynamic Viscosity

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NOMENCLATURE

h:convective heat transfer coefficient W/m^2K

Q:Convection (W)

q:heat transfer rate

Nu: Nusselt Number

Pr: Prandtl Number

Gr: Grashof Number

T:Temperature

T_s: Average Surface Temperature

T_a: Ambient Temperature

μ:Dynamic Viscosity

υ:Kinematic Viscosity

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Mechanical Property Variation of a Rotating Cantilever FGSW Beam under Parametric Excitation

S.N.Padhi, K.S.Raghuram, T.Rout, V.Naga Sudha, Gill Santosh Kumar

Abstract: We report here the dynamic stability of functionally graded sandwich (FGSW) rotating cantilever Timoshenko beams under parametric excitation. Power law with various indices as well as exponential law were used to find out the properties along the thickness of the FGSW beam. The stability boundaries were established using Floquet's theory. The equation of motion was governed by Hamilton's principle and solved by Finite element method. The power index was optimized for uniform variation of shear modulus along the thickness of FGSW beam. The shear modulus variation along the thickness of the FGSW beam was compared both by power law and exponential law. It has been confirmed that the Exponential distribution of constituent phases renders better stability compared to power law distribution of the phases in the functionally graded material(FGM).

Keywords: Exponential law, FGSW beam, Power law, Shear modulus, Stability.

I. INTRODUCTION

Functionally Graded Sandwiched structures find their use in spacecrafts, machinery and automobile industries because they have their high strength and stiffness compared to their low weight. In modern engineering, the FGSW beams have gradually substituted the large weighed metallic beams. Rotating FGSW beam structures are commonly found in engineering applications, including robotics, turbine blades, and helicopter rotors. Vibration of rotating structures has become a commonly occurring phenomenon. The vibration becomes severe because of resonance which causes heavy mechanical damage. Therefore, the stability and dynamic behavior of these rotating structures are of great practical importance to eliminate the problems of resonance. In actual practice, the rotating components mentioned above are usually pre-twisted and of asymmetric cross-section. However, beams of uniform cross-section under rotation can be used as a simple model and compared at par with the actual rotating structures to investigate the stability and dynamic behavior. The research on functionally graded materials (FGMs) is rapidly growing because of their continuously varying material properties, which give great advantages over the conventional homogeneous and layered materials. The major issues in conventional laminated composite materials, such as debonding, huge residual stress, locally large plastic deformations can be eliminated by using FGM. An FGM can be made as a good substitute for the rotating beam material. Many researchers have worked on the stability of the rotating beams. Stafford and Giurdiutiu [1] have developed a simplified model of helicopter blade considering shear deformation and rotary inertia corrections and investigated the natural frequencies using transfer matrix method. Dokumaci [2] has presented his work on the effects of pre-twist, ratio of bending rigidities and loading angle on the unstable zones of pre-twisted blades under lateral parametric excitation. Celep [3] studied the dynamic stability of pre-twisted column. The author showed that combination resonances of the sum type may exit or disappear depending on the pre-twist angle and rigidity ratio of the cross-section in case of simply supported columns. Abbas [4] used finite element method to determine the effect of rotational speed and root flexibility on the stability of a rotating Timoshenko beam. Ishida et al. [5] have investigated the parametrically excited oscillations of rotating shaft under a periodic axial force. They have observed that an elastic shaft with a disk exhibits only difference type combination resonance. Chen and Ku [6] have revealed from their investigation of cantilever shaft-disc system that gyroscopic couple can enlarge the principal regions of dynamic instability. Kosmatka [7] has developed a simple two-node Timoshenko beam element for the matrices of linear flexural ,incremental stiffness, mass, and force based upon Hamilton's principle, where interdependent cubic and quadratic polynomials are used for the transverse and rotational displacements, respectively. He reported that the buckling load and natural frequencies of axially-loaded isotropic and composite beams can be found for a variety of -lengths and boundary conditions. Lin and Hsiao [8] has derived the governing equations for linear vibration of a rotating Timoshenko beam by D'Alembert's principle and the virtual work principle and investigated the effect of Coriolis force on the natural frequency of rotating beams with different angular velocity, hub radius and slenderness ratio. Yang, Jiang and Chen [9] have investigated flexible motion of a uniform rotating Euler-Bernoulli beam

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Magnetic and dielectric properties of Zn substituted cobalt oxide nanoparticles

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ABSTRACT

Zinc-substituted cobalt oxide nanoparticles ($Zn_xCo_{3-x}O_4$, $0 \le x \le 0.5$) were produced by microwave refluxing technique. The structural, microstructural and magnetic properties of these samples were studied using X-ray diffractometer (XRD), scanning electron microscope (SEM), transmission electron microscope (TEM) and magnetic property measurement system (MPMS) respectively. XRD and TEM analyses confirmed the single phase nature for all the samples. Rietveld analysis of the samples further confirmed the substitution of Zn-ions into the Co_3O_4 lattice. The chemical states of the elements were studied using X-ray photoelectron spectroscopy (XPS), which suggest the presence of Zn^{2+}, Co^{2+}, and Co^{3+} ions in the samples. The maximum saturation magnetization (M_S) values of 0.33 Am^2/kg was obtained for $x = 0.01$ sample, and then it continuously reduced with increased Zn content. The dielectric property of the samples was studied in the frequency range of 40 Hz–110 MHz. The samples $x = 0.05$ and 0.5 displayed the lowest conductivity due to the narrow size distribution of grains.

1. Introduction

Currently, the researches on magnetic, optical, catalytic, and electrochemical properties of Co_3O_4 created great interest due to its wide technological applications. The applications include gas sensors, electrochemical devices, solid-state sensors, heterogeneous catalysts, and lithium-ion batteries [1–7]. Co_3O_4 possess cubic normal spinel crystal structure with tetrahedral sites occupied by Co^{2+} ($3\,d^7$) ions and octahedral sites by Co^{3+}($3\,d^6$) ions [8]. Predominantly, the magnetic moment of Co_3O_4 arises due to Co^{2+} ions. However, it also has a small contribution from spin-orbit coupling [8]. In contrast, Co^{3+} ions at octahedral sites do not contribute to the permanent magnetic moment. Further, it is well documented that cubic bulk Co_3O_4 is an antiferromagnetic material with Néel temperature (T_N) ≈ 40 K [8]. The antiferromagnetic ordering for this oxide exists due to super-exchange interactions through two favorable paths such as Co^{2+}–O–Co^{2+} and Co^{2+}–O–Co^{3+}–O– Co^{2+}.

Interestingly, a weak ferromagnetic behavior is also noticed for cobalt oxide nanoparticles [9–11]. Besides, the magnetic properties of Co_3O_4 are highly sensitive to shape, crystallinity, and magnetization direction. For example, Prabaharan et al. reported that the Co_3O_4 nanoparticles produced by precipitation method, exhibit weak ferromagnetic behavior with an M_S value of 0.34 Am^2/kg [12]. The other researchers have also reported weak ferromagnetic behavior for Co_3O_4 nanoplates [13]. As stated earlier, this cobalt oxide nanoparticles also display antiferromagnetic characteristic below 27 K, superparamagnetic nature between 27 and 45 K but paramagnetic behavior above 45 K [14].

Further, Moro et al. produced cobalt oxide nanoparticles by the continuous-flow hydrothermal method [9]. They observed fascinating magnetic properties such as weak ferromagnetism, spin canting of ions at the surface, exchange bias effect at low temperatures and superparamagnetism at room temperature. In contrast, Co_3O_4 nanotubes have shown weak ferromagnetic behavior and the presence of strong

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Application Design of Catfish Species Specification

Adi Fitri Yanto, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar, Satria Abadi, Wahidah Hashim, Andino Maseleno

***Abstract**: The system is a program inside of the computer and the task is to complete specific need or task. In its development, the system program has been developed for various fields, for example in determining the specification of catfish species. Catfish is a type of fish that live in fresh water. Catfish is easily recognized because their body is slippery, slightly flat elongated, and has long "mustache" that sticks out from around the mouth. Therefore, the researchers wrote this paper to improve service for the society and to facilitate the community in determining the type of catfish.*

***Keywords** : catfish, application, specification.*

I. INTRODUCTION

A. Background

Beware of buying beef and chicken meat, because there are some rogue traders who sell beef and chicken that are not suitable for consumption just to take advantage. At certain time such as Ramadan and Eid months, many meat traders sell beef and chicken that are not feasible, so consumer must be smart to recognize and distinguish the difference between the quality fresh meat and meat that is not suitable for consumption. If we consumed not feasible meat, it will interfere health. Next, we review some types of beef and chicken deviations and the characteristic of fresh meat that suitable for consumption so we are not wrong in buying.

B. Research Problem

From the background above, the following research problems are obtained:

1. How to provide easy service for the society?
2. How to make a simple and clear catfish type specification system program?

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C. Research Objective

Based on the research problems above, the objectives of this study are:

1. To help facilitate the service for the Society.
2. To make a system program type specification of catfish species.

II. THEORITICAL FRAMEWORK

A. The Definition of System

The system can be defined as a group of integrated elements with the same intend to achieve a goal [1].

The system is a collection of things or activities or sub-system elements that work together or connected in certain way to form a unity to carry out a function to achieve a goal [2].

The system can be defined as an entity or unit consisting of two or more components or subsystems (smaller systems) that are interconnected and related to achieve a goal [2].

From the three system definitions above, it can be concluded that the system is a set of elements that are interconnected with the same intention to achieve a particular goal [3].

B. Delphi

Delphi 7 is a software or application development program based on object Pascal production from Borland. Delphi is a programming language (development language) that is used to design an application [3]. The advantages of this programming language are productivity, quality, software development, compilation speed, attractive design patterns that are interesting and reinforced with structured programming [4].

C. DFD

Data Flow Diagram (DFD) was originally developed by Christ Gane and Trish Sarson in 1979 which are included in the Structured Systems Analysis and Design Methodology (SSADM) written by Chris Gane and Trish Sarson. The system developed is based on the functional decomposition of a system. Tom DeMarco introduced another method in 1980s which changed the square with curved angle (in DFD Chris Gane and Trish Sarson) with circle to denote. This popular DFD is used as a software system analysis model for software systems that will implemented with structured programming.

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Natural Language Processing utilization in Healthcare

Syihaabul Hudaa, Dwi Bambang Putut Setiyadi, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen, Wahidah Hashim, Andino Maseleno

Abstract: The significance of consolidating Natural Language Processing (NLP) techniques in clinical informatics research has been progressively perceived over the previous years, and has prompted transformative advances. Ordinarily, clinical NLP frameworks are created and assessed on word, sentence, or record level explanations that model explicit traits and highlights, for example, archive content (e.g., persistent status, or report type), record segment types (e.g., current meds, past restorative history, or release synopsis), named substances and ideas (e.g., analyses, side effects, or medicines) or semantic qualities (e.g., nullification, seriousness, or fleetingness). While some NLP undertakings consider expectations at the individual or gathering client level, these assignments still establish a minority. Here we give an expansive synopsis and layout of the difficult issues engaged with characterizing suitable natural and outward assessment strategies for NLP look into that will be utilized for clinical results research, and the other way around. A specific spotlight is set on psychological wellness investigate, a zone still generally understudied by the clinical NLP look into network, however where NLP techniques are of prominent importance. Ongoing advances in clinical NLP strategy improvement have been huge, yet we propose more accentuation should be put on thorough assessment for the field to progress further. To empower this, we give noteworthy recommendations, including an insignificant convention that could be utilized when announcing clinical NLP strategy improvement and its assessment.

Keywords : NLP, Artificial Intelligence, HER.

I. INTRODUCTION

The health care industry is quick understanding. the significance of information, gathering data from EHRs, sensors, and different sources. Be that as it may, the battle to comprehend the information gathered in the process may seethe on for a considerable length of time. Since the human services framework has begun embracing front line advancements, there is a tremendous measure of information gathered in storehouses. Medicinal services associations need to digitize forms, yet not superfluously disturb set up clinical work processes. In this manner, we currently have as much as 80 percent of information unstructured and of low quality. This carries us to an appropriate test of information extraction and usage in the health care space through NLP in Healthcare.

This information as it is today, and given the measure of time and exertion it would requirement for people to peruse and reformat it, is unusable. In this way, we can't yet settle on powerful choices in health care through investigation as a result of the structure our information is in. Along these lines, there is a higher need to use this unstructured information as we move from expense for-administration medicinal services model to esteem based consideration.

This is the place Natural Language Processing, a subcategory of Artificial Intelligence can come in. NLP based chatbots as of now have the abilities of well and really imitating human conduct and executing a horde of errands. With regards to actualizing the equivalent on an a lot bigger use case, similar to a clinic – it tends to be utilized to parse data and concentrate basic strings of information, accordingly offering an open door for us to use unstructured information.

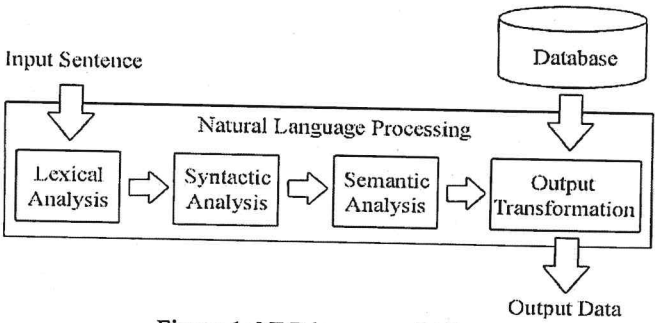

Figure 1: NLP is a core of AI

Streamlining of expense while safeguarding or improving nature of consideration is a focal point of national health change. One noteworthy indicator of mind-boggling expense of treatment is psychological well-being comorbidity—one investigation found that, by and large,

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Machine learning for healthcare(Article)(Open Access)

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Abstract

ML gives techniques, frameworks, and devices that can help dealing with demonstrative and prognostic issues in a collection of therapeutic domMLns. MI (ML) thinks about calculations which can gMIn from information to gMLn learning for a fact and to settle on choices and forecasts. Wellbeing Informatics (HI) examines the viable utilization of probabilistic data for basic leadership. The blend of the two can possibly rMIse quality, adequacy and proficiency of treatment and care. ML is being used for the assessment of the hugeness of clinical parameters and their blends for expectation, for instance desire for MIlment development, extraction of therapeutic learning for result investigate, treatment masterminding and support, and for the general patient organization.Wellbeing frameworks worldwide are gone up agMInst with "enormous information" in high measurements, where the incorporation of a human is unthinkable and programmed ML (aML) show amazing outcomes. Be that as it may, in some cases we are gone up agMInst with complex information, "little information", or uncommon occasions, where aML approaches endure of inadequate trMLning tests. It is fought that the productive execution of ML techniques can help the blend of PC based systems in the social protection condition offering opportunities to energize and overhaul made by therapeutic authorities and finally to improve the adequacy and nature of remedial thought. Underneath, we layout some genuine ML applications in drug. This paper additionally present medicinal services determination treatment and counteractive action of sickness, MIlment, damage in human. © BEIESP.

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Identifying Diseases and Diagnosis using Machine Learning

Iswanto Iswanto, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen, Wahidah Hashim, Andino Maseleno

Abstract: The method that is use to optimize the criterion efficiency that depend on the previous experience is known as machine learning. By using the statistics theory it creates the mathematical model, and its major work is to surmise from the examples gave. To take the data straightforwardly from the information the approach uses computational methods. For recognize and identify the disease correctly a pattern is very necessary in Diagnosis recognition of disease. for creating the different models machine learning is used, this model can use for prediction of output and this output is depend on the input that is related to the data which previously used. For curing any disease it is very important to identify and detect that disease. For classify the disease classification algorithms are used. It uses are many dimensionality reduction algorithms and classification algorithms. Without externally modified the computer can learn with the help of the machine learning. For taking the best fit from the observation set the hypothesis is selected. Multi-dimensional and high dimensional are used in machine learning. By using machine learning automatic and classy algorithms can build.

Keywords : machine learning; disease detection; computer; classifation algorithm.

I. INTRODUCTION

To support the medicinal choices, the ongoing advances in improvements and computing in innovation have encouraged the standard gathering and capacity of medical data. In many nations there is very necessary to store the data of a patient in a proper digital format. For taking the medical decisions that data are then gathered and analyzed [1]. This data include predictions, signal, diagnosis, treatment, image analysis and course. For perceive and distinguish the ailment accurately an example is fundamental in Diagnosis acknowledgment of malady. for making the various models machine learning is utilized, this model can use for expectation of yield and this yield is rely upon the info that is identified with the information which recently utilized. For relieving any sickness it is essential to recognize and distinguish that ailment. For characterize the ailment order calculations are utilized. It uses are numerous dimensionality decrease calculations and grouping calculations [2]. Without remotely adjusted the PC can learn with the assistance of the AI. For taking the best fit from the perception set the speculation is chosen. Multi dimensional and high dimensional are utilized in machine learning. By utilizing machine learning programmed and tasteful calculations can manufacture.

There is lots of scope of machine learning in the field of medical. In some functions like medical imaging, medical knowledge extraction, medical decision support, overall patient management, protein-protein interaction used automatic learning's empirical domain. The machine learning is used for detect and diagnose pneumonia, lung cancer and many other diseases.

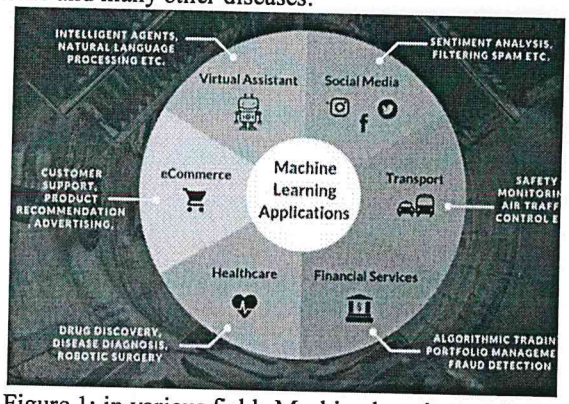

Figure 1: in various fields Machine learning applications

II. TYPES OF MACHINE LEARNING

The main two types of machine learning are Supervised are Unsupervised. There is some more machine learning are Semi-Supervised, Deep learning, Evolutionary learning and Reinforcement are discussed below [3]:

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Logistic Regression for Health Profiling

Ambika P., E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen, Satria Abadi

***Abstract**: in an event when there is lots of risk factor then the logistic regression is used for predicting the probability. For binary and ordinal data the medical researcher increase the use of logistic analysis. Several classification problems like spam detection used logistic regression. If a customer purchases a specific product in Diabetes prediction or they will inspire with any other competitor, whether customer click on given advertisement link or not are some example. For two class classification the Logistic Regression is one of the most simple and common machine Learning algorithms. For any binary classification problem it is very easy to use as a basic approach. Deep learning is also its fundamental concept. The relationship measurement and description between dependent binary variable and independent variables can be done by logistic regression.*

***Keywords** : logictic; regression; medical; binary variable.*

I. INTRODUCTION

A regression class where variable that is independent is utilized to foresee the dependent variable is known as Logistic regression [1]. It is called a logistic regression of binary type when the variable that is dependent has two classifications. And it is called logistic regression of multinomial type when the variable that is dependent has more than two classes. When the dependent variable category is to be ranked than it is called OLS (ordinal logistic regression) [6]. By transforming the variable that is dependent in the logit function, it can get maximum likelihood measurement. The logit function is generally defined as natural log of the dependent variable and it show the event occur or not. In between dependent and independent variable there is no linear relationship. This function doesn't expect homoscedasticity.

The logit model is a kind of statistical analysis and it is often used reaches out to applications in machine learning and for prescient investigation and displaying. in this approach the dependent variable is consider as categorical or finite.

A. they can be either A or B, this show the binary regression

B. or there is several finite options like A, B, C or D, they show multinomial regression

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The relationship between one or more Variables that is independent and the variables that is dependent it is used statistical software, by using logistic regression equation it measures the probabilities [1].

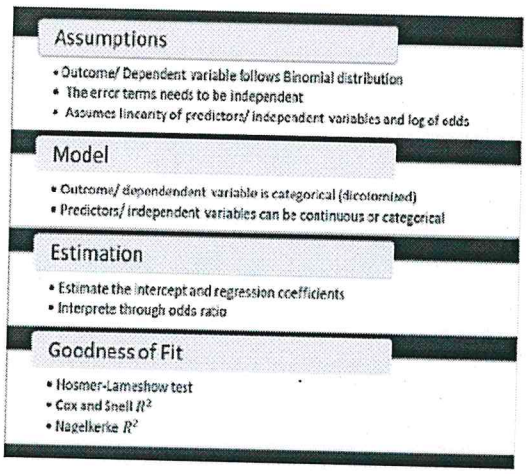

Figure 1: Binomial Logistic Regression Essential

II. LINEAR REGRESSION VS. LOGISTIC REGRESSION

The logistic regression gives a static or constant output but the linear regression provide a continuous output. The price hose and stock price are the example of continuous output. Predicting the patient has a disease or not is the example of discrete output. Logistic regression is measured through Maximum Likelihood Estimation (MLE) method and linear regression is calculated using Ordinary Least Squares (OLS).

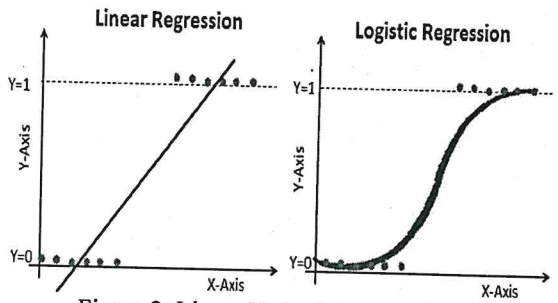

Figure 2: Linear Vs logistc regression

III. TYPES OF LOGISTIC REGRESSION

There are several types of logistic regression. Some of them are as follows:

1. Binary Logistic Regression

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Empowering Internet of Things (IoT) through Big Data

Bayu Prabowo Sutjiatmo, Alfian Erwinsyah, E. Laxmi Lydia, K. Shankar, Phong Thanh Nguyen, Wahidah Hashim, Andino Maseleno

Abstract: The coming of new advancements, devices and union of remote correspondence, computerized hardware, and miniaturized scale electro-mechanical frameworks (MEMS) advances have brought about the development of Internet of Things (IoT) which thusly delivers an enormous measure of information. IoT helps in diminishing expenses and expanding income, however at the expense of creating tremendous information. The organization of colossal data in an always stretching out framework offers rise to non-irrelevant worries as for data gathering capability, data planning, assessment, and security. This paper describe the benefits of big data in IOT. And also describe architecture and various applications of IOT.

Keywords : Internet of things, big data, analytics, distributed computing, smart city.

I. INTRODUCTION

Because of the Internet and accessibility of system assets anybody can accumulate the required data effectively and its utilization is changing ceaselessly with every single second. The coming of new advancements, devices and union of remote correspondence, computerized hardware, and miniaturized scale electro-mechanical frameworks (MEMS) advances have brought about the development of Internet of Things (IoT) which thusly delivers an enormous measure of information. IoT frames a system of interconnected devices, for example, PCs, workstations, WiFi, sensor empowered deices and family unit machines which delivers a major information and it is normal the this enormous information will increment from 22.9 billion out of 2016 to 50 billion by 2020 and will keep on expanding. IoT helps in diminishing expenses and expanding income, however at the expense of creating tremendous information. So as to get profits by IoT, associations should plan a stage that can procedure, oversee and dissect tremendous measure of information in adaptable and financially savvy way. Enormous information gives such a stage that can procedure voluminous and complex information sources, yet in addition helps in quickening the information mix.

II. BIG DATA

Immense Data is a social affair of device datasets that can't be readied using standard figuring systems. It escapes to enlightening lists or mixes of educational accumulations whose gauge (volume), unpredictability (variability), free data (veracity) and pace of advancement (speed) make them difficult to be gotten, directed, arranged or inspected by normal developments and instruments, for instance, social databases. To choose if a particular instructive record size is seen as a noteworthy data isn't unflinchingly described as it continues changing after some time. Information is distributed by various sources and after this it connects with the system at various rates. The range of educational accumulations is from terabytes to various petabytes, and is rapidly rushing toward exabytes.

III. BENEFITS OF BIG DATA PROCESSING

As we know big data processing has many advantages like:

- Outside information can be used by organization according to choices Communal information can be achieves by various web crawlers and locales like facebook, twitter are authorizing associations to regulate their professional approaches.

- ***Enhanced customer management***

Regular customer analysis systems are getting replaced by new structures arranged with Big Data developments. In these new structures, Big Data and basic language taking care of headways are being used to scrutinize and survey client responses.

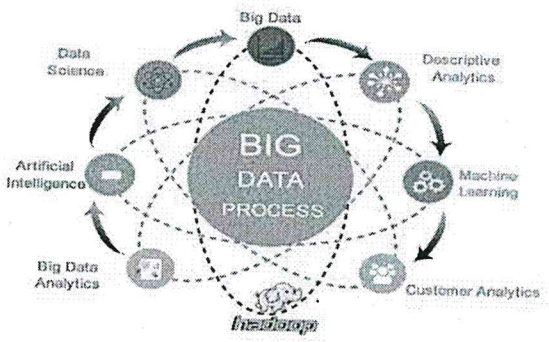

Fig1: Big Data Processing

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Online Games, Brain and Communication Ability

Ambyah Harjanto, Nurdin Hidayat, Mareyke Jessy Tanod, Apri Wahyudi, Dedi Irawan, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: *This study outlines the literature relevant to the effects of online games issues and the positive and negative effects of online games on child brain and communicative ability. Recent study, online games are now increasingly used for purposes other that entertainment. These games play on role in fields as diverse as education, cognitive training, physical exercise, and rehabilitation. Using games, which is communicative essence are often considered effective in developing child communicative ability. In this review, the result from the literature review indicate a number of gaps in the present framework. As a result, can guide teachers and parents to be able to know the processes that occur in the online game for child.*

Keywords *: online game, brain, communication ability.*

I. INTRODUCTION

Today, Internet is developing rapidly so that gadget users for both communication and entertainment facilities such as games are also growing rapidly. Playing game is an activity performed to make decisions, work together or competence who are trying to achieve goals regulated by rules [1]. Online game is a form of digital entertainment that is being preferred by all groups, especially child. Online game consumption makes parents worry will affect the brain development and communication skills of child.

Not all online games that are made will damage the performance of the child's brain. Many educational games are made even for therapeutic healing disorders in child. The study that was initiated by Feng *et al.* [2] shows that games can makes beneficial changes in perception, attention and spatial cognition. Game also gives child the opportunity to interact in the language studied.

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At certain times, game encourages and requires a lot of significant interaction between players. In online games, there is a form of collaboration and sharing of items that is one example of communication. Game can also be used for learning and acquiring second languages. If in school, child tends to be more difficult to communicate using a second language because when communicating students are already worried about the values and grammar rules [3-7]. For instance, chat log in online games provide opportunities for child to communicate authentically with other gamers.

Speaking is one of the basic language skills that must be mastered and the use is very significant for communication. Many linguists conduct experiments in encouraging child to be comfortable and not worry worry about making mistakes in learning language . Not only that, the game is developed for a meaningful purpose and requires a comprehensive understanding that triggers benefits in the game.

A lot of research reveals that second language learning will be better using games [8-12], of course games will also be very good if it is implemented in improving communication in the first language. By using games, students are more relaxed in communicating.

Playing game can be effective in developing students' communication skills because the communication process done is very dynamic because child is thoughtful, emotional and communicators. Game is not only the container of knowledge but also as the media to get ideas, concepts, thoughts, emotions and feelings expressed based on their own life experiences.

II. DISCUSSION

There are several types of approaches taken in this literature study : (1) Games can train child's brain abilities during playing game (2) Game can affect child's speaking abilities in language acquisition both first and second language acquisition.

A. Game online for Brain Development

In playing online game, Child has several stages starting from the visual stage to the stage when the child experience cognitive abilities. The stages are as follows.

1. Sensory processing

When the light from the gadget falls into the retina, there is an interaction of about 100 million special neurons to deliver information to parts of the brain through the optic nerve. Early visual system function such as brightness detection, edge detection, orientation detection, segmentation, shape perception,

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ROOM TEMPERATURE REDUCING ECO COOLER MADE FROM WASTE PLASTIC BOTTLES

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Abstract

Summer is in full swing and many of us are complaining about the heat. But few places reach the scorching temperatures where air conditioning is simply not an option for most people living in rural areas. A clever DIY cooling system that does not require electricity is built from common waste items such as empty plastic bottles. We call it a eco cooling system. The working is based on the principle that when the compressed air expands through the nozzle, the swirl motion is created. The air moves as a free vortex from the nozzle plane towards the valve end. As it reaches near the valve, the kinetic energy is converted into the pressure energy giving a point of stagnation.

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Keywords and phrases: development of artificial cooler, waste bottles, unused cardboard, eco cooler.

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Design and Performance Analysis of Pentagon Shaped Microstrip Patch Antenna

P A Nageswara Rao, YSukanya, P. Mallikarjuna Rao

Abstract: *Integration of RF circuit components is required to make the antennas more compact and robust and is a trend in wireless application now-a-days. The micro strip antenna of patch variety is able to satisfy the requirement but the disadvantage is reduced gain and reduced band width. The gain has a range of 1-2 dB. So in order to increase the gain as well as band width, the substrate with low dielectric characteristics and higher thickness can be used. However, thickness increases surface waves. So, proper thickness of the substrate is required. This paper proposes a micro strip patch antenna based on a special design (pentagon) suitable for resonant frequencies in the range of 7.6 GHz to 7.9 GHz. So the analysis has been done by means ofAnsoft HFSS software V 17.0 by taking Rogers RT/Duroid 5880 (tm) as substrate material into consideration.Subsequently the gain, band width, radiation pattern and return loss has been evaluated with equivalent designs.*

Index Terms: *Microstrip patch antenna, Pentagon Shape, Gain, Bandwidth, Return loss, Radiation pattern.*

I. OVERVIEW

The micro strip patch antenna was first suggested by Deschampsin 1953.Munson and Howell commercialized such antennas in two or three dimensions around 1970's. Basically the patch antenna comprises a ground plane and a radiating patch separated by a substrate. The feed lines and radiating elements are etched on the substrate with photolithographic process [1]. An illustration of the micro strip patch antenna is revealed in fig. 1.

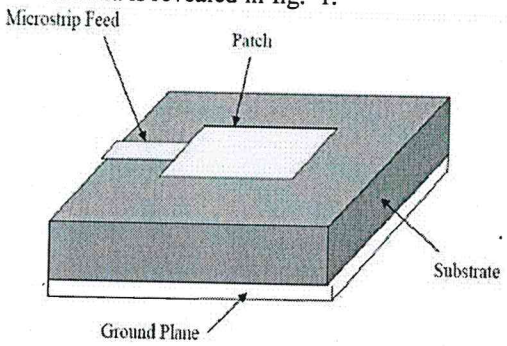

Fig.1: Microstrip patch antenna

Radiating patch can have different shapes like circular, square, elliptical, rectangular, pentagon, hexagonal and thin strip(dipole) as well as triangular. So the feeding can be done by using any one of the methods such as co-axial feed, line feed, CPW feed, inset feed, proximity coupling or aperture coupling[4, 7-9]. Two techniques of analysis are being used are cavity model and Transmission Line Model (TLM). Micro strip arrays cannot be used at high power levels as they are poor sources of radiation over a limited band of frequencies in wave guide and co-axial line. Santanu Kumar Behera & Y. Choukiker recommended a novel design based on Particle Swarm Optimization (PSO) along with MOM to obtain geometric parameters. A.Deshmukh & G.Kumar have proposed a flattened L-shaped patch antenna to get wide band. Further the band width of the above proposed antenna improved by 23.7% -24.43% by Z. M. Chen [2]. A satisfactory performance of the patch antenna is obtained by K. F. Lee [2] with a reduced size using U – slot. S. C. Gao [2] used photonic band gap to enhance gain and band width.

II. PRINCIPLE OF WORKING

The working theory of micro strip patch antenna is explained as follows. The two sides of the substrate have maximum and minimum electric fields with the middle portion having zero value. With respect to the instantaneous phase of the functional signal, the field signs on the sides of the patch change continuously. Finally, there is a spread of Electric field towards the boundary so that TM_{10} mode is radiated for rectangular patch.

Fr of patch antenna depends on the parameters like 1. Size of the GND plane 2. Patch width (impedance) 3. Thickness and ε_r of substrate. Applications of patch antenna include global positioning systems (GPS), vehicle based satellite link etc.

M. Abbaspour and H. R. Hassani suggested star shaped patch antenna to enhance impedance bandwidth. Different shapes of patch antenna in support of X band applications are made with FR4 (Flame Retardant) Epoxy substrate proposed by Sumanpreet Kaur Sidhu, Jagtar Singh Sivia [3]. By using pentagon shape it can be proved that the band width is better in comparison with other shapes. More over return loss also gives advantage for pentagon shape.

III. DESIGN OF ANTENNA

The pentagon shaped Microstrip antennas using Microstrip line feed technique are designed with HFSS V 17.0 software. The substrate used for the projected antennas is Rogers RT/duroid 5880 (tm) having $\varepsilon_r = 2.2$.

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DGS based Planar Inverted F Antenna for Multiband Applications

Y Sukanya, P.SaiSpandana, G.V Harshini, P.V.Y.JayaSree

Abstract: *As Long Term Evaluation systems have more benefits when compared to other network systems, it became more popular. Integrating a lower band with a higher by considering space as a constraint became a challenge for designers. A simple PIFA (Planar Inverted F Antenna) with DGS(Defective Ground structure) is suggested inmultiple band applications. The proposed antenna is designed using the CST Microwave Suite 2017. The design is for substrate having $\varepsilon_r$of 4.4(FR-4), (tan δ) 0.02 as loss tangent with a thickness of 1.53mm is preferred for designing of this antenna and is etched directly upon the substrate.*

Keywords : *Planar Inverted F Antenna,Defected Ground Structure (DGS), Multi band, Return Loss(RL).*

I. INTRODUCTION

LTE (Long Term Evaluation) has been the main features of 4G mobile systems for enhanced broadband and multimode applications like GSM,UMTS.LTE has gained popularity among mobile network technologies. Applications of LTE in mobile phones and also in various types of computers has been very well recorded [1-9].

The compact size of the cellular phone with lower frequency LTE bands creates hurdles in the design of suitable antennas. have been widely experimented. For achieving desired characteristics, lot of effort goes in optimization of chosen design parameters. The chief aim of this research is to propose multiband characteristics for mobile handsets keeping in mind uncomplicated rules of design requires to attain minimal dimensions of satisfactory operation. For this purpose, DGS structure is with simple PIFA structure is preferred.

II. DESIGN METHODOLOGY

The size of the projected simple PIFA antenna has been displayed in figure 1. The design is carried out using CST Microwave studio suite 2017which works on FEM(Finite Element Method)using substrate of ε_r=4.4 (FR-4), loss tangent (tan δ) 0.02 , (dielectricconstant) 4.4 with a thickness of 1.53mm along with copper thickness of 0.035mm were chosenfor making DGS and patch below and up side of the substrate. The simple antenna based on PIFA has been governed by the following equation with centre frequency of 2 GHz.

$$f = \frac{C}{4\,(L1-gX)\sqrt{\varepsilon_r}} \quad (1)$$

Where f = operating frequency
$L1 - gX$= Length of antenna
ε_r =dielectric constant
C= Velocity of Light

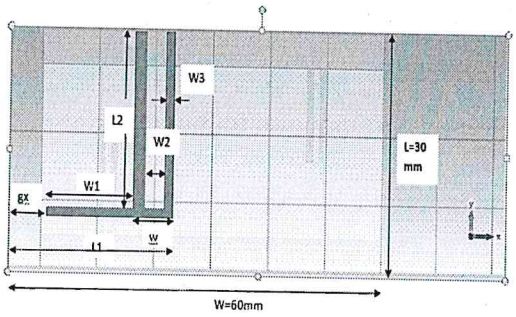
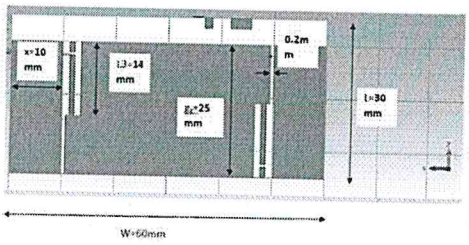
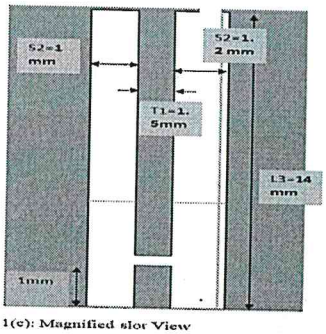


Figure 1: Geometry of the Proposed Antenna

1(a): Top View



1(b): Bottom View



1(c): Magnified slot View

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Big Data Analytics and Intelligence: A Perspective for Health Care

Muruganantham A., Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar, Wahidah Hashim, Andino Maseleno

Abstract: *The term big data refers to a group of large and vast amount of data collected from many research organizations, hospitals and scientific organizations which can be available for the healthcare. Such big data have potential for improving in the research in healthcare. The big data helps to analyze the clinical datasets and provides the key insights for the patients care. Such data can be analyzed by several multidisciplinary methods. The big data and intelligence model also helps to provide support in taking recommend action and make the decision making model more strong. The Healthcare medical artificial intelligence system mainly uses a computer software to perform the health and clinical diagnoses and suggest the proper treatments. Predictive analysis is also the most important part of Big Data Analytics which use datasets and historical data to make the predictions about the disease. But such predictions results may vary for person to person. Every person have different immunity power, so an detailed research may help to lead better results. There are many techniques and algorithms are available such as PPDM, Machine Learning, Data Mining Algorithms, Artificial Intelligence etc. In this research it is studied that how health care data can helps patients in predicting diseases and improve the treatment*

Keywords: *Big Data Analysis for Health Care, Data Mining, Artificial Intelligence, Privacy Preserving Data Mining.*

I. INTRODUCTION

The big data analytics is the process to get vast data from the research organizations in a encrypted pattern [1-3]. Then examine, correlate the data and compare it with the previously submitted data [4-6]. Once data is analyzed then produce the insights and a strong decision support system [7-9]. Such system helps to take faster decision to support healthcare in a better way. The enormous information breaks down the clinical datasets and gives the key bits of knowledge to the patients care. Such information can be broke down by a few multidisciplinary strategies.

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II. BIG DATA ANALYTICS AND INTELLIGENCE MODEL

The enormous information and insight model additionally offers help in making suggest move and settle on the basic leadership model increasingly solid [8-11]. Figure 1 shows the basic model of big-data analytics and intelligence system providing support of better healthcare.

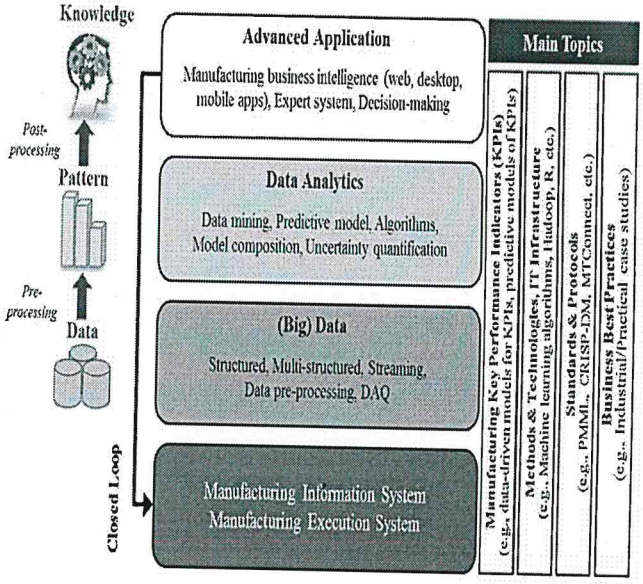

Figure 1. The basic model of Big-Data Analytics and Intelligence System providing support of better healthcare

The Healthcare medicinal man-made consciousness framework essentially utilizes a PC programming to play out the wellbeing and clinical findings and recommend the best possible medications [12-15]. Prescient examination is additionally the most significant piece of Big Data Analytics which use datasets and authentic information to make the expectations about the ailment [16-18].

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Mobile E-Commerce Website for Technology-Based Buying Selling Services

Eti Sri Asih, Kasmi, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar, Wahidah Hashim, Andino Maseleno

Abstract*: Buying and selling mobile phones which located at Raya Kedondong Street Waylima Subdistrict, Pesawaran District is a store that is engaged to develop, improving, and promoting the store so that it can be known outside the region. So with this, it is necessary to give easy service to the customers who are far from reach. It can be realized by (E-Commerce). Then an application system was built to help the service information about buying and selling mobile phones which uses the SDLC method, that will produce an information system related to buying and selling mobile phones. With this application, it will help the seller in managing data of ordering goods, customer data, and facilitate consumers in finding information about prices and brands of mobile phones.

***Keywords*: Web mobile, Buying and Selling, E-Commerce.**

I. INTRODUCTION

A. Research Background

The development of Information Technology today is very rapid and continuous, and the industrial world of business today has increased [1-3]. Competition between industries to dominate the market is very large. This condition certainly must be examined in order to get around the competition. This makes industries increasingly appear in various types of industrial fields in various places [4-6]. One use of information technology that makes communication easier is the Internet [7-9]. With the internet, business people have no longer difficulty in obtaining any information, to support their business activities, even now it tends to be able to obtain various kinds of information, so that information must be filtered to obtain appropriate and relevant information [10-12].

The great benefits of information technology, making E-Commerce give a big impact on the development of business practices, namely in terms of sales to perfect direct marketing, such as organizational transformation and organizational redefinition [13-15]. This business model suppresses information exchange and transactions, businesses use other technologies that are also network-based. Basically, E-Commerce is doing online business. In its clearest form, E-Commerce sells the products to consumers online, but the fact is that any type of business that is conducted electronically is called E-Commerce. Simply, E-Commerce is creating, managing, and expanding commercial relationships online.

With the weakness of the cell phone buying and selling service, it is necessary to design and develop a website-based system to facilitate customers in making transactions and ordering goods and can help meet the consumers needs. Based on the previous explanation, the researcher is interested in conducting research and making a new web-based information system to develop, improve, and promoting so that it can be known outside the region under the title "Mobile e-commerce website for technology-based buying selling services"

B. Research Question

To make the problems discussed are not too extensive and can be more focused on analyzing and designing the system, then limiting the problem, including: How to build an E-Commerce in mobile buying and selling service?

C. Research Limitation

The limitations of the problem in this research are as follows :

1. Only used for the traders of buying and selling mobile phones.
2. This application uses a database system so all the defective data is safe.
3. The price of each handphone is entered manually and can be edited by the traders according to the price.

D. Research Objectives

From the description of the main problems above, the purpose of this research is to design and build an e-commerce-based mobile sales information system.

E. Benefits of Research

The benefits of this research are as follows:

1. The availability of more attractive information, that is integrated directly with ordering and payment confirmation.
2. Reducing the time of ordering goods

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Efforts to Overcome Mathematics Learning Difficultyfor Dislexicdiscalcular of Elementary School Students

Noviana Diswantika, Apri Wahyudi, Dedi Irawan, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: ***For some people with dyslexia, success in the field of mathematics may be something that must be achieved with great struggle. There are various studies that report this problem that 10% of dyslexic children are geniuses in mathematics and show very good achievements in mathematics, but there are a majority of people with dyslexia experience dyscalculia or learning difficulties in mathematics. To overcome this requirement,an effort or strategy can make children absorb and understand learning mathematics well and can learn normally.***

Keywords : Difficulty in Learning Mathematics, Dyslexia-dyscalculilia

I. INTRODUCTION

Every child has a different character, as well as in terms of academic ability that is often called intellectual or intelligence. Some children have intelligence that is below average, even above average, and this affects children's performance in school. When a child is unable to perform well and satisfactorily based on his intelligence, the child is said to be a child with learning problems or learning difficulty.Learning difficulty can also be interpreted as the child's inability to complete the tasks given by the teacher. According to Masroza (2013).

This learning difficulty is a real disorder in children associated with general and special tasks, which are thought to be caused by neurological dysfunction, psychological processes and other causes so that children who have learning difficulties in a class show low ;earming achievement .

Children with learning disabilities have their own unique characteristics and different learning styles. Therefore, every child has the ability to succeed in their studies. Teachers are able to monitor their progress and implement various teaching strategies in the classroom. These students need special attention and are categorized as students with special needs[1]

Students with special needs naturally experience learning difficulties. The learning process of children with learning difficulties requires several strategies or approaches that are adapted to the child's condition.

Difficulty in reading, writing expressions, and process of arithmetic is part of the learning difficulties in the academic achievement problems. Hallahan and Kaufman, as quoted by Mangunsong, stated that some characteristics that are generally possessed by students with learning difficulties, are grouped into six types of problems, namely the problem of academic achievement; perceptual, perceptual-motor, and general coordination issues; attention problems and hyperactivity; memory, cognitive, and metacognitive problems; social-emotional problems; and motivational problems. [Frieda Mangunsong, Psychology and Education of Children with Special Needs Volume One (Depok: LPSP3 UI, 2014), 201] From this classification of academic achievement problems are divided into terms of dyslexia, dyscalculia and dysgraphia. But in this study, it only explains the learning difficulties or dyslexia, dyscalculia

Specific learning difficulties include difficulty in reading, spelling and writing that are found in children with normal levels of intelligence or even in intelligent children. Dyslexia can also manifest as communication disorders or difficulties in mathematics. Difficulties in learning mathematics are referred to as persons with dislection-dyscalculia.

There are various studies that report this problem. One researcher (Steeves, 1983) reported that many dyslexic children are geniuses in the field of mathematics. In contrast, Joffe (1990) reported that 10% of dyslexic children showed very good performance in mathematics, while the other 30% showed that there was no difficulty at all in the field of arithmetic counting. However, Miles and Miles (1992) report that most dyslexic people have dyscalculia.

Based on the explanation above, this paper will examine more about children who have difficulty in learning mathematics or dyscalculia and how the efforts or

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[1]Sulaiman, dkk. 2008. *The Level of Cognitive Ability among Learning Disabilities Children in Malacca Malaysia.* . Online: http://www.ccsenet.org/journal/index.php/ijps/article/download/10747/7596

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Exploration of Retinopathy Disease using Machine Learning Methodology

Khasanah, Sumardiyono, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: *The whole world is affected with the problem of Diabetic Retinopathy. Whenever a patient has diabetes, it starts affects human body sensitive parts. So the situation becomes very dangerous for the person. Here in this research work it is tried to detect Hemorrhages and micro aneurysms in multiple fundus images collected from various research institutes worldwide and available datasets. In initial it is required to separate RGB colors from the image. The green color is used for further processing. Further the grey color image is extracted for getting the texture of the input image. The feature extraction algorithms are used to classification. So that it is possible to predict the current situation of the retinal image. Once the situation is classified the segmentation algorithms are used using adaptive thresholding segmentation.*

Keywords: *Diabetic Retinopathy, Segmentation Algorithm, Grey Scale Image, RGB Images.*

I. INTRODUCTION

Diabetic retinopathy (DR) is a vascular disease of the retina which affects patients with diabetes mellitus. The entire world is influenced with the issue of Diabetic Retinopathy. At whatever point a patient has diabetes, it begins influences human body touchy parts. So the circumstance turns out to be exceptionally perilous for the individual.

Here in this examination work it is attempted to distinguish Hemorrhages and miniaturized scale aneurysms in numerous fundus pictures gathered from different research foundations worldwide and accessible datasets. In beginning it is required to isolate RGB hues from the picture. The green shading is utilized for further handling. Further the dim shading picture is extricated for getting the surface of the information picture. The component extraction calculations are utilized to grouping. With the goal that it is conceivable to anticipate the present circumstance of the retinal picture. When the circumstance is arranged the division calculations are utilized utilizing versatile thresholding division.

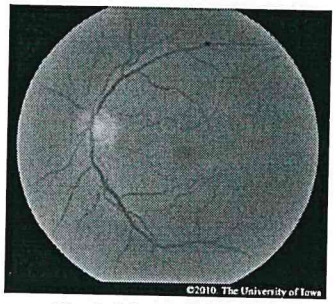

Fig.1. Normal Fundus

Glucose control likewise has the additional advantage of diminishing danger for opposite end-organ difficulties of diabetes, so it is significant that diabetic patients are instructed on the theme.

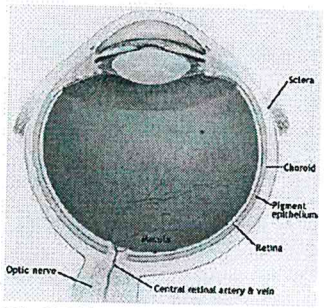

Fig.2. Diagram of Normal Eye Anatomy

The retina is one of the most sensitive part of eye and also it is a group of layers. It is one of the most metabolically dynamic organs in the body, and thus, it is amazingly touchy to ischemia and supplement irregular characteristics (Bengin 2004).

Classification

DR is classified into two main classes depends on the effects on retina. The first class tells weather retina is effected or not and the second class tells that the eye condition is stable.

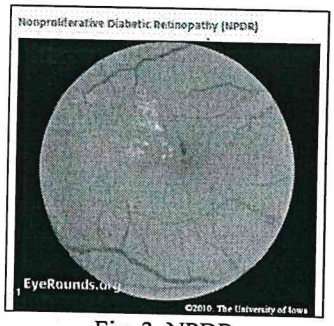

Fig. 3. NPDR

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Leaf Disease Classification using Advanced SVM Algorithm

Rima Herlina S. Siburian, Rahmi Karolina, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract:-Presently there are many alternates of pesticides and unfortunately a very big portion of the industry is relies and using such poisons to protects crops to prevent from bugs attack and spreading of infection. Such pesticides are seriously very harmful and used unorganic chemicals. Even some of such pesticides are beneficial for insects too. Even some times there is also an possibility that such chemicals may be automatically washed during rain or watering the crops. So the research since years on green house agro system focus on early pest detection. Such methodology focus on observing plants by camera. The images captured by cameras can be used to analyzed that weather the plants are infected or not. A number of methods and algorithms such as color conversion, segmentation, k-mean, knn etc are used to classified such images. This research is focusing on the interpretation of image for early stage pest detection so that the crop should be prevented from damage.

Keywords:- Early PEST Detection, Segmentation Algorithm, Pesticides alternates, Binary Image Conversion.

I. INTRODUCTION

This research primarily focuses on greenhouse crops. Image processing strategy assumes a significant job in the discovery of the irritations. Truly there are different trades of pesticides and incredibly a vital bit of the business is depends and utilizing such risky substances to shields harvests to keep from bugs trap and spreading of debasement. Such pesticides are actually fantastically risky and utilized inorganic produced substances. Beyond question, even some of such pesticides are beneficial for bugs too. In actuality, even a few times there is in like way an acceptability that such synthetics might be in this way washed during precipitation or watering the harvests. So the evaluation since years on green house agro framework base on early bug conspicuous confirmation. Such framework base on watching plants by camera. The photographs gotten by cameras can be utilized to investigated that climate the plants are undermined or not.

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Various methods and tallies, for example, hiding change, division, k-mean, knn, and so on are utilized to mentioned such pictures. This examination is concentrating on the translation of picture for beginning time inconvenience affirmation with the target that the yield ought to be kept from underhandedness. The principal goal is to distinguish some example bug. To accomplish this some advanced picture preparing calculations are gained. The model framework demonstrated dependable for fast location of bug. All techniques in this paper spare time and give proficient outcome. The strategies utilized are DBSCAN and NN calculations. The by and large early nuisance recognition exactness is 96% dependent on complete irritation dataset utilized in research.

Directly there are numerous interchanges of pesticides and shockingly a major part of the business is depends and utilizing such toxic substances to shields harvests to keep from bugs assault and spreading of contamination. Such pesticides are genuinely extremely destructive and utilized inorganic synthetic substances. Indeed, even some of such pesticides are valuable for bugs as well. Indeed, even a few times there is likewise a plausibility that such synthetics might be consequently washed during precipitation or watering the harvests. So the examination since years on green house agro framework center around early bug identification. Such strategy center around watching plants by camera. The pictures caught by cameras can be utilized to investigated that climate the plants are tainted or not. Various strategies and calculations, for example, shading transformation, division, k-mean, knn and so forth are utilized to ordered such pictures. This exploration is concentrating on the translation of picture for beginning time bother recognition with the goal that the yield ought to be kept from harm.

Background History

Beneath gave is a short outline of the calculations that are at present utilized for vermin distinguishing proof by various researcher's exploration.

In paper [1] creators present picture preparing strategy for Rice malady distinguishing proof and considered the two most normal infections in the north east India, to be specific Leaf Blast (Magnaporthe Grisea) and Brown Spot (Cochio bolus Miyabeanus).

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Adaptive PI control of Electric Springs For Voltage Regulation Under Dynamic Load Changes

K.K.Deepika, J. Vijaya Kumar, G. Kesava Rao, Seelam Chaitanya

Abstract: ***Due to continuous distributed generation development technology, the accessibility of wind, solar and also the renewable energy sources tends to intensify. To suppress the voltage fluctuation caused by the distributed generation electric springs had been developed. In this article an adaptive control of Electric spring is proposed, in which the gains of the PI controller are optimised by TLBO to maintain constant voltage across critical load. The proposed strategy is tested for dynamic changes in the non-critical load. Simulation results show that, for voltage fluctuations caused by the DGs and also with the dynamic load changes, ES with adaptive controller stabilize the bus voltage effectively, over ES with Fuzzy Logic Control and traditional PI control.***

Index Terms: Electric Spring, TLBO, Tuning of PI controller.

I. INTRODUCTION

The energy domain has become a conspicuous topic in global research due to the escalating prominence of energy and environment. So due to its important features the primary energy may be the extensive application of renewable sources. When DG supplies to the active distribution network, it reduces the transmission power ratings. DG has strong fluctuation due to solar energy and wind energy, which cause severe damage on the working of power system, and also increases the occurrence of failure in the system. Control of reactive power and energy storage [1] are the two viable solutions. Among these two reactive compensation technology cannot meet DG scenario much effectively, and energy storage technology (battery) can solve the voltage fluctuation in an effective manner as the current capacity is small but leads to high installation cost and effect on environment.In order to overcome these problems, Prof. Shu Yue (Ron) of Hong Kong University and the other members had introduced the analogy to mechanical spring that is Electric Spring (ES) [2]. ES can reduce the fluctuations and maintain the stabilized voltage, with the variations in renewable power generation capacity. [3] Discusses how PI controller post gain varies with the output current of ES to restrain voltage fluctuations. In [4], 0°/180° phase control technique is implemented to limit fluctuations in active power at the distribution network, using ES. In [5], performance of ES with droop control and coordinated droop control for voltage control is compared by considering European LV network.

In general, parameters of the PI controller have fixed values. To stabilize the voltage across critical load, for variations in the set point, parameters of the PI controller must be optimized dynamically. In the regulatory layer, tuning process involves refinement of control parameters to reduce the error. Conventional mathematical methods like Ziegler-Nicholas and Cohen-Coon methods, did not yield anticipated results. Advancements in the fields of metaheuristic optimization algorithms, led to improved tuning of PI controllers. This paper implements Teaching-Learning Based Optimization to determine optimal control gains. Advantage of TLBO is that it does not require any algorithm parameters for execution. Tuning of PI controllers with TLBO algorithm has been extensively applied in the last 7 years in diverse fields [6]-[12].

This paper presents tuning of PI controller with TLBO algorithm applied to the operation of Electric Springs in Distribution Systems. Main contributions of the paper are to highlight the robust and fast response of proposed adaptive controller to voltage fluctuations caused by intermittent power sources and dynamic load conditions. Robustness of the proposed adaptive PI controller for ES is highlighted by the comparison of obtained results with the conventional PI and Fuzzy Logic controllers.

II. ELECTRIC SPRINGS

A British Physicist Robert Hook had invented the" Mechanical Spring" concept, and three centuries hence, the mechanical spring had been used in electrical equipment and was named as "Electrical Spring".

The two types of springs are the mechanical spring and the electrical spring. The mechanical spring is a device that stores mechanical energy to provide mechanical support for damping the mechanical oscillations.

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Distributed Architecture for Secure, Attack-Resilient Crypto Currency Transactions for the Classified Temporal and Text Data

Challa Narasimham

Abstract: In the digital world, the crypto currency has to do with the use of tokens based on the distributed ledger technology in a secure manner. Crypto currency can be a resource on a block chain network or can be seen as a tool to perform the transactions ensuring the privacy and security. Data may be available in temporal or text format. This paper describes about the distributed architecture for secure and attack-resilient bit coin-based crypto currency transactions for classified temporal and text data. The temporal data may be voice, sound or graphical information basing on the time series. If the data available is temporal this work describes about how it can be classified into a processed form. In this context, this paper describes the process of converting temporal data into text data. Further, the paper describes about the process of ensuring the security. This paper describes about the methodologies of cryptography-based hashing, attack-resilient nonce generation and verifiable encryption techniques for the construction of resilient transactions against stealthy data-integrity attack.

Keywords: *Classification, Crypto currency, Hashing, Nonce, Temporal Data, Transactions, Verifiable encryption.*

I. INTRODUCTION

Now a day's majority of the applications like e- transactions performing over internet. Billions of operations that are taking place over digital systems. At the same time threats are also increasing in enormous way. One side technology is growing the other side it is enviable to come up with security measures to ensure the transactions over internet. In the digital system crypto-currency a specially designed data structure and transactions.

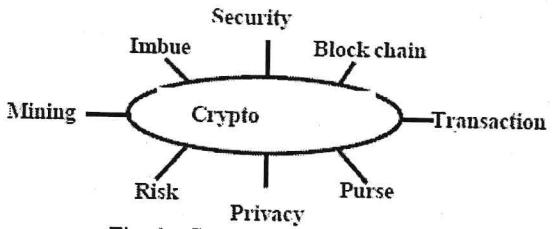

Fig. 1. Crypto currency data structure

Data can be text data, temporal data. Data available in the form of text from other sources, on the other hand it can be temporal. Temporal data refers to data changes over time. It can be represented by its general form

$td = fun(time))$;

and for a discrete time stamps ts, this can be in the form

$td_i = fun(ts_i)$;

Data can be classified to identify, manage and protect the information by representing as a layered security to protect itself against advanced persistent Threats from the outside world.

II. EXISTING SYSTEM

The block chain is the distributed registry of bit coin entities. It is recurrently developing as miner and appends new blocks to document the updated negotiations. These blocks are updated to the block chain in a linked list manner. The pass around blocks linked to the Bit coin network.

Block chain technology has been used for the bit coin as a digital currency. The block chain is the name of the technology behind of Bit coin. Technically the block chain is similar to a database, except that interactions with them differ. A public distributed ledger of all block chain transactions or digital events that have been executed and shared among the participating parties across peer-to-peer networks. The bit coin system transactions by them in groups called blocks and then linking these blocks. The transactions in a single block are considered to have happened at the same time. These blocks are linked to each other (like a chain) in a linear, chronological order, with every block containing the hash of the previous block.

III. PROPOSED PROCEDURE

The following is proposed to orvide distributed architecture for secure, attack-resilient transcations.

a. Classify the temporal data into text file
b. Temporal to text data conversion using classifier
c. Data Conversion using SHA256
d. Nonce generation
e. Verifiable Encryption
f. Mining

A. Architectural Design

The work proposes to integrate the transaction and security as well as to protect from threats and disturbances by using block chain Technology. The project focuses on adaptive featured dynamic hash algorithms for the cyber-secure data transactions in the Block-chain models. It is proposed to demonstrate the efficacy of security and privacy of crypto currency data transactions for the Bit coin application.

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Genomics and Machine Learning

Velmurugan R., Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar, Wahidah Hashim, Andino Maseleno

Abstract: *Genomics is one of the most focused area for studying and helps to understand the nature of disease and it is an area where genetics can be deeply studied and research conclusion can be obtained. Genomics is different from genetics as genetics is the composition of only single gene but on the opposite side the genomics contains all gens and also keep track of their collectively growth during the development process of an organism. Here the datasets of DNA on the organism is called Genomic data. This datasets are further used in bioinformatics for doing experiments on collect and process for research. For this purpose a very large storage space and specifically-built computer program is required to analyze. Genomic is also different from the proteomics because in proteomics only focuses on the proteins present in the cell. The Genomics research involves many scientific factors, which leads to identify many diseases symptoms such as heart related disease, diabetic, cancer etc. Here in this approach genomics is useful because somewhere and somehow the genetic and the external factors are causing such diseases. The purpose of deep learning with genomics is to identify the disease and learning the development structure of disease. Such research may help in treating diseases in a better way.*

Keywords: *Genomics Study, Genomics Applications, Machine Learning Techniques, Genomics and Research.*

I. INTRODUCTION

The Genomics research includes numerous logical elements, which prompts recognize numerous infections side effects, for example, heart related illness, diabetic, malignant growth and so forth [1-3]. Here in this methodology genomics is valuable since some place and by one way or another hereditary and the outer components are causing such infections [4-6]. The reason for profound learning with genomics is to distinguish the ailment and learning the advancement structure of infection. Such research may help in treating illnesses in a superior manner. Genomics is one of the most engaged zone for considering and comprehends the idea of sickness and it is a territory where hereditary qualities can be profoundly examined and investigate end can be gotten.

Genomics is not the same as hereditary qualities as hereditary qualities is the creation of just single quality however on the contrary side the genomics contains all gens and furthermore monitor their all in all development during the advancement procedure of a life form [7-9]. Here the datasets of DNA on the living being is called Genomic information. This datasets are additionally utilized in bioinformatics for doing investigates gather and procedure for research. For this reason a huge extra room and explicitly assembled PC program is required to examine. Genomic is likewise not the same as the proteomics in light of the fact that in proteomics just spotlights on the proteins present in the cell [10-13].

II. MACHINE LEARNING

Machine learning is one of the moist important application of artificial intelligence which have ability to detect, analysis and produce results related to disease [14-17]. The beauty of machine learning process is deep learning. The program learns new things every day on the basis of datasets provided as in input. Figure 1 shows machine learning supporting the clinical DSS.

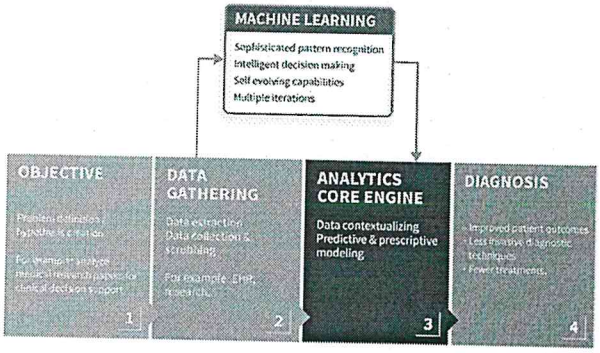

Figure 1. Machine Learning Supporting the Clinical DSS

In other words it can be said that machine learning is the process of continuously improvement and development of computer software which access datasets or patient data and use it for themselves for further learning. A large amount of datasets is used for machine learning. Although it helps to solve a problem in a faster way but there is also an disadvantage that it is very difficult to cross verify the datasets weather they are compatible for the machine learning software or not. Notwithstanding figuring out how to perceive designs in DNA groupings, AI can take as info information created by other genomic examines, for example, microarray or RNA-seq articulation information, chromatin availability tests,

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Comparative analysis of Test Case Prioritization Approaches in Regression Testing

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ABSTRACT

Testing is a huge time and cost consuming task in software development. Moving most of the testing strategies from manual to automation has significantly reduced time and efforts a lot. Still, regression testing pays a lot in time, effort and cost for testing the whole software for each change in the code. Thus, test case prioritization is highly researched and improved domain in last decade which covers and prioritizes all the test cases for early fault detection and cost saving. In this paper, 27 scholar articles are reviewed ranging from year 2000 to 2019. Objective of this paper is to review and compare top TCP approaches for their strengths and limitations. This comparative study will be beneficial for beginners and experts in the domain of TCP for further study.

Key words : Coverage based, comparative study, history based, model based, regression testing, test case prioritization

1. INTRODUCTION

Testing is one of the significant phases in SDLC model, where cost, resources and time are the key factors. Traditionally, testing is performed after the coding phase. But nowadays, as the agile became the development approach due to its benefits, testing has become a parallel activity performed along with the coding. Aim of the testing is to deliver the defect free software within estimated cost and schedule, which can be achieved by detecting defects in the early phase of software development.

Testing becomes very crucial when the software undergoes continuous changes/ up-gradations. Regression testing is the approach which confirms that changes done in the code under up-gradation has not affected the already working functionalities of SUT. Regression testing is performed by re-running all the test cases which ensures that no new defects have been introduced in the changed code. However, re-running all the test cases ("Retest All" approach) at each stage of change in the application is impossible in terms of money, time and resources. Thus, researchers have focused on this problem in last two decades and came up with many solutions to reduce the time for testing along with improvement in effective testing. Test Case Prioritization (TCP) is the widely researched area to overcome the limitations of regression testing. TCP ranks the test cases of the test suite in order to achieve one or more objectives, such as increasing the rate of fault detection, reducing time for testing, detecting bugs in early phase of development, prioritization based on user requirements etc. Average Percentage of Faults Detected (APFD) metric is used study the rate of fault detection[2]. Too much detection of faults after doing the modification in the code has direct effect of reliability of software [4].Regression testing is the part of risk management of system under maintenance which distinguishes potential faults in the system before they happen and influence software system risk, thus reliability [5]-[7]. In research work [09], author has frame a software reliability growth model by using the test execution time and code coverage information.

Despite of some literature surveys and studies of introducing and evaluating TCP approaches, there are limited comparative studies available for TCP approaches. In this article, we have reviewed the ten recent survey papers, which results that code coverage, model and history based are most commonalty used TCP approaches. Here, we are building a comparative study of coverage, model and history based TCP approaches. We have surveyed the recent contributory articles under these three approaches and performed a comparative analysis.

2. CLASSIFICATION OF TCP TECHNIQUES AND OBJECTIVES

There are three techniques under regression testing: Test Case Prioritization (TCP), Test Case Selection (TCS) and Test Suite Minimization (TSM). Test Case Selection (TCS) is like subset of Test Case Prioritization, where selected test cases from the test suite are picked for execution. TCS aims to locate the faults under the changed code and execute them to get the confidence that changed code does not have affected unchanged code. TCP re-execute all test cases where TCS execute subset of test cases. TSM goal is to trim down the number test cases from the test suite which are redundant and absolute.

TCP is better approach as compared to TCS and TSM, as it does not negotiate with the quality of testing by reducing the test suite. Every TCP technique follows one or more objectives; so technique can be single or multi objective. Figure 1 shows TCP techniques and objectives.

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Time-Domain Simulations of Single-Phase Enhanced PLL for Power Converters under Distorted Grid Conditions

K.K.Deepika, J. Vijaya Kumar, G.Kesava Rao

Abstract: With the developing number of alternate energy sources being connected to the Grid, there is a need for robust Grid synchronization technique that is capable enough despite the grid frequency and phase variations. Single phase Enhanced Phase Locked Loop (EPLL) presented in this paper meets these requirements. A detailed study of the performance of EPLL for disturbances in input grid voltage magnitude, phase and frequency is detailed through mathematical equations. Extensive simulations are carried out in Matlab/Simulink to analyze the phase and frequency tracking by EPLL. Dynamic response is examined carefully in terms of estimation of grid voltage, frequency and phase error.

Index Terms: Phase locked loop, frequency jump, Phase jump..

I. INTRODUCTION

Electric Power System is experiencing a tremendous change with the proliferation of Distributed Generation Sources such as wind, Photovoltaic cells, micro turbines and fuel cells. Grid connection schemes have become rigid to avert any occurrence of grid stability. Determination of phase angle of the grid voltage by grid synchronization algorithm plays a vital role in the Grid connection scheme. Some of the methods for grid synchronization are zero-crossing method [1], filtering method [2], Phase locked loop (PLL). Zero crossing technique enables detesscton of phase angle of grid voltage for every half cycle. But operation time is high and it is prone to distortions in input signal. In filtering method phase angle is calculated after transformation of grid voltage to dq or αβ frames. Drawbacks of all these methods are overcome and the calculation is accurately and quickly performed by PLL. PLL achieve this using closed loop control to synchronize between the distributed generation and utility grid [3]. PLL discussed elaborately in [1][3][4] produces a sinusoidal signal of the same frequency and phase as the fundamental component of the fed input signal with noise.

Conventional PLL [5] consists of a phase detection unit (PD), a low pass filter (LPF) and a voltage Controlled Oscillator (VCO). Major drawback of the conventional PLL is its poor performance when the difference between the frequency of the applied signal and that of the VCO is very large. [6] Details improvement in the operation of PLL by addition of another lowpass filter and a nonlinear element. [7] Introduced Enhanced Phase Locked Loop (EPLL) and presented its widespread applications to power system applications. It was further explained in [8] and modified in [9] with adaptive frequency estimator.

This paper presents the detailed mathematical modelling of Enhanced Phase Locked Loop (EPLL) and demonstrates the amplitude and phase are estimated in section II. Dynamics of the phase/frequency loop are analyzed and validated with extensive simulation results in section III. Section IV concludes the work.

II. EPLL MODELLING AND OPERATION

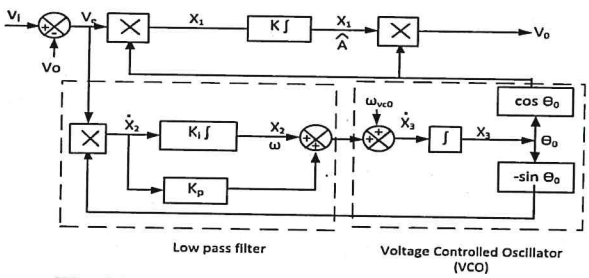

Fig. 1 Basic scheme of a single phase EPLL

$$V_o = \hat{A}\cos\theta_0 \quad (1)$$
$$x_1 = \hat{A} \quad (2)$$
$$x_2 = \Delta\omega_e \quad (3)$$
$$x_3 = \theta_0 \quad (4)$$

Block diagram of EPLL based on Eq. (5)-(8) is shown in Fig. 1.

$$\text{Error in voltage, } V_e = V_i cos\theta_i - \hat{A}\cos\theta_0 \quad (5)$$
$$\dot{x_1} = KV_e cos\theta_0 \quad (6)$$
$$\dot{x_2} = V_e K_i(-sin\theta_0) \quad (7)$$
$$\dot{x_3} = x_2 + K_p V_e(-sin\theta_0) + \omega_{vc0} \quad (8)$$

Substituting Eq. (5) in Eq. (6)-(8) and further using Eq.s(1)-(4) gives,

$$\dot{x_1} = \frac{K}{2}V_i[cos(\theta_i + \theta_0) + cos(\theta_i - \theta_0)] - \frac{\hat{A}}{2}K[1 + cos(2\theta_0)] \quad (9)$$

$$\dot{x_2} = -K_i(V_i cos\theta_i - \hat{A}\cos\theta_0)sin\theta_0 \quad (10)$$

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Parallel Computation Performingkernel-Based Clustering Algorithm Using Particle Swarm Optimization For The Big Data Analytics

E. Laxmi Lydia, B. PRASAD, Gogineni HimaBindu, K.Shankar, K.Vijaya Kumar

Abstract: *Digital data has been accelerating day by day with a bulk of dimensions. Analysis of such an immense quantity of data popularly termed as big data, which requires tremendous data analysis scalable techniques. Clustering is an appropriate tool for data analysis to observe hidden similar groups inside the data. Clustering distinct datasets involve both Linear Separable and Non-Linear Separable clustering algorithms by defining and measuring their inter-point similarities as well as non-linear similarity measures. Problem Statement: Yet there are many productive clustering algorithms to cluster linearly; they do not maintain quality clusters.Kernel-based algorithms make use of non-linear similarity measures to define similarity while forming clusters specifically with arbitrary shapes and frequencies.*
Existing System:Current Kernel-based clustering algorithms have few restraints concerning complexity, memory, · and performance. Time and Memory will increase equally when the size of the dataset increase. It is challenging to elect kernel similarity function for different datasets. We have classical random sampling and low-rank matrix approximation linear clustering algorithms with high cluster quality and low memory essentials. Proposed work: in our research, we have introduced a parallel computation performing Kernel-based clustering algorithm using Particle Swarm Optimization approach. This methodology can cluster large datasets having maximum dimensional values accurately and overcomes the issues of high dimensional datasets.

I. INTRODUCTION PREFACE

Advancement in data creation, data acquisition, and data storage applications. This lead to an explosion in digital data. Corporations like IDC and ECM has anticipated that 44 ZB of digital data generated by the year 2020(Fig 1).Real-timeprocessing of high-dimensional digital data both structured and unstructured as a part of big data.

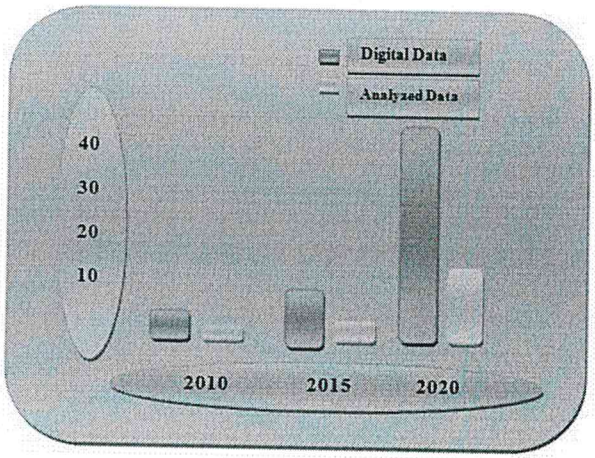

Fig.1 Data creation from past years to future years

Big Data Analytics margin new applications for different sectors, recent beneficiary services were provided to medical healthcare systems. Any data analysis is normally classified as finding data and process the data effectively without any noise. It identifies various patterns and designs the data accordingly. Most of the digital data deal with Statistical methods. It follows the internal process of pattern recognition like the representation of data, learning, and interpretation of data.

Set of features represent data objects among the datasets. These features from the data sets can be mathematical numbers, unambiguous. A text document words can be represented as x_p. Image pixels can be represented using intensity values. Representation of data plays a major domain to proper and accurate result analysis. With respect to the new applications, deep learning has employed effective approaches for automatic representation of data.

Hidden structured data in unsupervised does not need labeling, therefore it is easy to avoid searching of data. Tasks performed by unsupervised learning are estimating density, dimensionality reduction, finding features and extracting them, finally cluster features.

A. Unsupervised Classification

Prominent approaches for unsupervised classification is Clustering. The process of clustering is easier and reliable. Clustering has found its place in popular applications like web search, retrieval of information, market analysis etc. Clustering algorithms are developed based on the datasets.

Hierarchical clusteringalgorithm, creates a hierarchy of clusters i.e, groups to the subdivisions.

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Performance Analysis of Pentagon Shaped Microstrip Patch Antenna with Different Substrate Materials

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Abstract: Microstrip patch antennas are the handiest antennas for the present trend of applications in communications. The well-known beneficial mechanical characteristics (low profile, light weight, planar but conformal to non-planar structures, easy to fabricate), flexibility in terms of electromagnetic parameters like radiation pattern, gain, impedance, polarization and low cost are the key features for the success of such antennas. High efficiency antennas are essential to cater the requirements of various military oriented space vehicles like spacecraft, aircraft, satellite and missile applications where dimensions of installation are important as size, weight, performance, ease of installation and easy integration to the circuit. Microstrip antenna array are most apt for such applications, but the limitation of such antennas are gain and the bandwidth. The order of gain is low for patch antenna which is generally in the choice of 1-2dB.To increase gain and bandwidth factors the utilization of material with low dielectric constant having greater thickness is employed. However, this generates surface waves. So, proper thickness of substrate is selected. In this paper, microstrip patch having pentagon shape uses probe feed technique for various substrate materials such as Roger's RT/Duroid 5880 (tm), Roger's RO4003 (tm) and FR4 epoxy. The results of the three substrate designs are acquired for the resonant frequencies 6.5 GHz, 6.6 GHz, and 6.7 GHz respectively. The whole analysis is carried out using Ansoft HFSS software version 17.0. The characteristics like bandwidth, amplification factor (gain), return loss and radiation patterns of the different antenna are assessed, related and the same are presented at the end.

Index Terms: Microstrip patch antenna, Pentagon Shape, Substrate materials, Gain, Bandwidth, Return loss, Radiation pattern.

I. INTRODUCTION

Microstrip patch antenna is most commonly used in the present trend of communication world. Microstrip antennas are most widely used in the high frequency range of microwave variety because of simplicity, minimalism, compatibility and ease of being integral part, also used to construct either as individual elements or as arrays.

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The Microstrip patch antenna was initially presented by Deschampsin 1953. However they were made popular and were developed in the 1970's by Munson and Howell. The patch antenna can be designed by 2D or 3D; this consists of a ground plane and radiating patch to either side of the substrate. By photo etching, radiating elements and feed lines are connected by printed circuit technology with precise contour. A printed circuit (photolithographic) technology with a precise low contour can be utilized in manufacturing process [1]. The patch for radiation can be designed in various geometrical shapes. Radiating patch is designed, using different shapes such as square, circular ring, rectangular, pentagon, hexagonal etc. There are different patterns obtained for different feeding techniques. For analysis, Transmission Line and Cavity models are used. Microstrip arrays are poor to emit strongly above a limited range of frequencies and cannot be used at high powers in coaxial line, waveguide. Santanu Kumar Behera has advised (PSO) particle swarm optimization algorithm in conjunction with the (MOM) method of moments to obtain the geometric parameters of the antenna performance. L-Shaped design was suggested by A. Deshmukh for obtaining large impedance. Z. M. Chen expanded the frequency range of the L-shaped antenna whereas K. F. Lee used half sized U-slot for improving performance patch. S. C. Gao proposed uniplanar photonic band gap construction for increasing gain and frequency range. M. Khodier proposed stacking techniques for increasing the bandwidth.

II. PRINCIPLE OF WORKING

The principle of working of the microstrip antenna is explained as follows. The substrate has high and low electric fields on either side with zero value as mean position. With respect to the varying phase of the function, the field signs vary accordingly on either sides of the patch. The electric field lines extent towards the boundaries of the patch, referred as fringing fields useful for radiating the patch. The fundamental mode of rectangle shaped patch is TM_{10}. The resonant frequency (f_r) of a patch antenna depends on size of the ground plane, impedance of patch, thickness and ε_r of substrate. There are numerous applications of patch [2]. M. Abbaspour [3] chosen star shaped patch for increasing impedance bandwidth. Sumanpreet Kaur Sidhu [4] made comparison for various shapes of patch antenna

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A Machine Learning based Preventing the Occurrence of Cyber Bullying Messages on OSN

K. Leela Prasad, P. Anusha, M. Srinivasa Rao, K. Venkata Rao

Abstract: The process of threaten or harassment of any user with the help of posting wrong/abused or vulgar messages using the social media in the internet is known as Cyber bullying .These messages may sometime contain a text posted by a teen, or preteen or a child who want to threaten or harassed or embarrassed other child by posting the messages. So in this project, we mainly try to propose another depiction learning strategy to handle this issue known as SEMdae. Here the semantic augmentation comprises of predefined words that contain noise or abused meaning which is posted into the database by the admin and these words are classified based on the five categories that are available in the literature like "HATE, VULGAR, OFFENSIVE, SEX, and VOILENCE".

Index Terms: BoW, SEMdae.

I. INTRODUCTION

Bullying:

Bullying is conduct that is intended to be terrible, focuses on an individual or gathering of individuals, happens more than once and humiliates, compromises or threatens the individual being harassed. It might occur face to face however can likewise occur far out or on the web. Menaces don't generally work alone. The effect of tormenting can be much more noteworthy when a gathering of individuals start to act together.

The current definition recognizes two modes and four sorts by which youth can be harassed or can menace others. The two methods of tormenting incorporate direct (e.g., harassing that happens within the sight of a focused on youth) and backhanded (e.g., harassing not straightforwardly imparted to a focused on youth, for example, spreading gossipy tidbits). Not these two modes, the four sorts of harassing incorporate general classifications of physical, verbal, relational (e.g., efforts to hurt the notoriety or connections of the focused on youth), and harm to property. Tormenting can occur in any number of spots, settings, or areas. In some cases that place is on the web or through a cellphone. Harassing that happens utilizing innovation (counting yet not restricted to telephones, email, visit rooms, texting, and online posts) is viewed as electronictormenting and is seen as a unique circumstance or location.

Prevalence:

Between 1 in 4 and 1 in 3 U.S. students say they have been bullied at school Numerous less have been cyberbullied. See more commonness insights.

Most harassing occurs in center school. The most well-known sorts are verbal and social harassing.

There is developing attention to the issue of tormenting, which may persuade that harassing is expanding. Nonetheless, examines recommend that rates of harassing might decay. Despite everything it remains a pervasive and significant issue in the present schools

Risk Factors

Young individuals who are seen as not the same as their companions are regularly in danger for being tormented. See more on who is in danger.

Effects

Bullying influences all adolescent, including the individuals who are harassed, the individuals who menace others, and the individuals who see tormenting going on. A few impacts may last into adulthood. See more on the impacts of harassing.

Group Phenomenon

Bullying isn't normally a straightforward association between an understudy who menaces and an understudy who is harassed. Rather, it frequently includes gatherings of understudies who bolster each other in tormenting different understudies.

Changing Roles

There is certifiably not a solitary profile of a youngster engaged with tormenting. Youth who menace can be either very much associated socially or underestimated, and might be tormented by others too. Likewise, the individuals who are tormented once in a while menace other. Youth who both domineering jerk others and are harassed are at most serious hazard for ensuing conduct, emotional wellness, and scholarly issues.

Disconnect Between Adults and Youth

There is frequently separate between youngsters' understanding of tormenting and what the grown-ups see. Likewise, grown-ups frequently don't have the foggiest idea how to react when they do perceive tormenting.

Promising Prevention Strategies

Solutions to harassing are not straightforward. Tormenting aversion approaches that demonstrate the most guarantee stand up to the issue from numerous points

Bystanders who intercede for the benefit of youngsters being harassed have a gigantic effect.

II. LITERATURE SURVEY

In the existing system there was no pre-defined method or software to classify the abused or cyber bulling messages for a text message which is posted on OSN walls and identify the

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Priority towards Subjectiveand Experimental Framework inTeaching-Learning Process inEngineering Education forMillennial Learners

E. Laxmi Lydia, B. Arundhati, MadhusudhanraoVallabhaneni

ABSRACT: From the time of 20thcentury, the world has undergonecomplete change in the field of Engineering Education. Learning environment in Educational systemofMillennial's, for very short concentratedpeople who prefer interactive, experiential and collaborative learning,usually they are informal and choose to have friendly relationships with teachers. Educational system in engineering classes for such Learners with dynamic and technology driven people do not prefer long lectures anymore. The design objective is to understand the cognitive and social developments in easier way that outcome in faster learning, and also to redesign classrooms and other learning environments. So that Learners can learn more passionatelywith completeness in the topic/ subject and to make them self Learners.This paper provides a meaningful teaching objective that relates with real-life experiences, Lectures mixed up with methods like video clips, concept charts, and PowerPoint presentations with key concepts based on the summary, also creating collaborative subjective experiences with social networking platforms.Finally, this paper concludes bydiscussing the experiments being applied in our institution (VIIT) to make engineering education practicalby means of experimental learning.

Keywords: Engineering education, Teaching-Learning Process, classroom environment, Cognitive development.

I. INTRODUCTION

Generally, Education is a single word but brings responsible life with good knowledge, enhancing skills, following rules and transforming them. engineering education. to engineersistoprovide them reach their expected educational goals. Engineering minds are full of imaginations, they try to learn interactively by getting feedback which leads to valid outcomes Educating Engineering students is not making them learn only existing facts but to train their minds. Young minds are like swords, when they set their minds on anything they try to achieve. Engineers with young and energetic minds play a crucial role play in the accomplishment of a nation. Therefore, Effective As every individual has not the same capacity of extracting knowledge from teachers, teachers must be aware of simple and attractive attention of children from a low level to high level. One of the procedures for educating students is Teaching- Learning process. It is anefficientsystematicorderto obtain predetermined targets and objectives. Millennial Learners are graduates who also try to analyze problems, using knowledge to develop a system. These learners like to communicate with their faculty directly and they wish to have more guidance from the faculty. They want continuous feedback and are lifelong learners. They are committed to their private self-learning and enhancement.

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Millennial Learners:

Millennial learners are enforced to prosper with enhancing skills which are significantly essential in the present professional world. Teamwork establishes spark inside the millennial learners. This leads to the gain of knowledge and best communication skills to the millennial learners. Interacting with each other and instant feedback will be provided.

1. Having this group work, millennial learners enjoy learning and thus as a result, their outcome performance shows an admirable improvement.
2. More members of the group work, hands-on exercises that connect with technology providesa friendly learning environment. Modern technology has adopted "flipped classrooms" for millennial learners.
3. Learners are requested to understand the topic before giving the lecture on the next day. By this, the fundamentalbasis related to the concept could be understood by the students.
4. Based on the improvement of thelearning process, time consumption will be reduced for the students to listen long hours and also given chance to clear their doubts and tries to learn in a practical manner. Then the students will have a broad mind to discuss the real-time applications and moves towards the bottom of the subject.

II. LITERATURE REVIEW

(Wilson and Gerber, 2008)[2]: explained that millennial Learners are a type of learners who are very much interested to communicate directly with the faculty and expect to have their guidance and encouragement. They try to have faculty focus on them and to gain special personal concentration. They find themselves in a different world with great Tolerance level. A Classroom is mixed with a combination of all various cultured people. The classroom environment for the millennial learners is quite activating by joining them and getting them with most combinations of knowledge because they are very weak in self-management.

(Elliot -year and Sherri, 2012)[3]: explained about the millennial learners that they are affectionate to their parents more than to the popular personalities in 33% of the situations.

(Allen and Christopher, 2013)[1]: described that millennial learners need a good suitable planning because they did not expect to have as much freedom or responsibility for structuring their educational lives

The Millennial learners are groups find themselves in lacking the control and consider themselves in a confused state of sharing information exactly what they want contact with others.Learners in this group are is very much anxious aboutobtaining new knowledge.

They are very brilliant and active capable of arranging

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Text Mining with Apache Hadoop over different Hadoop Clusters Architectures

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Abstract: Big data is very much practical for real time applicational systems. One of the mostly used real time application worldwide are on unstructured documents. Large number of documents are managed and maintained through popular leadingBig Data platform is Hadoop. It maintains all the information at Hadoop Distributed File System in Blocks. Irrespective of datasize, BigData has opened its path to store and analyze the data which has consumed time. To overcome this, Hadoophas designed cluster process for large volumes of unstructured data computations. Three different cluster architectures like Standalone, Single node cluster and multi node clusters are considered. In this paper, Big Data allows Hadoop platform to boost the processing speed overlarge datasets through cluster architectures, which are studied and analyzed through text documents from newsgroup20 dataset.It identifies the challenges on text mining and its applications using ApacheHadoop.

Keywords:Big Data, Hadoop Cluster, Standalone mode, Pseudo cluster mode, Fully Distributed mode,

I. INTRODUCTION

Data processing for single centralized resource is a dedicated network carried out by independent components of Hadoop cluster. These systems incluster are named as "Shared Nothing" systems as they share nothing maong the nodes except network connection.

This will minimize the latency of processing in Hadoop cluster whenever queries are posed in large database of data. Hadoop clusters maintain virtual machines over cloud to overcome energy consumption and enhance the productivity. Hadoop empowers the technology of distributing process over high degree fault tolerance. It is applicable tool used especially for Big Data.

Key constraints required for Hadoop cluster

- Hadoop clusters are focused design processing clusters pointed at analyzing and storing for unstructured data. Hadoop clusters are data processing computational clusters that distribute the work over multiple cluster nodes in parallel.
- Hadoop operates for partitioning the data into chunks and distributed every chunk to an individual cluster node for analysis.
- Data nodes in Hadoop cluster may not be uniform for handling processes in cluster node.

Following are some of the most favouring circumstances in Big Data through Hadoop clusters:

- A Hadoop cluster absolutely performsparallel processing to help with the analysis,but clusters are lackingdue to increase of data theprocessing power. These clusters are scaled to maintain analysis by making modifications to the additional appended cluster nodes that has application logic.
- Hadoop clusters are inexpensive for commodity hardware, so they can be used in any organization but server hardware is expensive.
- Cluster nodes wont create any problem if single data node fails, it has an replication files with other nodes (replication factor). It becomes an challenging issue if the NameNode fails in a cluster.

II. LITERATURE SURVEY

Ankita Saldi et al[1], focused on statistical data generated in industries. When the generated data is in different formats, environment becomes more challenging to perform functioning. They have choosenHadoop environment to overcome the issues on large data records by appling parallel implementation of datanotes in single node. The authors concentrated on sequential execution of datanodes. Every datanode running at Hadoop cluster using SMs (Streaming Multiprocessors) has obtained profitable desired result for raw industrial data that is collected in a year.

E. Laxmi Lydia et al [2], worked on Flume, MapReduce, Pig and Hive components on Hadoop for traditional database management system considering twitter data. They have examined Hadoop framework by utilizing apache components on enormous information. They identified the performance of Hadoop components throughcomparision. All these have properly organized in Hadoop distributed file system (HDFS) and use such data in easy manner. In 2016, E. Laxmi Lydia et al [4], processed their work on big data with technological improvement by calling a new system data acquisition. This accomplishes three stage proceedings using Hadoop, peocedures and technologies, handling through cloud computing.

Ehab Mohamed et al [3],suggested that Hadoop can manage and work on large datasets at fault-tolerant platform. Their research work has studied on data transmission through blocks in Hadoop with optimal efficacy.Also suggested the improvement of cloud environments for job scheduling on multiple constraints mostly for parallel distributed systems and quality requirements..Sujit Roy et al.[7], also done their research study on data blocks for assigned jobs in Hadoop. Nishant Rajput et al.[14]

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An Integrated Way for Teaching Hadoop & BigData Analytics Course

E. Laxmi Lydia, N. Sharmili, T. V. Madhusudhanarao, Madhu BabuChevuru, K. Vijaya Kumar

Abstract: *Hadoop &BigData Analytics course has occupied a ubiquitous role in present software technologies. Educational institutes are fond of this course as it's been trending course most of the placements in software companies are based on. As per the traditional teaching mechanisms, the educational systems are not much up- to- mark where the students are not assisted with the course resulting in atrocious placements. Therefore to enhance this placements, institutions has to adopt a new integrated teaching- learning proceedings which help in drastic change of academic results discussed in this paper. Here the result analysis of course attainments are compared to show the eye-catching improvements as occurred in VIIT College.*

Keywords:*Hadoop, Big Data,Analytics,technologies, academic,attainments*

I. INTRODUCTION

In most of the educational institutes, traditional teaching practices are been carried that impacts the result analysis along with practical knowledge of students. Although the institutes appoint well knowledge teachers, they can't concentrate on each of the students in the class whole day. They can maximum concentrate on 10 to 15 students in the class. We know that the learning capabilities of students vary in class irrespective of same teaching practice followed by the teachers. This shows that teacher as to spend time on slow seekers when compared to fast learners which leads to disturbances in syllabus completion or makes class boring to others. Therefore leading to instinct downfall. To avoid these fluctuations, we have approached you with four innovative teaching learning mechanisms.

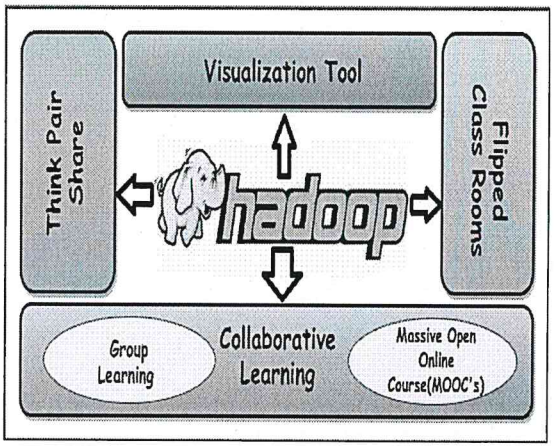

Figure. 1: Innovative Teaching-Learning Mechanisms

Figure 1 shows the different innovative teaching-learning mechanisms that are discussed in this paper. They are: Think Pair Share, Flipped Classrooms, Visualization Tool and Collaborative Learning. These mechanisms are been well fledged used in college VIIT for Hadoop &Big DataAnalytics course. The outcomes of these mechanisms are shown in figure7 with course attainments outcomes achieved in the last two years. Table1 demonstrating the teaching-learning modes with the detailed role of teacher, student and outcome of the learning activity.

Mechanism 1: Think Pair Share

Think Pair Share mechanism helps students to elevate themselves with new approaches when compared with traditional teaching techniques. This makes student to understand critical topics easily with discussions held in the classroom. According to this mechanism, a troubleshooting question is been given by the teacher to the students. He asks them to resolve the question and find out the solution individually. After solving the question, he asks each student to compare their results with neighboring student (making a pair) and discuss their approaches to find the appropriate solution. Lastly, one of the pairs in class come-up with a solution and explains it to whole class.

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TECHNICAL PAPER

Spark Plasma Sintering of Graded Dissimilar Metals

N. Naveen Kumar[1] · G. D. Janaki Ram[2] · S. S. Bhattacharya[2]

Received: 21 November 2018 / Accepted: 14 March 2019

Abstract An attempt was made to produce graded stainless steel (SS)/commercially pure titanium (Ti) samples using spark plasma sintering. A cylindrical sample of 20 mm diameter and 38 mm height, consisting of six layers with decreasing amounts of Ti (in steps of ~ 20 vol.%) from layer L_1 (100 vol.% Ti) to layer L_6 (100 vol.% SS), was targeted. After process optimization, fully dense, graded SS/Ti samples were successfully produced. However, the samples showed several different intermetallics such as FeTi, NiTi, Fe_2Ti, and Cr_2Ti. The intermetallic formation was found to be most severe in layer L_5 (80 vol.% SS + 20 vol.% Ti). These graded SS/Ti samples exhibited a tensile strength of 280 ± 9 MPa and were found to suffer brittle fractures in layer L_5. In subsequent experiments, attempts were made to overcome this problem using temperature gradient sintering and/or ball-milled SS powder. While the combined use of temperature gradient sintering and ball-milled SS powder was helpful in improving the tensile strength of graded SS/Ti samples to 320 ± 12 MPa, undesirable intermetallic formation and brittle fractures in layer L_5 could not be avoided.

Keywords Spark plasma sintering · Dissimilar welding · Joining inserts · Compositional gradation · Functionally graded materials · Temperature gradient sintering

1 Introduction

Butt joining of dissimilar metal tubes or pipes by fusion welding is often done using a transition piece. For example, in power plant industry, transition tubes of nickel-based alloys such as Incoloy 800 are commonly used for welding of austenitic stainless steel tubes to ferritic creep-resistant Cr–Mo steel tubes [1, 2]. In this case, alloy 800 is not only metallurgically compatible with both the base metals, but also has a coefficient of thermal expansion (CTE) that is intermediate between the ferritic and austenitic base metals. However, for many different combinations of dissimilar metals such as steel/titanium, steel/aluminum, and nickel/titanium, a compatible transition metal does not exist. In such cases, it is common to consider using a bimetallic transition piece produced a priori by solid-state welding of the two dissimilar metals in question. For example, a tubular bimetallic transition piece for fusion welding of stainless steel tubes to titanium tubes can be machined from explosive welded thick plates of stainless steel and titanium [3, 4]. While explosive welding largely overcomes the problem of brittle intermetallic formation at the interfaces of metallurgically incompatible dissimilar metals, it does not provide a fully satisfactory solution in most industrial applications. The main issues are: (1) explosive welds are inherently weak in tensile loading, (2) machining of tubular transition pieces from explosive welds is tedious and involves a lot of material wastage, (3) thermal stresses can cause cracking at the explosive weld interface during fusion welding of the transition piece to the base metals (one must therefore use a sufficiently long

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Magnetic field regulated, controlled hyperthermia with Li x Fe 3-x O 4 (0.06 ≤ x ≤ 0.3) nanoparticles

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Abstract

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Critical investigation on Cu-O bonding configuration variation in copper-oxide thin films for low-cost solar cell applications

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ABSTRACT

The present work provides a detailed investigation on how Copper-Oxygen bonding configuration varies with the plasma processing parameters. XRD, FTIR, XPS and Raman spectroscopy is extensively used to identify and study the phases and phase changes in the films. The Copper-Oxygen bonding configuration was altered by varying the RF power and substrate temperature. We studied the combined effect of both RF power and substrate temperature on the Cu-O bonding configuration, which in turn affects the optical and electrical properties, which are essential to understand before the device fabrication. Films were deposited with 40, 60 and 80 W of RF power at the different growth temperatures such as RT(room temperature), 200 °C and 400 °C. Even the RT deposited films were found to be exhibiting the crystalline nature to the maximum extent. We observed a wide range of variation in the Cu-O bonding configurations with the RF power and growth temperature. Films deposited at 80 W are leaning towards Cu_2O phase, whereas films deposited with 40 W is close to CuO phase. Also it is found that, for a fixed power, the films deposited at high substrate temperature are leaning towards Cu_2O Phase.

1. Introduction

As a low cost and abundant material, copper-oxide has been catching the attention of researchers in the field of photovoltaics [1,2], water splitting and hydrogen evolution [3–9]. It has been reported several times that, copper-oxide can exist in any or a combination of the Cu_2O, Cu_4O_3 and CuO [10–14] phases. Depending on the method of preparation, these phases of copper-oxide semiconductor thin films exhibits a range of direct optical band gap energies [15–23]. Though cuprous oxide (Cu_2O) is known to have high optical transmittance, it is also known to have a high electrical resistivity which in turn depends on the method of preparation. Researchers have reported the resistivity in the range of 10^2 to 10^6 Ω-cm. Several attempts have been made in the literature to produce Cu_2O films with lower resistivity. As the sputtering process has the advantage of producing films with varying stoichiometries, Drobny et.al [24] have attempted to prepare copper-oxide films by reactive sputtering. They have deposited films with stoichiometries varying from Cu-rich Cu_2O to Cu_2O, Cu_4O_3 and finally CuO. Not just the resistivity, generally any property variation in the thin film originates from the variation in the microstructure which in turn evaluates from the variation in bonding configuration of the elements in the thin film.

During the film growth, the add-atom density on the substrate is different at different target powers. Also at different substrate temperatures, the energy experienced by the add-atom during the growth is different. Different research groups [25–31] have worked on DC, Pulsed DC (PDC) and RF plasma diagnostics and proved that plasma density significantly affects the plasma parameters such as (i) the ratio of the fluxes of bombarding ions and depositing atoms (ii) the energy of the bombarding ions (iii) the homologous temperature, which eventually affects the bonding configuration of atoms in the growing film and leads to different thin film properties. Therefore, it is obvious that, at different RF powers and substrate temperatures, the microstructure and the bonding configuration varies drastically, which eventually leads to changes in the structural, optical and electrical properties of the growing thin films [24,25]. Researchers have reported the phase

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Performance Analysis of Wavelet Transformed Of dm with Plc over Wimax

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Abstract*: *High PAPR is one of the main drawback for OFDM system. This paper proposes a Hybrid system of PLC (Piecewise Linear Companding) of wavelet transform to overcome this demand. Simulation results are quite encouraging in terms of reduction of PAPR, improvement of PSD and BER.

Index Terms*: *PAPR, Wavelet transform, Piecewise linear companding, OFDM

I. INTRODUCTION

OFDM offers high data rates in wireless communication applications because of combination of modulation and multiplexing. Large number of subcarriers with close spacing, but orthogonal to each other to handle data on data channels simultaniously or parallellly. Conventional modulation like QAM, PSK are used to modulate each of the subcarrier signals at relatively low symbol rate. The wide applications of OFDM ranges from WLAN to DAB, DSL including Modern DRM. Due to superimposition of multiple subcarriers, OFDM experiences a noteworthy disadvantage (i.e.) Peak-to-Average Power Ratio (PAPR). When OFDM is fed to HPA, linear distortion takes place with the output touches saturation level of the amplifier section. Such distortion offers ICI and OOB radiation. ICI disturbs the transmission of signal by degrading the BER, moreover OOB has adverse influence on frequency bands that are adjacently placed. So many strategic techniques or methods be proposed for degradation or minimization of PAPR [1-14]. Due to the flexibility of cost effectiveness, companding schemes are proposed. Among them, PIECEWISE LINEAR COMPANDING (PLC) has satisfactory performance in the matters of PAPR and sustainability of BER and PSD.

The next part of the paper discusses the PAPR problem along with the proposed scheme and simulation results are discussed in following part followed by conclusion.

II. PROPOSED TECHNIQUE

piecewise linear companding (plc) Is Combined With The Wavelet Transform To Have A HYBRID METHOD In Which The Incoming Data Is Given To IFFT Stage. Later It Is Transformed By Wavelet Transform And Then Followed By PLC Scheme. Fig. 1 Shows The Proposed Technique.

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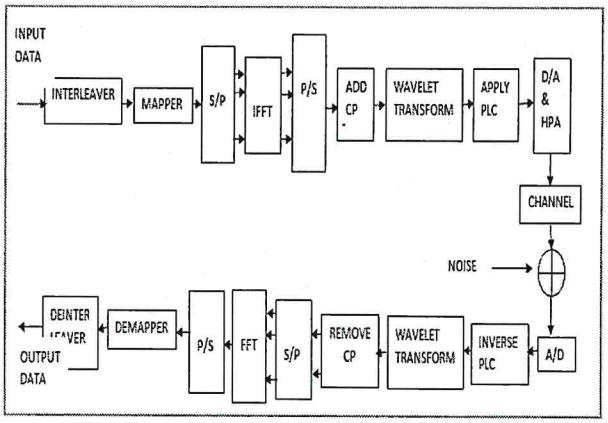

Fig-1: Proposed method's Block diagram

III. DESIGN

The basic steps are described as follows…

1. Basic OFDM signal is generated by using standard procedure….

$$s[k] = \frac{1}{\sqrt{M}} \sum_{n=0}^{N-1} S_n \exp\left(\frac{j2\pi nk}{LM}\right),$$

$0 \le k \le LM - 1$

2. ADD CP to the generated OFDM
3. Wavelet Transform is applied to the OFDM
4. Now, Piecewise Linear Companding [8] is carried out as

$$z(k) = C\{s(k)\} = \begin{cases} s(k) & |s(k)| \le A_i \\ m\,s(k) + (1-m)A_c & A_i < |s(k)| \le A_c, \\ \mathrm{sgn}(s(k))A_c & |s(k)| > A_c \end{cases}$$

5. Now for the received signal p(k), the decompanding operation is done by

$$y(k) = C^{-1}(p(k)) = \begin{cases} p(k) & |p(k)| \le A_i \\ (p(k) - (1-m)A_c)/m & (1-m)A_c < |p(k)| \le A_c, \\ \mathrm{sgn}(p(k))A_c & |p(k)| > A_c \end{cases}$$

6. Lastly inverse wavelet transform is applied for the above signal
7. Finally, the signal is demapped and to get back into bit stream.

IV. SIMULATION

SSPA (Solid State Power Amplifier) is taken as the standard for IO characteristics for the non-linear region. Consider 256 subcarriers with a oversampling factor of 4. The proposed system is tested for QAM of 4, 16, 64 bits. ($A_{saturat}$- saturation level)

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MINIMIZING THE SHIP EXHAUST RADIATIONS

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Abstract

The present work is done to protect defence people platform against IR guided missile threats, by essentially cooling the funnel surfaces, such that temperature between background and platform becomes minimum. The multiring eductor/diffuser type IRSS device uses ejector action to draw in large volume of ambient air for both metal gases cooling. With the ejector action, the exhaust gases are accelerated in convergent nozzle and the resulting high velocity jet is used to entrain ambient air within a mixture. Entrainment for ambient air quantity depends on the level of cooling required for hot gas temperature to about 80% to 125% of hot gases.

Introduction

An infrared source is a spectral distribution of power emitted by ideal body. This spectral distribution is a characteristic phenomenon of the temperature of the body [1]. A real body gives radiation efficiency factor or emissivity which is given by the ratio of wavelength of the emission of a real

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Retina Resistivity Analyzer

Ravada Aamani, Rudra Pratap Das, A.Sampath Dakshina Murthy

Abstract Retina play a vital role in nervous system being directly connected to the brain .Depending on the person & his mental and physical health the character of retina ought to change .To study such changes and possibly diagnose clients of the human body, retina needs to be examining .The purpose of the invention is to collect data of resistivity values of retina by a simple economical method. The conventional techniques involved light ray based study using coherent light such studies could be dangerous in the long run .The proposed method is the non invasion process of applying four electrodes to the eyelid at specify distances so that the retina resistivity can be easily determined .The data collected by such a device can be useful for a finding out the health of the body and even predict future affections. Analogous to resistivity probe in geological exploration studies and resistivity measurements of semi - conductor our invention uses Schlumberger method. Two outer electrodes carry the current from a constant current source; the inner electrodes pick up the voltages with reflected from inside. All the electrodes are filled like a set of lenses and the spectacles. A simple circuit concealing of a battery few resistors and an ammeters and voltmeter combination gives the apparent resistance associated with 2/3 of the distance of any outer electrodes from the centre .The resistivity calculated from the apparent resistance is related to the retina. The initial study on the device has been quite encouraging and is able to distinguish resistivity of old persons to that of young person's .So in future more data needs to be collected from various persons show us to have a knowledge base further analysis.

Index Terms: Resistivity, electrodes, ammeters, voltmeter, four probe methods.

I. INTRODUCTION

It is known that resistivity is a characteristic property of materials which shows the extent to which the material blocks flow of electricity. This proper proposes a technique for determining resistivity of retina reflecting the contribution of blood vessels present in retina [1]. The values are studied using the phenomenon of soil resistivity which is used to determine various characteristics of soil. By calculating retina resistivity values, a person's health can be judged. This study takes into consideration properties of tissue in multiscale determinations based on interaction of electromagnetic fields with neural tissues having relevance to dosimetry as well as neuroprosthetics. Conventionally, models at bulk tissue on cellular levels are determined using resultant voltage of existing tissue-scale models used as extracellular source. Taking Schlumberger four electrode probes circuit has been designed by placing specific resistor in series with ammeter for maintaining constant current. In comparison with Wenner method, Schlumberger method is more economical because of the centre remaining constant. In the design of instrumentation, need to be eliminated [3,4]. Reciprocity theorem can be applied to inverse Schlumberger array [5]. The self potential factor is automatically made negligible in this technique. The placement of electrodes has to be non-invariance considering the effect of electrodes has toe non-invasive considering the effect of probes on probes neural tissues and required spatial cells.

II. METHODOLOGY FOUR PROBE RESISTIVITY

For the study at steady temperature the relationship between Resistance R and resistivity is given by

$$R = \rho \frac{L}{A} \quad (1)$$

Where
L = Length
A = Area of cross section
For measurement of resistivity of semiconductors it must be noted that their resistivity is less than metals and more than non conductors such that semiconductors differ from metals in having the property of decreasing resistivity with increasing temperature [6].
It is known that energy band structure for semiconductors consists of valence band and conduction band. When an external electrification applied, electrons in valence band tend to have free movement resulting in flow of electric current. For intrinsic semi conductor, the Fermi level is in between the conduction band minimum and valence band maximum.In the case of intrinsic semiconductors, the Fermi level [7] lies in between the conduction band minimum and valence band maximum. The conduction band remains unoccupied at 0 k as no thermal excitation takes place with Fermi level than this band. Such a situation results in infinite resistance. As the temperature goes up occupancy in conduction band increases lowering the electrical resistivity [7].

For semiconductors, four probe measurements can be done by the following:-

1. It is assumed that resistivity is uniform in the measurement space
2. In case of minority carrier injection by the electrodes, the effect is minimised by recombination.
3. The surface of measurement is considered to be flat with negligible leakage of the surface.
4. Four probes are kept on a line.
5. The diameter of contact area for probes and semiconductor is assumed to be negligible in comparison to inter electrode distance.
6. The boundary between electrodes carrying current and bulk material is considered to be hemispherical with small diameter.
7. The surface could be conducting or non conducting. Conducting boundary has low resistivity where as non conducting boundary is produced when surface of semi conductor has constant with insulator [8]

Upper Limb Movements Identification through EMG Signal using Artificial Neural Network

M. Karuna, A. Sampath Dakshina Murthy, G. Thiagarajan, Sitaramanjaneya Reddy Guntur

Abstract: Nowadays, analysis of electromyography (EMG) signal is one of the powerful areas of interest in medical, rehabilitation, robotic and industrial fields. The measurement refers to the recording of electric signals that appear during muscle contraction. As these signals are related to human process of action, because of uncertainty of EMG signals proper prediction of a specific motion is difficult. An Identification of a specific wrist motion by means of the EMG signal pattern will help in controlling prosthetic hand. A movement recognition technique is required to segregate different wrist movements for instance extension, flexion, pronation, supination. In this direction the EMG signal pattern recognition includes feature extraction and classification of proper EMG signals obtained from human forearm muscles using Artificial Neural Network to establish control over the prosthetic hand. Training of ANN was performed using four input neurons, four output layers, and with 10 hidden layers achieved 90% overall accuracy.

Index Terms: Electromyography signal, EMG, Feature Extraction, Artificial Neural Network.

I. INTRODUCTION

The chance of a person losing wrist is quite high in the present days where accidents, military action on natural calamities live earthquakes occur so often. Myoelectric arm can help such person to do necessary action by sEMG signal recording from the residual forearm muscles of upper limb. Such techniques of non invasive nature have been proposed for controlling myoelectric prosthetic devices to ensure that amputated people to have fundamental movements. Other rehabilitation robots are also available [1-4]. Signals of sEMG are time series variety emanating from neuromuscular system as recorded from skin surface having nonlinear dynamical characteristics. These are sensitive to the nature of muscular dynamics. Analysis of sEMGhas focussed on time and frequency domains so far [5].Time-domain features are extracted from the detected signals of EMG and are used for identifying limb movements [6].These features can be fed to ANN for classifying of action potentials of set of muscles [7]. A simple ANN is used in this research work, and it can be trained with extracted optimum features from single channel EMG signal. Huge computational work and complexity can be avoided by using ANN [8]. Scaled conjugate gradient (trainscg) algorithm [9] is used for classification. Four statistical features: Mean, Root Mean Square, Variance, and Mean Absolute Value [10-12] are used as the inputs of ANN as shown in fig.1.

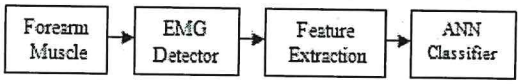

Fig.1 Block Diagram of Method of approach

For robust and efficient classification is important to preserve important discriminatory information resulting in improved accuracy for classification. Different types of ANN models consist of various interconnected network elements to develop internal classification strategies based on training data. ANN models can work in parallelism and providing higher performance where as traditional classifiers function sequentially.

II. METHOD OF APPROACH

A. Data Collection

The experiment was conducted on 5 healthy male subjects without loss of hand (aged 21 years). Surface electrodes are placed at specified forearm muscle activity with a distance of 2c.m which are made up of ag-agcl. After placing the electrodes, subject was instructed to perform wrist actions twice such as Extension, Flexion, Pronation, Supination and then muscle signal is detected and acquired using EMG detecting circuit and Digital CRO setup. Finally we receive 40 (5×4×2) samples in this experiment.

B. Feature Extraction

Time domain features have been extensively used in both medical and engineering researches and practices. The one set of extracted features from one subject forearm muscle signals are shown in table.1

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Novel Techniques on Flight Maneuvering Based On Fuzzy Logic Using Human Edge Detection

A.Sampath Dakshina Murthy, P. Tirumala Rao, A.Usha Rani , M.S.G.Prudhvi

Abstract: Maneuvering techniques for flight have been developed using human motion detection and fuzzy logic. The need for predicting various flight paths needs a non linear approach or the situations are extremely complex and difficult to predict. Taking care of uncertainties and various human expressions, an efficient technique has been developed.

Index Terms: Maneuvering, Fuzzy logic, Edge detection , flight mechanism

I. INTRODUCTION

Maneuvering aero planes used in war operations requires skill, experience and intuitive powers of the pilot and effectiveness of the mechanism. In many applications, exact measurements and precise data collection are not feasible. Such situations are complex governed by many non linear relationship as well as uncertainties. To impart artificial intelligence to flight mechanism the most convenient method is to adapt IF-THEN rules of fuzzy inference system by which many real life situations can be brought to a platform where solution can be arrived at despite uncertain situation including inclement weather and different condition of enemy positions during attacks and counter attacks. The objective of this paper is to develop modeling method based on fuzzy logic logarithm to create aerodyne path solutions from the data sets of flight data recorder [] . The precedence of the algorithm comes from the natural situations which cause human expressions. Paths can be predicted based on study of natural human variations using fuzzy logic. Similar logic applying to neural application.

II. RELATED WORK

Many real situations are similar to the case of maneuvering using fuzzy logic based for predicted paths stored in the FDR. To detect and recognize the human actions so that computer system is able to understand human motions and make further schematic description of the scene to convert as paths the methodology is carried out by taking different physical parameters as inputs for image processing and for fuzzification. In rotation many human impressions need to be observed [2], for generate appropriate time of response. Similarly force angle disgust have to be studied even before they are completed. Fuzzy logic control is a non-linear technique using linguistic approach with membership function and rules [3].

III. OBJECTIVE AND METHODOLOGY

The data from H.60 qualification flight stress syrup is in the process the data through proper code which will be robust to handle varieties in flight and given reliable results. In identifying Air craft usage [4-7]. Basic flight maneuvers involved may vary tactical turns, rolls and other actions to get behind on above an enemy before the opponent can exercise similar techniques. The most important procedure is that of fuzzification or creation of membership function of inputs and outputs to the logical decision making in figure .1. The next step is to create IF-THEN rules for having the knowledge base after processing of the fuzzified data de-fuzzification is required to create chirp data.

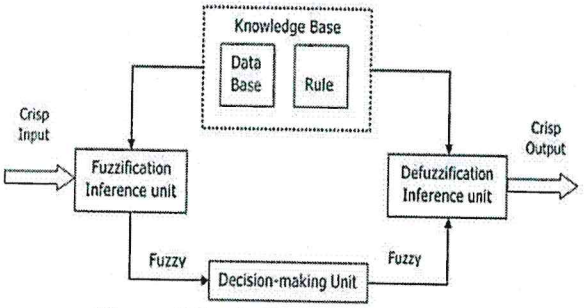

Figure 1Block diagram of fuzzy logic

The flow chart shown in figure 2 below covers the logical steps required in processing the above. It must be noted that BFM also reduce on the pilots understanding of the geometry of pursuit with the s-dimensional area where different angles of approach can cause different rates of closure. To avoid lower shooting "wrong line overshooting" covers stay of flying out act in front of the opponent is adopt. For crossing enemies flight path, "flight path overshoot" most of the maneuvers offensive such as barrel roll attack, high Yo-Yo, low Yo-Yo and "lag Yo-Yo". The defender usually maneuvers to force over shoot on the extent the range to drive away and escape. Last is made to make "guns defense" on defense square yard. Image processing techniques of edge detection and edge enhancement used for developing strategic paths on fuzzy logic algorithm in figure 3.

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Detection of Vehicle Intrusion Using Opencv

Ch.Sekhar, K Venkata Rao

Abstract: Detection of vehicle Intrusion may be a period of time embedded system that mechanically acknowledges the registration number plate of vehicles by victimization Optical Character Recognition. it's the potential of characteristic the unauthorized vehicles that trespass in dark areas. Several applications square measure starting from complicated security systems to common areas and from parking admission to urban traffic control[1]l. Detection of auto Intrusion (DVI) has complicated characteristics thanks to various effects like light-weight and speed. Most of the registration code Recognition systems square measure designed victimisation proprietary tools like MATLAB. during this paper, another methodology of we tend to enforced this technique victimisation Python and therefore the Open laptop Vision Library. This System can be implemented over offline video as well as on a live streaming video. Whenever a vehicle enters the zone, using OCR, the License Plate is recognized and verified over the database of allowed vehicles. If an Intruded vehicle enters a restricted area a message over a mail will be triggered to the zone in charge with the details of the intruding vehicle and the time instance of the vehicle entering the zone. These details are also stored in the database.

Index Terms:Vehicle Intrusion, Intrusion Detection, OpenCV

I. INTRODUCTION

Vehicle Intrusion Detection is a software application that monitors a place or an area for malicious activity or access violations. VID is designed to provide human less security which can alert the security services by triggering an alarm when a malicious activity takes place. The primary purpose of this paper is to reduce the human effort by taking advantage of computer vision and high-speed computers. It is also a fact that humans are prone to make mistakes and on the other hand it is essential to automate the manual tasks to computers. The system is simple and easy to use. It takes minimum efforts and cost to install anywhere. It can be used 24x7 and also we can ensure 0 errors once installed. It has a built-in security system which can automatically capture the intrusions and can alert the security services through an email within a span of seconds.

A. Purpose:

VID is relatively a new innovation in security. It is essential to improve our security systems continuously. VID system is designed in situations where the security surveillance is heavily needed and in situations like where traditional manual security check-ups become slow and dull. VID completely avoids the humans and function on fully automatic mode. It can troubleshoot its own problem and they can recover to normal mode when a sudden crash in the software happens. VID has a lot of scope in future. It can be deployed to the areas where security is most important to the locality like military bases, nuclear sectors, defence secured areas, etc.., It can also be deployed to small scale areas with the minimum cost factor.

B. Motivation:

The traditional security system might become outdated in upcoming years. Those manual techniques may not function well and also we cannot ensure the perfect security to the locality. Innovation is needed to overcome this deficit.

C. Literature

Intrusion Detection System (IDS) is a vital component of security measures shielding computer systems and networks from potential abuse and misuse. In 1980, John Anderson published one of the earliest papers on IDS in the Computer Security Threat Monitoring and Surveillance. Since then many different efficient approaches for IDS have been proposed and implemented in practice. However, the research on intrusion detection is still an active field and attracts the attention of many researchers because of its challenges and necessity of IDS for our computing resources when using the Internet. Some of the challenges in current IDS are:
Effectiveness: IDS should detect attacks accurately without raising too many false alarms. It can be fine-tuned to produce less range of false alarms however solely at the price of the accumulated range of false negatives (i.e., by missing the particular attacks); conversely, it are often created general to hide a lot of attacks however solely at the price of the accumulated range of false alarms. Additionally, the potency of associate intrusion detection system conjointly contributes to crucial its effectiveness.

Adaptability: IDS ought to unendingly learn changes in the earth after some time and acclimate to them in like manner. Adaptability is a noteworthy test and apparently the most wanted trademark for IDS. For the most part, accomplishing flexibility consequently is a more complicated issue for abuse recognition frameworks which depend on a manual making of marks. Oddity location frameworks by definition search for novel assaults yet they likewise need to adjust their scholarly models of typical conduct with respect to changes in the earth

Speed: dealing with the high-performance network — Diversity of environments: needs to operate in changing and adversarial network environments with different protocols, services, and applications.

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Automatic Smart Street Light by Intensity Controller Using Node-MCU

Sandhya Pasala, Veeramanickam M.R.M, Mamatha Vayelapalli

Abstract; India facing one of the major problem is maintenance of street lights. In India street lights are maintained manually, it is found that there is wastage of power by operating the street lights due to manual operations like switch on the lights at day time. Due to that wastage of electricity will be occurred. The methods that are working on the maintenance of street lights are not effective. In this paper a new technique is proposed to control the intensity of LED lights using LDR sensors and PWM drivers resulting in power saving and reducing the manual errors by controlling automatically. Implementation is done using NodeMCU. For effective communication, sending the status of the street lights by using Blynk App for monitoring the street lights effectively.

Keywords; NodeMCU, Street Lights, LDR, PWM driver, Battery, Regulator, Blynk App.

I. INTRODUCTION

In present days we can see there is a lot of wastage of electricity. especially in street lights. Street lights are controlled manually in olden days. These days automation of street lights has emerged. As we do not required high intensity light of lights in the peak hours i.e. when there is no traffic and even in early mornings. This reduction of lights brightness intensity helps to save more energy of power consumption to the small extent. So in this project we are implanting based on the intensity of light.The intensity of the light will be calculated and based on that intensity the LED lights will glow. The brightness of the LED lights will be gradually increased with respective to the intensity and the brightness will decrease when the intensity of the light is low. So that we can reduce the electricity and no man labour is required.[1][2]

The objective of the project is to provide automatic control on street lamps and street lamp glowing at day or Street lamp not glowing at night then attend the problem immediately. The main purpose of this project is to reduce the wastage of electricity in the field of Street lights, reducing the manual errors and providing safety at late hours.

II. EXISTING SYSTEM

Most of the existing application is studied about the automatic light intensity automation in various platform like this system used LDR sensing techniques in sensing required light intensity with PIR based motion sensing used to detects its speed of objects motions. This entire concept deployed in the mobile application which is controlled using a database which collects data in real time. [3][4]

In this model, Arduino used to do the comparison for switch ON and OFF timing with the help of the rtc module deployed to match required outputs. The LED which is attached will be turned OFF based on inputs matches with on and off modules with Aurdino.[5] In this application users used manual controlling for the street lights based on lot time allotted for taking in the evening timing which helps to switch ON.[6][7] Most of the application making automation in controlling lights with the help of the internet of things feature's with Aurdino.[8] The light controlling the intensity with the help of dimmer basic circuits. This Light dependent resistor which is used for sensing darkness and then Passive Infrared are used for detecting any objects. Raspberry Pi acting as master and then Arduino is used as slave for communicating among one another.[9][10]

In the existing system street light automatic intensity controlling done by using Aurdino UNO. Arduino is an open-source hardware kit with 8-bit Atmet AVR pre-programmed on-board micro-controller kit, with boot loader that uploads programs into micro-controller memory. In this work, two kinds of sensors namely, PIR, which is a motion sensor, used to identify passage of vehicles or pedestrians and LDR is a light sensor which will detect intensity of sun light. Wi-Fi module is a wireless communication medium, used to send/receive information from/to street lights and control unit.[11][12]

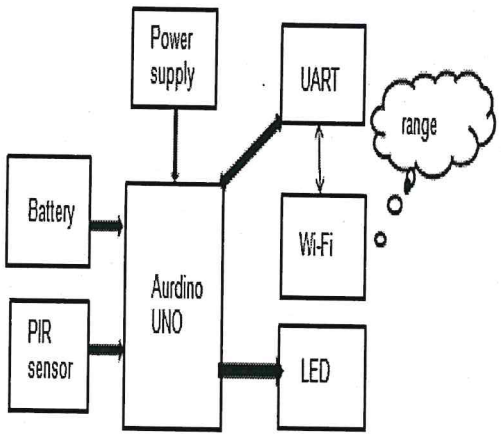

Fig:1 Block Diagram

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ORIGINAL ARTICLE

Harmony search algorithm and combined index-based optimal reallocation of generators in a deregulated power system

Sravana Kumar Bali[1] · **Suryakalavathi Munagala**[2] · **Venkata Nagesh Kumar Gundavarapu**[3]

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Abstract It is compulsory for the electrical industry to make effective utilization of the available resources and provide a stable and reliable supply to the consumers. Optimal reallocation of generators and implementation of FACTS devices have been found to be very effective in this regard. In this paper, a combinatory strategy of optimal tuning of generators using harmony search algorithm in the presence of static VAR compensator has been proposed. The static VAR compensator has been placed on the basis of a combined index that comprises of V_i/V_o index and L-index. A multi-objective function comprising of voltage deviations, active power generation costs and line losses has been considered for proper tuning of the generators. The results obtained are compared with the genetic algorithm. The proposed method has been tested and implemented on an IEEE 30 bus system for normal loading and for severe system conditions due to line outage.

Keywords Optimal reallocation · Static VAR compensator · Harmony search algorithm · Voltage stability

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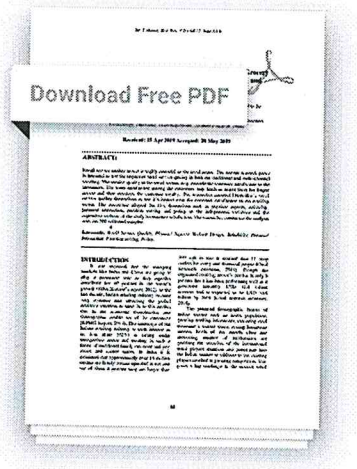
1 Introduction

The complexity of power systems has increased recently increased multifold due to deregulation of the electric power market. Due to the marked increase in the competition, finest use of the obtainable power supplies has become mandatory. On the other hand, due to rise in power flow the transmission lines are continuously facing a problem of congestion because of carrying power at their extreme transmission limits and sometimes higher. Sustained congestion in the lines can cause an excessive risk to power system security, reliability and stability.

Optimal tuning of generators is an inevitable requirement of the power systems in the present scenario. FACTS devices have been suggested by reviewers for various power system-related issues [1]. Proper placement and tuning of the devices are necessary for utilizing the benefits of the devices to the utmost level. Various metaheuristic methods [2] have been used recently for placement and tuning of the FACTS devices for various purposes. Several authors have used metaheuristic algorithms for obtaining the optimal location of FACTS devices for various objective functions [3, 4]. Prasad and Mukharjee [5] proposed symbiotic organisms search (SOS) for the solution of optimal power flow of power systems with FACTS devices for a multi-objective function. Chang [6] has used multi-objective particle swarm optimization method for the installation of SVC to improve transmission system loading margin (LM) to a certain degree and reduce network expansion cost. Nam and Viet [7] have suggested optimal placement of SVC in power market that voltage stability is increased by PV curve and social welfare is increased by locational marginal price (LMP).

Rao and Gundavarapu [8] have used OPF technique in the presence of SVC for the improvement of network



Influential Role of Retail Service Quality in Food and Grocery Retailing: A Comparative study between Traditional and Multi-channel Retailing 1

Surapaneni Mohana Murali Krishna

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Design of Micro Strip Stacked Patch Antenna in C-Band for Satellite and Radar Communications

A. Naga Jyothi, T. Pavani P. Ayyappa Kumar, G.V.Sai Swetha

*Abstract: An analytical model of Edge Feed Micro Strip Stacked Patch Antenna (EFMSSPA) with twin slots operating at 5Ghz frequency is proposed and this lies within the microwave C-band (4-8 GHz). Micro strip Patch antennas (MSPA) with simple making procedure are preferred because of light weight , low profile low volume and easy to fabricate. These are used for satellite communication, wireless communication, medical , military systems and microwave radar applications. The antenna parameters like return Loss (S11), Voltage Standing Wave Ratio (VSWR), Gain and Directivity have been studied in this paper. The scale of the antenna 37.2*61.94*1.6mm3 has been increased by applying the Parametric Analysis. A unsighted trial and error means of analysis is take up to study the effects of twin slots on the patches .This Edge Feed Micro Strip Stacked Patch Antenna (EFMSSPA) with twin slots is designed using computer simulation Technology (CST) Microwave Studio. The CST Microwave Studio helps in understanding the features like Gain, Directivity, Return Loss (S_{11}) and Voltage Standing Wave Ratio. The design process of an EFMSSPA and EFMSPA (Edge Feed Micro strip Patch Antenna) is obtained by using FR4 Epoxy having a dielectric constant of 4.3. The Patch width (P_W) and Patch length (P_l) of an antenna are 18.43mm and 13.92mm The twin slots in the patch and stacked Patch placed with 3mm air gap above original patch increases the Return loss (S11), Gain and Directivity. A comparison of EFMSPA and EFMSSPA is considered and proved that EFMSSPA exhibits good results than EFMSPA.*

Keywords: Return Loss, Stacked Patch, Gain, Directivity, Micro strip Patch antennas (MSPA), Edge Feed Micro Strip Patch Antenna(EFMSPA) ,Edge Feed Micro Strip Stacked Patch Antenna(EFMSSPA).

I. INTRODUCTION

Antennas place a crucial role in communication systems. By definition, it is a device used to convert Radio frequency signal into an Electromagnetic wave in free space[1]. The radiating patch can be placed on one side of the dielectric substrate and ground plane on the back of the substrate to achieve the Micro Strip Patch Antenna (MSPA)[2]. The Materials of the patch are copper, gold etc and can be shape like, rectangular, circular or square type [3]. There are numerous feeding types in MSPA. The four types mainly pointed out and mostly used are micro strip line, coaxial probe, proximity coupling and aperture coupling [4]. The proposed antenna is designed using micro strip line. The advantages are more in MSPA when compared with conventional antennas. They have low cost, less weight, low volume and easy to fabricate. Radar communication demands a light weight, low profit, low volume antennas [5].The MSPA are an individual choice. They are used in Satellite communication, wireless communication, medical and military systems. Moreover, there are several disadvantages present in the MSPA. It consists of narrow bandwidth, low efficiency and low gain.

II. PROBLEM FORMULATION

There are several methods to improve to improve efficiency and gain in MSPA. One of the technique is to change the slots and apply stacked patches to the original patch, fractal geometry and defected ground structure [6]. In this paper, twin slots are placed in the patch and stacked patch is introduced with 3mm air gap above the original patch to increase the Return Loss (S_{11}), Gain and Directivity.

III. REVIEW OF MICRO STRIP PATCH ANTENNA[MSPA]

A dielectric substrate and a ground plane are present on the either side and a radiating patch is placed on the top of the substrate and is of any shape (planar or non planar in geometry) [7]. It is a resonant antenna and is popularly printed for narrowband microwave wireless links that are required for semi hemispherical coverage [8]. It is used as elements for an array due to its ease of integration and planar configuration with micro strip technology [9]. Most commonly used micro strip antennas consists of rectangular and circular patches and are used for most demanding applications [10]. The Symmetric pattern of radiation is the main advantage of circular patch antenna and a Rectangular MSPA in its easiest form is shown in Fig 1 [11].

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Optimal Analysis of a Queuing Model Based Communication Network

N. Thirupathi Rao, Debnath Bhattacharyya, V. Madhusudhan Rao, K. Srinivasa Rao, P. Srinivasa Rao, Tai-hoon Kim

Abstract*—Queuing model based communication network models development was increasing a lot in the recent days. The actual setup of the network and analyzing the performance of such networks are becoming the tough part day to day observations. Hence, the authors now a day's tries to model the communication network models in the form a queuing model and trying to analyze the performance of such networks. In the similar fashion, in current article also, the authors tried to develop a communication network model such that to analyze the performance. The arrivals considered for the model are the compound Poisson arrivals and the form of the arrivals is in bulk. The current network model considered is having the two stage arrivals and the performance was analyzed in the form of tables and graphical representations. Numerical representations are displayed to examine the impact of changes in input parameters on framework execution measures. With reasonable cost contemplations, the ideal working strategies of the communication networks are determined and broke down. It is watched that the compound Poisson binomial mass landings dissemination parameters have noteworthy impact on framework execution measures. Dissecting the two phase coordinate landings enhance the system execution and diminish clog in cradles and mean postponements.

Keywords*-- Optimal performance, network, communication, bulk arrivals, bandwidth, dynamic bandwidth, communication networks, utilization, loss of packets, queuing models.

I. INTRODUCTION

Communication networks displaying is an essential for plan and investigation of numerous communication frameworks [1, 2]. It is hard to lead research centre examinations under factor stack conditions, the communication organize models are created with different suspicions on landing forms, transmission forms, designation, steering and stream control systems. For better usage of assets and to enhance nature of administration parcel exchanging is utilized over circuit or message exchanging. Much work has been accounted for in writing in regards to communication systems with blockage control procedures. Bit dropping is one of the typical strategies received for blockage control.

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In this technique, the thought is disposing of certain segment of benefit, for example, minimum huge bits with a specific end goal to diminish the heap. In any case, the bit dropping makes changes in voice quality because of a progressively fluctuating piece rate amid a cell transmission [3]. To keep up nature of administration and to lessen the clog in cradles another transmission system dynamic data transfer capacity designation technique is used as an option and effective control procedure [4].

In every one of the papers alluded above, they expected that the landings are single and take after Poisson process. In any case, in packetized exchanging the message that touches base to the source are changed over into an arbitrary number of parcels and land to the cushions in mass. In any case, in these papers likewise the creators considered that the entries to the system are to be first cradle as it were there [5]. For instance, in media communications there are some neighbourhood calls and some STD calls where the STD calls may straightforwardly touch base to the second cushion. To break down this kind of frameworks, a two hub pair communication networks coordinate with dynamic data transfer capacity allotment having two phase coordinate compound binomial Poisson entries is produced and broke down [6].

II. QUEUING MODEL

Consider two-transmitters pair correspondence organizes in which the messages touch base to the system are changed over into an irregular number of bundles [7]. The landing procedure of the messages is arbitrary and various parcels (X) that a message can be changed over takes after a binomial dissemination with parameters m and p i.e., the entry modules takes after a compound Poisson binomial process with composite entry rate α1. E(X), α2 [8].

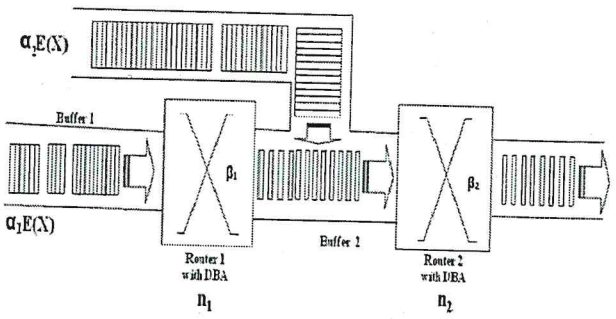

Fig 1. Network model with arrivals

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Implementation of Malicious Things Detection at Public Places Using Deep Learning

P. Aleemulla Khan, N. Thirupathi Rao, Debnath Bhattacharyya

Abstract: To provide effective security in crowded or public areas in today's world is a big challenge for us. One of the major challenges is to detect or monitor potential threats such as explosive items or bombs (Abandoned luggage items).In this paper we propose an approach for automatic detection of abandoned luggage and alerting the security alliances ,We use deep learning to train the system with a set of images, these images were given to the trained system which is going to visualize the objects in the image and calculate the distance between objects if the object is person and baggage or only baggage. If the distance is greater than a threshold distance limit then the system is going to raise an alarm for the security alliances.

Key Words: Explosive items, Deep Learning, Security alliances

I. INTRODUCTION

Now a day's providing security in the crowded or public areas and usage of video cameras to capture the objects continuously is a huge task, video cameras are not having the intelligence to classify the objects as well as humans. To enable security to be very effective the security people should be increased and continuous monitoring is required which is very impossible. To make people more secured with more powerful security alliances and reducing the human efforts, in this paper we propose a machine which adds intelligence to the video data captured from the security cameras. We train the system with a set of images and then the input data which is video into the one image per one second. These images were given to the trained system which is going to visualize the objects in the image and calculate the distance between objects in case if the object is person and baggage in the specified time frame. If the object is baggage alone or distance between person and baggage keeps on increasing than the specified threshold distance and for a specified time gap the system will raise an alarm for the security alliances.

A. Deep Learning

- Deep Learning is a subfield of machine learning worried about calculations Inspired by the structure and function of the mind called simulated neural systems.
- Deep learning is utilized to recognize objects from satellites and distinguish sheltered or risky zones for troops.
- Automotive scientists are utilizing profound figuring out how to naturally recognize protests, for example, stop signs and activity lights.
- Deep learning is being utilized as a part of computerized hearing and discourse interpretation.

B. NEURAL NETWORKS

An Artificial Neural Network (ANN) is a prominent method and technology used to process many applications. Utilizing video observation cameras, lawbreakers have been captured and fear monger assaults have been stayed away from. Video observation cameras must be enhanced keeping in mind the end goal to counteract wrongdoing and fear based oppression effectively. A perfect video observation framework for surrendered gear discovery must have the capacity to identify uncommon occasions, to recognize a man and a baggage. In a large number of the confined spots security ought to be extremely alarm and continue checking the regions for unattended stuff. The procedure isn't mechanized and required part of human exertion.

A deficiency of the manual video reconnaissance framework in the general population transportation territory is that the security staff can't watch all suspicious conduct caught by the camcorders and checked on the PC screen. Manual framework should be supplanted by a robotized framework which will alert the security staff when relinquished baggage is identified or caution the explorer when he or she leaves the gear unattended. This proposed framework goes for identifying relinquished gear at the prepare station and its encompassing. It will be built in three distinctive User Interface variants for three various types of clients.

C. Image Annotation

There are three types of learning methodologies in machine learning. They are:

i. **Supervised learning**: In supervised learning we will give the labels for the image and make the system learn different images of same feature.

ii. **Unsupervised learning:** In unsupervised learning we will give the features for a system to understand and name the system according to that features is done by the system.

iii. **Semi-supervised learning:** In semi-supervised learning we have the images both with labels and without labels.

The annotation is mainly to label the images and use the supervised learning mechanism. The annotation is of two types:

- Manual Annotation
- Automatic Annotation

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Design and Development of OMPS Game

N. Thirupathi Rao, Debnath Bhattacharyya, Tai-hoon Kim

Abstract: *The current Model "Online Multiplayer Strategy Game" is an online multiplayer strategy game which is developed as a web application. Each player starts the game as the leader of a small undeveloped village, surrounded by undeveloped resource fields. Creating military units will allow them to attack a person or defend from enemy attacks. Players can join as a team. Allies may trade resources through trade market or send reinforcements when others are being attacked. An alliance can win the game by destroying the enemy alliance completely. The main motive of the game is to gather resources with villagers, developing village by constructing new buildings, creating as many troops as you can and destroying the enemy alliance with your alliance. The current Model is developed using mean stack. A standard java stack called MEAN is used for designing and building the dynamic web pages. Also the same software is used for MongoDB and other sources etc,. The current work sparks the player's creativity, develops problem solving skills, and improves one's planning, management and foresight. The game is portable and can be accessed from anywhere.*

Keywords: *Online game, multiplayer's, villagers, strategy and game.*

I. INTRODUCTION TO BROWSER GAMES

Browser games are getting famous day by day and also the games which were developed targeting mobile devices also getting day to day [1]. Browser games are those users can use the personal computers to play the games. The development of such games includes the usage of various web technologies and other technologies for further more interactive with the end users. These games consist of all types of various video games and other types of related games. These games include the combination of both single players and sometimes double players and in some games more than two players also possible to play the games [2]. Program diversions are regularly allowed to-play and don't require any customer programming to be introduced separated from an internet browser or program module. Now and again an amusement might be free, however charge for additional in-diversion highlights. Multiplayer program recreations have an extra spotlight on social association, either between a few players or on a huge scale. Because of the availability of program diversions, they are regularly played in progressively visit, shorter sessions contrasted with conventional PC recreations [3,4]. Since program diversions run separated from equipment in an internet browser, they can keep running on a wide range of working frameworks without being ported to every stage. In a diversion Model the item is amusement, which is substantially more than just programming [5]. It needs to give agreeable substance.

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The nature of the diversion likewise has a noteworthy job in its notoriety. Standard web innovations, for example, HTML, CSS, PHP, and JavaScript can be utilized to make program diversions, yet these have had constrained achievement on account of issues with program similarity and quality. These advancements take into consideration amusements that can be kept running in all guidelines consistent programs. Furthermore, committed designs advances, for example, SVG and canvas take into consideration the quick rendering of vector and raster illustrations separately. Also, WebGL takes into consideration equipment quickened 3D support in the program. Program modules were utilized to give diversion advances subsequent to being introduced by the client. Starting at 2017 most organizations (Oracle for Java module, Adobe for Flash Plug-in) are thinking about to end support for their modules. Additionally internet browser makers are leaving utilizing modules in their items later on. Some examples of such browser based multiplayer games are as follows,

A. Castle Of Heroes

Castle of Heroes, is an enormously multiplayer online dream program based procedure amusement created by the Chinese designer Snail Games and distributed in the United States by its U.S. distributing division, Snail Games USA [6, 7]. The decision is between Human, Elf, Orc and Undead. Each race has distinctive advantages for a beginning player, for example, people having an early extended unit, or early undead units being less expensive to deliver than different races. Further racial advantages are discovered later in the diversion. In the wake of picking and naming a character players will have the alternative to take a short instructional exercise to acquaint players with the diversion. Errands for the player to finish help to direct the player through the amusement once the instructional exercise is finished [8, 9, 10]. Players begin with a little however shifted supplement of troops and a blue quality Hero to order them. Some of the other set of games are "Empire and State" and "Clash of Clans". The advantages and disadvantages of these games are discussed in detail in the following sections. The client side programming Languages is JavaScript while the server side programming language is PHP [11, 12, 13]. The JavaScript Library used is jQuery 1.8.3 and Modernizr with HTML5 as the mark up language.

II. OBSERVATIONS FROM THE EXISTING MODELS

1. "Age of Empires" uses PHP and ASP.NET for server side scripting and jQuery javascript Library for client side programming.

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Applications of Artificial Intelligence and ML in Business

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Abstract

The utilization of artificial intelligence and its related techniques is going in rapid level of growth. As the technologies are upgrading from time to time, the technologies are also increasing the utilization of these techniques such that to provide the more sophisticated facilities to the users. The utilization of various applications of artificial intelligence includes face recognition, palm recognition and other applications etc. As the technology trends going, the utilization is also increasing and in the current paper, thee applications are given with a brief details. Various sectors where the current AI techniques are utilizing in a very high growth to be noted and presented in detail in the current paper. This growth has to be observed in various fields and all those areas were discussed in detail.

Keywords: *Artificial intelligence, Machine learning, Face recognition, Smart technologies, Business applications, Marketing applications, E-commerce applications*

1. Introduction

Artificial intelligence is the recently developing technologies and it is helping the other technologies in the market and society to achieve good levels of the technology. The technology is growing day by day with the usage of these techniques [1]. This utility has changed the entire worlds prospective towards the artificial intelligence and its related areas of working and support. With this utility, the business of the various big companies in the world had entered into the he level of very few millions of dollars to the billions of dollars for their businesses. The utility of these techniques and its other related areas will give the best outputs when compared to the other sets of implementations. The techniques that can be used for the research experiments and other issues, the results will be very impressive and will not be expected by the users or the scientists. The results astonish the scientists who are working on these areas.

The utilization of these applications started form the initiation of using rule based mechanisms. In rule based mechanisms, the data with which we had decided to work with the machine will be given in the format of rules. The machine will work on the basis of these rules and will take the decisions appropriately. At first, the data that was available for the currently considered problem will be collected from various sources. All this data will be converted in to the form of rules with various answers for the same rules. All these rules will be stored in the database of the intelligent machine or the artificial intelligent machine where the data will be used by the machine for taking the decisions on the currently raised problems. The place where these setoff rules will be stored can be taken as the knowledge base [2].

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Enhancing Security Features for IoT Devices by Integration with Block Chain Technology

B.Venkatesh, Ch. Srinivasa Reddy, Ch.V.Bhargavi

Abstract— System of bodily hubs or "matters" joined with hardware, programming, sensors, and linked to enact articles to move information from servers, included frameworks, or doubtlessly distinctive associated devices depending on a numerous correspondence foundations may be actualized with net of factors (IoT) version. IoT facts gathered from various sensors, hubs and government are moved to the cover over the net. The principle target of IoT protection is to ensure thriller of the statistics, and make certain the assurance of the consumer's statistics, frameworks, software program's facts substance, and smart machine's of the IoT, via manner of ensures the administrations accessibility of IoT organic gadget. The number one purpose of this exam article is to enhance protection highlights to IoT device becoming a member of with rectangular chain. The significance of Bit-coin the usage of rectangular chain innovation, which changed into at that factor set up for a few, financial nicely well worth exchanges because it have been. Anyhow, because of its Non-delivered collectively engineering, agile corruption and cryptographic defend benefits, for instance, pseudonymous personalities, statistics trustworthiness and take a look at, scientists and safety professionals round the sector are concentrating on the rectangular chain to decide coverage and protection issues of IoT. In this article, we have positioned a few right down to earth problems which can be associated with the becoming a member of of IoT devices with the square chain. At closing, we endorse a course ahead to determine a part of the large difficulties to the rectangular chain's utilization in IoT based totally software program.

Index Terms— IoT, Sensors, Block Chain, Integration

I. INTRODUCTION

There was intense interest and advancement within the internet of factors (IoT) based totally administrations round the arena, specially in wellness division, administrations and application introduction and in especially thick areas for the usage of IoT. It's far required to enroll in billions of gadgets by 2020 [1]. Global's financial system and individuals' existence may be improved by way of the usage of IoT. Preference is to make approximately USD 7.1 trillion commitments to the worldwide financial system through 2020 [2]. Be that as it may, within the meantime, IoT devices are unprotected because of great security highlights slips by simply as clients' protection worried, that are known to the designers but security in IoT devices is both disregarded or dealt with as an addendum [3].

It's far run of the mill for the eventual destiny of IoT that its sensible model is restored from steeply-priced, common and over-curved integrated layout to an automated and self-guided decentralized model, this type of transformation will give wide scope of usage, low foundation price, independence for devices, at ease sports in a trustless state of affairs, customer driven safety, get to manipulate and extra towards gadget assaults.

Square chain is being considered as one of the realistic technique to renowned required decentralization and offers structures that are disgraceful in such way [4].

Notwithstanding the fact that rectangular chain changed into before everything considered as a economic trade conference as Bit coin, however due to its cryptographic protection advantages, as an example, pseudonymous personalities (IDs), decentralization, adaptation to non-important failure, change honesty and affirmation, professionals and protection investigators around the world are concentrating at the square chain to decide protection and safety problems of identified with IoT.

In spite of the reality that an average Bit coin square chain confinements are, as larger diploma of usage, delay occurred within the change take a look at and large sparing capacity, spillage construe for protection and basic degree count and the best desires, that square chain innovation must be investigated profoundly earlier than it has a tendency to be performed properly and ably in an IoT associated software's.

II. PREFERRED CONCEPT OF IOT

We centered on giving a brief depiction of the IoT innovation on this level,

A. IoT Devices

In earlier trade it became stated, the IoT will cover severa facts association systems wherein the hubs are conveying utilizing net with every other. "

It's alluded as both Node or .substances within the workplaces are typically called as utility devices, they displayed severe traits. [5].

a. Identity: every IoT system need to display an inexpensive strong point, just like an internet Protocol rendition 6 (IPv6) cope with for you to talk amongst all objects [6].
b. Sensing: The detecting strategies are actualized to secure statistics from the modern-day actuators around the hubs correspondence [26].
c. Communication: communique implies the between connection strategies which can be applied for you to companion with all hubs using items with each different [6].
d. Computation: The calculation structures are gotten to take a shot on the records that is procured from the hubs [7].

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Extractive Text Summarization using Deep Natural Language Fuzzy Processing

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Abstract— Text summarization is most trending research areas in a modern context. The main aim of this project is to reduce text size while preserving the information underlying into it. In summary construction level, in general, given complex task which are basically will involve with deep natural language fuzzy processing methodologies. In general, an extractive based summary method is the very simple original text of subset of which will not guarantee as best narrative coherence output, because they are most conveniently representing an approximate summarized content from given text-based only on relevance judgment. In an automatic process of fuzzy summarization which is divided into the following steps: Pre-processing (sentence segmentation, tokenization, stop words removal), Feature Extraction, Sentence Scoring, Sentence Ranking and Summary Extraction.

Index Terms— Natural Language Fuzzy Processing, Text Summarization, Tokenization, Naive-Bayes.

I. INTRODUCTION

In today's world, we can get information everywhere. It has never been this much accessed in the past until now. With the growth of the internet, we entered the era of information technology. Information and data are produced every day at a massive rate. There are over 1.8 billion websites currently on the internet. We cannot imagine how much information these many websites contain. But this information doesn't guarantee the usefulness for the user. Some information contained in such massive websites might be of less use to the user, some information might be duplicated, and some might contain noise in it [1] [2]. Noise refers to the incompleteness of documents, missing characters or use of unwanted characters, and so on. The given input can retrieve the relevant and essential point's information from a document, its summarization phase playing a vital role. In the computing field teaching and learning using personalized learning is most required platform with social learning, internet of things and ANN [3][4]. This summarization model helps to deployed in e-learning platform.

The communication of human between each other will be done using the Natural language. By using the huge amount of data, the process of communication will be happening and from that useful information will be occur, by that information it allows the computer to make more communicate with the human. NLP (Natural Language Processing) refers to techniques and methods involved in automatic manipulation of natural language [5]. Human-computer interaction, machine learning, information summarization and some more are using the Natural language [6].

Summary refers to a text, or a paragraph or a document having less size than the original text, or a paragraph or a document and containing the most important meaning from that text, or a paragraph or document. It is impractical to construct a summary of each and every document found in today's world manually. Instead, we can automate the process of constructing a summary of documents so that only selected documents can be summarized. We can construct a summary of two kinds of documents, i.e. single document and multiple documents. The given single input document can do summarization which refers to the generating process for summary output from a one document, but in case of multi-document summarization level the process generate single output summary with help on using multiple given input documents. There are different ways of summarization for a document [7]. E-learning used for notes sharing to help of personalized model using internet of things and summarization [8] [9].

Extractive summarization: The basic approach is to extract document parts as per deemed interest for summarization on certain metric like example: inverse-document frequency mentioned as the tf - IDF: this so called often as a weighting factor, this factor value is increased proportional to the number of times a word appears in the document. The weight of terms diminishes based on Inverse document frequency factors which occurred frequently allow to increase the weight terms occurs rare manner, for example, the word "the", "and", "a" appear most frequently but they aren't helpful in giving the required information about the document) [11] [12].

Original Text: Alice and Bob went by the train for visiting the zoo and saw animals like a baby giraffe, a lion, and a group of birds in the colorful tropical area.

Extractive Summary: Alice and Bob visited the zoo. Saw a flock of birds in a group.Many of the times we can notice about the extractive summarization constraint which makes the output summary as an awkward sentence or grammatically strange one.

Abstractive summarization: Second approach for simplifying summarize as similar to humans doing, which is different from imposing extractive constraint and then allow for re-phrasings the content.

Abstractive summary: Alice, Bob visited the zoo and saw birds and animals. For another example, if the case summary

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Parametric Study of Vivaldi Antenna with Different Corrugated Edges for Microwave Imaging Applications

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ABSTRACT--- For communication now days we are having so many transmission mediums in modern communication system. But may not have the security, privacy and reliability of the data what we are sending in a qualitative way. In order to achieve quality communication, this paper mainly deals with a new and innovative approach to send data via ultra-wideband antennas.

A wide range of communication there are many advanced ultra-wideband antenna available such as Bow tie, Helical, Spiral, Log periodic, Horn and Bi-conical antennas. To compete with the available trending technology we concentrated on innovative Vivaldi antenna is selected. It has the capacity to communicate widely through superior broad band. This approach meets effective impedance matching to feed line and easy manufacturing process.

Keywords: Vivaldi antenna, The Linear Tapered Slot Vivaldi Antenna, CST Microwave Studio Suite, UWB

I. INTRODUCTION

This paper consists on design of Vivaldi antenna which is unique in its kind of travelling wave of micro strip, which is commonly used in various applications. The variable structural parameters taken to balance pattern, return loss performance by reducing the size of the antenna. The Linear Tapered Slot Vivaldi Antenna has been changed by adding the appropriate size corrugations on its edges to regulate the complicated mutual coupling at high scan angles. On Further improvement, which opens multiple unsymmetrical corrugated slots on the edges of the radiative part to increase the gain and directivity .The operating frequency range is 0.5- 12GHz.The application of UWB Vivaldi antenna is to obtain microwave images. The preferable dimensions of the Vivaldi antenna needs to be based with a dielectric substrate 3.27 and relative permittivity 4.4 where Permeability is 1. Tangent is 0.025 and height is 0.3807. The antenna is intended to be frequency of 12GHz with dimensions of 41.97mm 72.92mm 0.3807mm. CST Microwave Studio Suite 2017 is used for simulation and designing of antenna. The simulation result provides Waveband from 0.5GHz to 12GHZ as return loss -10dB and HPBW varies around close to 90°. The antenna is remarkably small in size with improved HPBW and it will meet the necessities of UWB system.

Satellite, wireless communication, remote sensing and radar has led to the ultra wide band (UWB) in electronic systems for rapidly developing communication systems.

Here UWB technology uses antennas with broad bandwidth minimum distortion for received and radiated pulses. The design of these antennas shows good impedance stability over the large frequency range.

Since radio signals from a spectrum occupies a bandwidth greater than 20% of the center frequency or greater than 500 MHz the UWB technology, tapered slot antennas (TSA) are suitable to use. These antennas enable operators with efficeient wide bandwidth, significant gain and symmetric patterns in both co-polarization and cross- Polarization.

The Vivaldi is a traveling-wave, leaky, end-fire antenna, geometrically simple and advantageous. Vivaldi antenna, presented by Gibson [2] in 1979, has tapered slot line which grows exponentially. At microwave frequencies Vivaldi antenna provides broad bandwidth, low cross polarization and directive propagation and Printed circuit technology is used for construction of these antennas which yields in unlimited range of operating frequencies.

II. ANTENNA DESIGN

The proposed slot tapered Vivaldi antenna consists of corrugated boundaries (Microstrip-fed Vivaldi antenna) parameters taken are Minimum frequency (min) = 0.5 GHz the thickness of the substrate = 1.44 mm, the relative permittivity of the substrate = 3.27, Flare height(H_f) = 82.44 mm, Flare length (L_f) =157.4 mm, length of tapered microstrip line(Lmt) = 23.26mm, radius of the microstrip stub(rs) = 8.455mm, Height of the conductor (H_c) =104.9 mm, width of the tapered microstrip line at the port (Wmt) = 3.412mm, starting angle of the microstrip stub(θs) = 90, substrate height(Hs) = 1.44mm, width of the slot line(Ws) = 537.6 μm, Cavity diameter (D_c) = 10.93 mm, Length of microstrip coupler (Lmc) = 10.93 mm, Width of microstrip coupler (Wmc) = 1.151mm, Dielectric constant of the Substrate(εχ) = 3.27, Distance form cavity to the centre of the microstrip coupler (Smc) = 575.4 μm, loss tangent of the substrate(tanδ) = 0, length of slot line (Ls) = 1.151mm, factor determining the opening rate of the flare (displayed value calculated in a SI system) (Ft) = 20.angle of the microstrip stub(θ) = 80, Microstrip Stub feed is placed under the dielectric Substrate.

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Arduino Based Color Sorting Machine using TCS3200 Color Sensor

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Abstract— Sorting of object is an essential mechanical process in which difficult work is quite required. Chronic manual arranging makes consistency troubles. Machines can perform mainly dreary assignments superior to human beings. Laborer exhaustion on sequential manufacturing structures can result in decreased execution, and purpose troubles in retaining up object fine. A employee who has been appearing research undertaking over and over may additionally in the end forget about to recognize the color of item, but a machine in no way. On this paper a compact records close to arranging of articles based totally totally on shading has been implemented making use of TCS3200 shading sensor with SERVOMOTORS associated with AURDINO UNO.

Index Terms— Color sorting, Conveyor belt, TCS3200 color sensor, ARDUINO UNO, Servomotors

I. INTRODUCTION

In the cutting-edge-day scenario of competitive manufacturing in commercial zone performance of manufacturing holds the important component for achievement. It's miles essential to beautify manufacturing pace, lower the labour charge and reduce the breakdown time of production gadget.

Merchandise should be taken care of in numerous ranges of manufacturing and manual sorting is time consuming and labour extensive. This paper discusses about the automatic sorting tool which helps the sorting mechanism to kind based at the coloration. For sensing TCS3200 coloration sensor has been used. With the aid of reading the frequency of the output of the sensor, color primarily based absolutely sorting is completed.

Layout of a innovative venture referred to as item sorting system by means of spotting the only of a kind shades of the item has been leader goal of the challenge. Accumulating the objects from the hopper and distributes those objects to their accurate area based on their coloration even they'll be unique in coloration. Many paintings environments aren't suitable for manual sorting and a few areas are risky for humans to paintings on. Consequently to avoid the unstable work, time consumption and hard paintings catch 22 situation. This prototype is built as a simple digital gadgets like microcontroller for processing, Servo motors for actions and coloration sensor for recognizing exclusive colored devices.

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II. APPROACH

This venture makes use of a simplified and not steeply-priced technique for sorting the substances of a unique colored items, it's far sensing the color of the object and kind out the different colored devices. Servo automobiles are used to manipulate the motion of the skittles are amassed on the hopper. A servo motor is used to pressure the skittles to the sensor and the sensor that is interfaced with ARDUINO identifies the shade of the object and the bottom servo is operated as consistent with the deliver code.

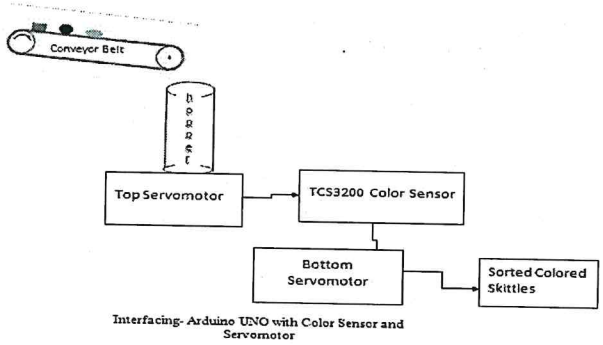

Figure 1: Block Diagram of the System

A. Input Unit

The precept goal of the work is to move the object from specific spot to sensor unit. On the factor at the same time as the object is introduced to the sensor a directing rail is made to prevent. Proper here field is the important statistics unit. Field is going to accumulate all the shaded items and drives personally toward the sensor unit with the help of pinnacle servo engine. We are able to make use of any of the shaded gadgets in step with the mechanical factors of the device. The essential hued objects we are going to use right here are colored skittles like gem stones, Marbles and so forth. The essential employment of this unit is to transport the object shape a gap to sensor unit, while the object goes to the sensor unit the manual rail desires to prevent.

B. Processing Unit

This unit gives pointers at the same time as the item emerges at the directing rail. With the help of servomotor and makes a decision the coloration of the item with the assist of the TCS3200 shading sensor and sends those sign to the control unit for subsequent operational advances.

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Implementation and Testing of Dual Polarized Parabolic Dish Antenna

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Abstract: The paper details test of Dual Polarized Parabolic Dish Antenna, at centre frequency of 3GHz, around 10^0HPBW in azimuth, elevation planes and LPDA (Log Periodic Dipolar Antenna) has feed. The antenna has ability to switch peak power of 1.5KW over a bandwidth of 50GHz and also be able to withstand the environmental conditions like wind, rain. The investigations which have taken place previously have concluded that the prime focus Parabolic Antenna is the most apparent one to meet the design requirement. The LPDA is dependent on operational frequency and is at a focal point of 0.25m to the parabolic reflector of 0.6m diameter. Investigations on the Parabolic Antenna contain gain, VSWR, Half Power Beam Width in both planes of the antenna. The Parabolic Dish Antenna with LPDA feed has been found with 8.56^0 and 10.5^0 HPBW of both azimuth and elevation respectively. The gains at different frequencies are comparable with the theoretical values. The antenna fabricated is tested and is in compact size to meet all the requirements of power, bandwidth. Finally, the results are shown with the antenna meeting all the requirements and ready for practical use.

I. INTRODUCTION:

This paper is all about testing a dual polarized Parabolic Dish Antenna with azimuth bandwidth of 8.56^0, which is enough to be setup on a truck. These parabolic reflectors are of many forms, though the necessary operation mode will be the same. The parabolic reflector receives parallel EM waves and focuses in the direction of focal point. The antenna feed is located on focal point, where the strong EM waves are received. It is true that emitted EM waves from the feed get reflected by the parabolic reflector.[1]The Fig shown below demonstrates the various Parabolic Antenna models used maximum. The Parabolic Reflector Antennas are examined by the authors, so as to meet the project requirements. The examined results are here concluded as: A Dish Antenna can be a dual polarized and it can handle high levels of power, so as to maintain a small structure. A shortened Parabola Dish Antenna is needed for automotive radars. Due to the requirement of dual polarization, the feed has to remain symmetrical; also the spillover and side lobe levels must be measured properly. The aperture of the Parabolic Dish Antenna is quite bigger when compared with other antenna models. The volume of the dish is less than a horn or pillbox antenna. The blockage of the feed as well as the efficiency of a small dish antenna is always an engineering challenge. The advantages and disadvantages of a Parabolic Dish Antenna are considered, so that the antenna with most feasible design is pursued in a Parabolic Reflector Antenna for the purpose of use in RADARs.[2]

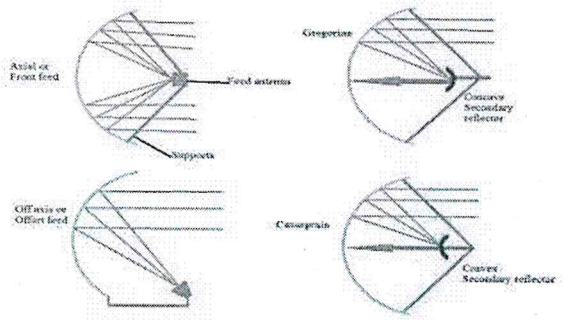

Fig 1: Parabolic Dish Antenna with front feed main focus, Parabolic Dish Antenna with Gregorian secondary reflector, Parabolic Dish Antenna with offset feed, Parabolic Dish Antenna with Cassegrain Secondary Reflector. LPDA consists of a range of wide frequency that makes it a good application for reflector antenna feeds.[3] LPDA provides a high gain above a large bandwidth, or else it is difficult to find with regular wideband antennas. These LPDA antennas are less in cost, appropriate for the illumination of reflector antenna. Whenever there is an increase in substrate dielectric constant, the length of the dipole and the dimensions of the antenna can be reduced.[4] An individual LPDA can be optimized for desired characteristics of the antenna, such as gain, bandwidth, and half power beam width. On the other hand, when it is used as feed, parameters of the performance can be degraded when compared to a standalone or an individual LPDA. The radiation pattern significantly changes because of the near field coupling along with the reflector that is measured in Voltage Standing Wave Ratio (VSWR). [5]On the other hand the standalone LPDA has a problem of defocusing which can be rectified and fixed by optimizing the LPDA as a reflector feed; as required optimizing is done on LPDA structure and also the geometry of the reflector antenna. This makes the design complex, whenever a large operating bandwidth is measured. Increasing the quantity of elements with their apex angle as well as scaling factor, LPDA is designed with a desired frequency band of 3-18GHz.[6] Proper attention has to be given as the dipoles become minor, the impedance matching and also the coupling of each element makes the design more complex.

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Implementation of Modified Harris Corner Detector Algorithm -Including Free Parameters Based on FPGA

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Abstract— An efficient, pipelined Field Programmable Gate Arrays (FPGA) engineering of a modified Harris corner Detector is proposed. In laptop imaginative and prescient, the Harris nook encompass locator is one of the most fundamental strides in numerous precious applications, as an instance, three-D replica. in any case, inside the occasion that it's miles actualized in programming, the following code is not affordable to be achieved continuously by using minimum attempt versatile processors. device technique has been acquired for offloading the monotonous element extraction method into reason entryways with the purpose that the association is having minimal attempt to supply and low capability to paintings contrasted with its product accomplice. The framework is fabricated and attempted on a field programmable Gate Arrays(FPGA) level (Zed board). The assessments and demos exhibit that the speed and precision of the component indicator are enough for some proper applications. The results reveal an ideal concord between belongings utilization and timing execution, contrasted and previous.

Index Terms— Field Programmable Gate Arrays, Computer Vision, Harris Corner detector

I. INTRODUCTION

Constantly superior sign packages area programmable entryway show off (FPGA) were present as one in all applied in the system field of automated indicators, utilising parallel coping with. previous due to computational unpredictability a giant lot of calculations had been walking with the decrease rate. In FPGA it's far even attainable to cope with the non directly qualities. In various software areas of reconfigurable gadgets, FPGAs have broadened their application into image managing circle as nicely. image getting ready activities are fundamentally of two kinds: low stage advertisement unusual state. in this paintings we are involved about the low stage photo making ready sports consisting of spotlight recognition. It includes first pastime on a photo, by inspecting every unmarried pixel to test whether or not there is an element gift at that pixel. A function is a hallmark a few portion of a picture like edges, corners, hundreds, edges. Corners focuses can be characterised as pixel wherein surprising change in force occur. those have excessive bend and lie in the locale among edges. nook recognition includes low level photograph handling precious for laptop imaginative and prescient packages like movement following [1], stereo vision [2], movement following [3].

Extensive assortment of fashions are located in implanted making ready like decreased education set computing(RISC), digital sign processors(DSP), application express incorporated Circuit(ASIC), application precise instruction set processor(ASIP), field Programmable Gate Array(FPGA), and Programmable system on Chip(SoC). every engineering has its own favorable situations and weaknesses. Miniaturized scale programmable gadgets are chosen in step with the specific necessity. FPGAs are broadly applied as a result of their parallelism, adaptability and short time to be useful in marketplace. The fundamental fee of FPGAs is that their programmable additives can be designed to have required usefulness. besides FPGAs accomplish advanced than GPUs and DSPs [4] as a ways as energy and timing execution.

II. ASSOCIATED PAINTINGS

Many nook finders were mentioned up till now. essentially two lessons exist. On eis shape based totally and the alternative is electricity based totally. form based totally techniques to begin with recoup picture shapes and after that quest for ebb and flow maxima or expression focuses along those forms. The number one task for automatic photograph acknowledgment became the shading based totally calculation (shading histogram or shading distributive highlights). Shading histogram become fruitful and faster in distinguishing shading conveyance includes in a few random images assembly vital necessities. besides it become useless in coordinating big arrangement of snap shots and did now not satisfy the accompanying standards (Consistency, Accuracy) [5]. The later endeavors have been restricted to the distinguishing proof of corners and edges. Harris corner Detector which fused crafted by Harris and Stephen fundamental work. Harris become powerful in distinguishing sturdy highlights in a few random image. because it was just figuring out corners, his work is absence of community of spotlight focuses which had obstacles in getting full-size descriptors, as an example, surfaces and articles. Later some other nook finder calculation called speedy (features from accelerated phase take a look at) changed into exhibited. The 0.33 enterprise includes image coordinating from finished photo with jumbled foundations. it's miles applicable to realize that element based calculations have been broadly applied as highlight point locators as hues, corners and edges relate to picture

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Artificial Way of Characterizing unsupervised Data using Auto-Encoders With Deep Learning Cluster Analysis

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Abstract: Most data processing methods for structural, unstructural and semi-structural data are not usually trained to process Big Data. In this 21st century, processing techniques for big data have reached the advanced level of processing data through deep neural networks, which are highly sophisticated in achieving an optimized solution.Autoencoder is a dynamic approach which also combines both supervised learning and unsupervised clustering with minimum reconstruction error.This paper advances the pattern clustering and multidimensional visualization of data.Deep Convolutional Auto-encoder, CDNN-based deep clustering algorithmscomprise of multilayer perceptions improves robustness using Deep Convolutional Embedding Clustering(DCEC), Clustering Convolutional Neural Network (CCNN) clustering algorithms. The objective of this paper is to reduce the computational complexity, enhance reliability, and effective simultaneous feature learning for non-linear transformational data usingautencoders in convolutional networks.

Keywords: Autoencoders, Convolutional Neural Network,Deep Learning clustering algorithms, MultilayerPerceptron.

I. INTRODUCTION

Pattern clustering consists of various representations of patterns for extraction and selection, defining pattern proximity measure, clustering them and assessment of the data. A traditional approach towork outclustering complex problems usually follows mathematical formulas. Engineering problems cannot be described by equations by adopting adaptive learning architectures such as ANN, SVM, and ELM. Complex problems adopt higher enhanced systems through deep learning. These deep learning algorithms are more demonstrative with compactable architectures 100 times more powerful than ordinary learning algorithms specifically MLP. Multi-Layer Perceptron has the capacity to train algorithms by indulging new neural network architectures. It introduces additional connections beyond layers and maintains different approaches to accomplish complete success than partial success.

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It diminishes gradient problems while training neural networks. It trains without using computations of backpropagation. It describes the size limitation of the algorithm based on the breaks in computational problems.

Large datasets with multiple dimensions are difficult to process. Neural networks design process that can be replaced with/through learning. Special data pre-processing and transformations are used for a specific problem to manage a number of hidden layers. Deep learning neural networks follow the architecture, generate a set of deep features manageto cluster. it calculates the network loss of the clustering by measuring non-clustering loss, clustering-loss and combine both the losses. Later, the Cluster algorithms like CNN, MLP are performed.

Auto-encoder is an active functional unsupervised learning procedure for representation and dimensional reduction.It can increase the rise of progress clustering accuracy by eliminating noisy information that affects the clustering process withproductive time and profitable space complexity.

Clustering using a set of deep features

The transformed input is majorly cluster-friendly as the features used for clustering are considered from multiple layers from the network.

Single layer network point to one layer of the network. It is very much beneficial when the dimensions are very low.

Multiple layer network point to the sequence of outputs from all the layers.Accordingly, it allows the entrenched space to define large complex semantic descriptionsthat improve the partitional progress and support similarity computation.

II. BACKGROUND SURVEY

Deep learningclustering algorithms are typicallygrounded into two grades (i) after the specification of learned clustering data, atwo-stage work is applied and (ii) algorithms in deep learning jointly optimize both the feature learning as well as clustering. The anterior grades of algorithms straightly hold the benefits of existing unsupervised deep learning frameworks and different algorithmic approaches.

The usage of autoencoder to determine the lower dimensional features forexisting modeled graph, and then lead by the k-means algorithm to obtain clustering outcomes.

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Analysis of SNR distribution of MIMO Indoor VLC System Up to Second order of Reflection

Ashish Kumar, R. Umamaheswari, Subhrajit Barick, A. Sampath Dakshina Murthy

Abstract: In this paper, analysis of distortion of signal distribution of LOS and higher order reflection up to second order reflection has been done. Through simulation result it has been found that maximum SNR is received at the receiver's position for Line-of-sight (LOS) component whereas it is uniformly distributed for second order of reflection. This analysis helps in finding the required Field of view (FOV) at the different receiver position according to SNR distribution.

Index Terms: SNR, VLC

I. INTRODUCTION

Light based communication invisible range is widely used for unregulated and unlicensed bandwidth, energy efficient lighting and communication, security, robustness in case of radio Frequency interference. In the next decade, the huge demand of data is shifting demand the towards VLC system because of its huge bandwidth. In spite of so many advantages, it suffers from limited bandwidth of LED which limits the data rate. To overcome this limitation MIMO system with spatial multiplexing has been suggested [1]. The advantage of using MIMO system is that it doesn't need extra spectrum and also increases the illumination inside the room. VLC is based on intensity modulation and direct detection technique. Hence, channel gain is real unlike the channel gain of RF system where the channel gain is complex. In MIMO-Indoor VLC system the layout of transmitter plays very important role in SNR distribution. Therefore analysis of SNR distribution inside the room becomes one of the research topic. Many authors have done research work over the SNR analysis. P. J. Smith et al. [2] have tried to find the impact of feedback through SNR analysis.David Gesbert et al. [3] have comparision of BER performance over various transmission technique for 2×2 MIMO system w.r.t to received SNR. J. Grubor et al [4] have investigated the benefits and difficulties of angle diversity receiver in non-directed infrared wireless communication system. They have simulated the electrical SNR with the variation of diagonal position of receiver for MRC-combined channel using 100-Mb/s OOK. K.D.Dambul et al. [5] have demonstrated indoor 2×2 MIMO optical system using receiver with signal processing. They have simulated the case of adversely affected SNR vs BER for different results that low SNR has a strong impact on the device in matrix and resultant BER. Thomas Q. Wang et al. [6] have proposed a hemispherical simple receiver incapable of imaging VLC system which can provide wide FOV and high channel gain. They have investigated the performance measure of their proposed lens by analysing the received SNR at the four receiver position.

II. INDOOR VLC MODEL

In MIMO system, there are N_TLEDs on the ceiling of the roof and N_RPhotodetectors placed at some height above the floor. These photodetectors are positioned below the optical concentrator which collects light incident from a large area and refracts the light. Thus there is channel matrix H of the order of $N_R \times N_T$ whose elements are basically channel gain H (i, j) between the i^{th}photodetector and j^{th}LED. In our paper, first a 4×4 MIMO system MIMO system have been considered. Fig.1 shows the space geometry of 4×4 system where LEDs are placed symmetrically w.r.t to the concentrator. This 4×4 system will lead to a square matrix of the order of four and with sixteen elements each showing gain between the corresponding LED and photodetector.

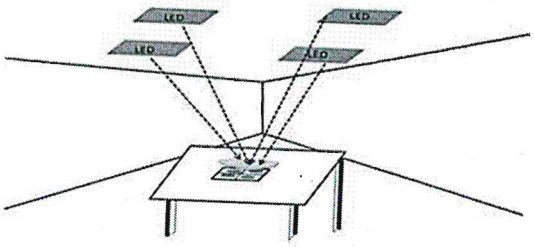

Fig.1. Indoor VLC model

LEDs with Lambertian pattern can be considered as

$$s(\phi) = P_t \frac{m+1}{2\pi} cos^m(\phi) \quad (1)$$

where ϕ is the angle of radiance w.r.t normal axis, m is emission order which is given as

$$m = \frac{-ln2}{ln[cos(\emptyset_{1/2})]} \quad (2)$$

Here $\emptyset_{1/2}$ is the LED half power angle. The DC gain of LOS channel is given as

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Electronic Governance of Housing Price using Boston Dataset Implementing through Deep Learning Mechanism

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Abstract: The growth of technology in our day-to-day enterprise with advanced machines are outstanding through Artificial Intelligence involving both machine learning and deep learning all over the world. As things go on the forecast of innovations to business and society applying Artificial Intelligence influence technological transformations. This will possibly lead to vulnerable with reference to security. In this paper, we intend to constitute particular prediction forms depending on deep learning to regulate the actual data of the real estate processed apartments data in Boston to predict the housing price. We construct a Linear regression prediction model related to Supervised Learning in Artificial Intelligence. In this paper, a comprehensive study on house pricing using different class labels. Finally, the supervised data was produced, which is important to estimate and prediction of the housing price in the real estate business. Connecting with Artificial Intelligence, we will acquire the capacity of composing higher intelligent predictions regarding future management and developments on smarter intelligent systems and prototypes.

Keywords: Artificial Intelligence, Supervised Learning, smarter intelligent, deep learning

I. INTRODUCTION

Artificial Intelligence is a procedure that authorizes the machines to pretend close to humans by simulating their role and kind. Artificial Intelligence models machines to achieve their skills through their training. The machines regulate their reaction depending on the newly incoming inputs through operating human-like activities by transforming high volumes of information and identifying patterns among them. Machine learning and deep learning are subdivisions of Artificial Intelligence which use its approach in statistical methods to enable machines to improve. Machine learning specifies computers with the performance to learn explicitly beyond its design. Deep Learning is the subdivision of Machine Learning that makes the computing of multi-layer neural network appropriate.

Classification: Classification of the data is essential to analyze and later predict. The model generated from the training data classifies into already defined classes. This process is known as supervised learning. Supervised Learning is the process points the input variables (X) and an output variable (Y). This algorithm is used to discover the mapping function in between input and output.

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Existing two models of supervised learning are Regression and classification. A real estate deliberation firm has the data apartments costs in Boston. This data includes standards like crime rate, age, accessibility, population etc. Depending on the extracted data, the companychooses to decide the price of the new apartments. This issue can be figured througha linear regression model.

Regression: In contradiction to classification, regression output results in continuous-valued numeric data. It analyzes suitable structure to determine labels identical to multi-label classification using Regression analysis. A Dependent Variable is a variable to be predicted or explained. An Independent Variable is a variable related to the dependent variable in an equation. Regression is the prediction of a numeric value based on an input. Regression has been tested in distinct applicational fields.

II. BACKGROUND

Classification and prediction are the most regular and complicated areas in obtaining accurate outcomes through class labels. Practical implementations of higher computational layers in neural networks through deep learning in present days are very much powerful. Deep Learning operates on detection process indeed with a composite nonlinear dependency within both dependent and independent variables [2]. Usual conventional data mining systems as Neural Network is an additional materialized approach executed in educational data mining. The dominance of the neural network is that it has the capability to reveal all potential communications within predictors variables [3]. This was treated as the most useful prediction method.

While purchasing the houses buyers are extremely interested in the dealings related to housing prices in their ups and downs. Despite the long process observations of real estates most of the buyers sometimes be at loss to invest high prices. To figure out and clarify such kind of problems, systematic prediction information regarding inconstancy rates are been specified. Change in the technological trends, the prediction and identification process all over the world is available through research by sitting at home with no proficient business applications [4]. The fundamental search of housing price primarily investigates the bearing of housing price at the price levels and rate of growth [5].Further, arising the perspective of statistical and analytical, the time series method, impacts the tendency of house pricing predictions.

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Generating Cipher Text using BLOWFISH Algorithm for Secured Data Communications

Ch. Usha Kumari, T. Pavani, A. Sampath Dakshina Murthy, B. Lakshmi Prasanna, M. Pala Prasad Reddy

Abstract: Cryptography plays a major role in the network security. In order to secure the data one must do encryption of the original message. In this paper, the design and analysis of high speed and high performance BLOWFISH algorithm is implemented in VHDL coding and compared with AES (Advanced Encryption Standard) algorithm. The BLOWFISH algorithm involves the process of giving the data and key as input to the encryption block. BLOWFISH encryption algorithm is designed and programmed in VHDL coding. Then it is implemented in Xilinx 10.1. This research is carried in the following steps: designing of encryption algorithm, writing VHDL code, simulating the code on "ModelSim altera 6.5e", synthesizing and implementing the code using Xilinx's ISE 10.1.This research aims in developing flexible and technology independent architectures in the areas of VPN software, file compression, public domain software such as smart cards, etc. Also presents the comparison of BLOWFISH and AES algorithms. Experimental results show that BLOWFISH algorithm runs faster than AES algorithm while both of them consume almost the same

Power.

Keywords: BLOWFISH algorithm, AES algorithm, Cryptography, Feistel Networks, Encryption.

I. INTRODUCTION

The secure data communication is directly attributed to the nature of the Cryptosystems. Cryptosystems use cryptographic algorithms, with keys and different protocols to work effectively. The security of encrypted data is entirely dependent on two things, one, the strength of the cryptographic algorithm and the other the secrecy of the key while under the transmission over a channel. Advancement in this direction is the newly approved and widely adopted secret-key algorithm known as Rijndael Algorithm, has been selected as a standard algorithm by the National Institute of Standards and Technology (NIST). Though there are several designs and implementations of this algorithm in Software and Hardware, many lack coordination, optimization and justification among the parameters of interest-Throughput, Speed, Power, Cost, etc.

Cryptology is the art of secret writing. Cryptography allows storing secret information and transmitting it across insecure networks so that it is not possible to read by any other person except the intended recipient. Data which is read and understandable without any special methods is said to be plaintext/clear text. The method of separating plaintext in such a way as to hide its contents is called encryption.

Encrypting plaintext in an unreadable text or understandable language called cipher text. Encryption helps in hiding the information from anyone for whom it is not intended, even those who can see the encrypted data. The procedure for reverting cipher text to its original plaintext is called decryption.

In this research, the design and analysis of high speed and high performance BLOWFISH algorithm is implemented in VHDL coding and compared with A-E-S algorithm. The BLOWFISH algorithm gives the data and key to the encryption block as input, later implementing many blocks as Fiestal network block shown in Figure.2. Initially, the BLOWFISH encryption algorithm is designed and programmed in VHDL coding. Then it is implemented in Xilinx 10.1.

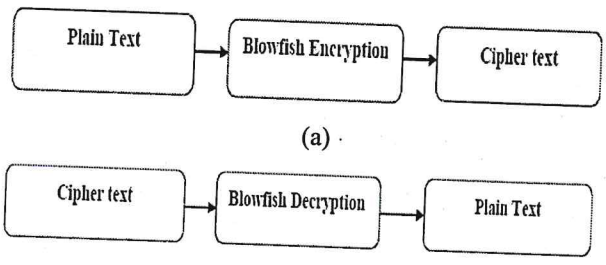

Fig.1. (a) Encryption (b) Decryption

Figure 1 is the block diagram of blowfish Encryption and Decryption. In this research Blowfish, is a block cipher secret-key method, designed and analyzed. It is a Feistel network, repeating encryption function for about 16 times. The size of block is 64 bits, and size of key is of 448 bits. Blowfish is a block cipher key of variable length.

It is very fast compared to AES when applied with 32-bit microprocessors. The comparison of two algorithms AES and Blowfish is carried out in this research.

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Identification of Natural Disaster Affected Area Precise Location Based on Tweets

B. Premamayudu, P. Subbarao, Koduganti Venkata Rao

Abstract:Twitter is an "in the moment" platform designed for customers to post tweets about any event, which reports any major event including natural disasters. Hence, social media creates volumes of data on an event. Therefore, during the time of natural disaster like tsunami, earthquake, floods, landside etc., people of that area require information in those situations to enable relief operations to save many lives. This paper presents the identification of natural disaster affected area based on twitter tweets using Geoparsing to mark the places of disaster on a world map. In the proposed mechanism, longitude and latitude location of twitter message can extracted to map geographical coordinates in GoogleMapPlotter. The source of the geographical coordinates in real time is twitter messages collected based on the keyword and timeline. We can parse real time collected twitter messages for the natural disaster effected areas and locations. The collected tweets and their location information will help us to identify the exact place of disaster event. These tweets location information is stored in database or saved in CSV format to create the dataframe in python pandas. Further, the visualization is performed on the prepared dataframe using GoogleMapPlotter. This visualization is helpful for the disaster relief operations and estimates the severity of the natural disaster. The truthiness of the user tweets is evaluated using sentiment analysis for decision making.

Keywords: twitter, tweets, dataframe, pandas, python, googlemapplotter, sentiment analysis.

I. INTRODUCTION

Interactive computer mediated technology is a boon for data. Social media is a real time mechanism which provides a gateway for effective data[1][2]. Though the data is huge, unstructured and noisy the current focus is on extracting the best out it. Twitter is a micro blogger site to broadcasting information to the people. The well-known focal point for the information is twitter, where people can converge and share during the natural disaster. Information from broadcast media will be gathered directly or indirectly. Generally, information can be obtained directly from the people involved in the disaster[3]. Some time, it can be gathered from various broadcasting blogger and reports or pointers of the information available from public sites. The natural disaster information in social media can be directly clouded by conversation and incomplete[4].

Data analysis on obtained tweets will help to know the current trend on the disaster. This analysis will help to identify the various patterns such as focal point of natural calamity or logistics at the located area[5]. To build decision making system from the obtained patterns by combining geo locations with sentimental analysis. Those decisions will help to take correct decision that help the victims and also save the lives of humanity in disaster. This article attempts to find the precise location of the natural calamity. Thereby, it will be informed to the rescue teams and send them to those locations to save the lives of humanity which are affected in natural disasters[4].

The proposed system has two major phases to find the precise location of disaster. In the first phase crawling the twitter to obtain data streaming and mining the knowledge using python pandas library. For these two phases, twitter API and social media informative sentiment analysis through data science and analytics. Crawling data from the twitter required to establish connection with twitter database. This connection needs authentication. There is a procedure to create an authentic connection with twitter database. The authentication connection and search key for the natural disaster will create data stream of tweets form the twitter database. In this process all the tweets are stored in data frame and data frame is converted into a comma separated values (CSV) file for identifying geo location of disaster through second phase. In second phase, sentimental analysis will be applied. Based on the result of sentimental analysis, the tweets and geo locations to extracted from the data frame and then visualized in a world map[5].

A. BigDataAnalytics

Big data analytics provides uniqueness of mining knowledge from the huge data frames. The analytics methods are more suitable for trends in leverage[6]. There are several methods available to improve the performance of trends analysis by ensuring the less resource utilization like storage cost, power consumption, and processor cycle etc. The new development in big data analytics, many modern tools are available to build analytic model with more accuracy. Big data analytical tools namely python, Hadoop, R studio, MAT lab etc are more popular to performance multidimensional analysis to mine the required knowledge from the given data set[7].

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PAPER

An investigation on tribological and electrical behaviour of conventional and microwave processed copper-graphite composites

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Keywords: powder metallurgy, sintering, microwave, self-lubricating

Abstract

The effect of graphite content and sintering mode on the tribological and electrical properties of copper has been studied by incorporating varying proportions of graphite flakes (0, 8, 15, 25 and 32 vol%) following powder metallurgy route. The sintering of green compacts was accomplished by microwave and conventional processes at 900 °C with a heating rate of 5 °C min^{-1} and 20 °C min^{-1}, respectively, and holding time being 60 min for both processes. As expected the densification was observed higher in microwave heating than conventional process. Microstructural examination of microwave samples revealed a fine-grained microstructure. Pin-on-Disc wear test exposed excellent self-lubricating nature of these composites. Best coefficient of friction values were observed for microwave sintered composites. Microwave sintered samples exhibited better hardness, coefficient of friction (COF) and electrical conductivity as compared to their conventionally sintered counter parts. Morphologies of polished surfaces were analyzed to predict the wear mechanisms involved.

1. Introduction

Modern engineering techniques introduce new methods which overcome the limitations posed by existing materials and technologies. Recently, many composite materials with high strength to weight ratio have been developed to cater the demands of increasing fuel economy and high-performance vehicles with light weight structures. Design requirements for lighter components without compromising the productivity necessitated the development of metal matrix composites (MMCs). Researchers have been developing stronger and lightweight materials, which are put for use in a multitude of industries to increase performance and efficiency by infusing different materials into metals. Al, Ni, Cu and refractory metals based metal matrix composites are gaining popularity for past few decades. Most of these MMCs possess high-temperature capability, better radiation resistance, higher transverse stiffness and strength, higher electrical and thermal conductivity and fire resistance [1–5]. Development of metal matrix composite by addition of particulate or whisker reinforcement fulfills main demands where pure metals and alloys fail. Tremendous improvement in mechanical, electrical and tribological properties of materials has been reported in recent reports [2, 3, 6–10]. Copper has been widely used in electrical and thermal applications as it possesses superior electrical and thermal conductivity [6, 11, 12]. Due to its poor mechanical and tribological properties, pure copper cannot be employed in tribo system parts. Addition of solid lubricant to a metal matrix enhances the tribological properties of the resultant composite [1–5, 12]. Graphite is a soft allotrope of carbon with self-lubricating property and good electrical conductivity. Copper-graphite metal matrix composites find applications in tribological system parts like brushes in motors and generators, bearing materials, parts of pantographs and contact strips owing to its enhanced tribological

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Health Advisory System using IoT Technology

K. Asish Vardhan1, N.Thirupathi Rao, S. Naga Mallik Raj, G.Sudeepthi, Divya, Debnath Bhattacharyya, Tai-Hoon Kim,

Abstract: The Internet of Things (IoT) utility in nursing will provide a new life to the human services field. It conjointly incorporates a rapid advancement of the numerous fields. One among the higher approach the specialists are fit to decidedly and rapidly ideal to utilize the important patient data's and together with the patient case history. Through the net of Things, the standard of information and consequently the patient care inside the Medical field had enhanced in a substantial manner. Thus, the web of Things offers Associate in nursing genuine stage to interconnect the every one of the assets. Semantics and metaphysics components help the PCs notwithstanding the understanding the side effects and restorative assets. By using semantics, the metaphysics instrument makes a recovery procedure and reconfigures restorative assets steady with patient's particular necessities apace and more than once.

Keywords: Knowledge Base, Patient data, Output Prescription, IoT, Ontology, Worldwide Ontology.

I. INTRODUCTION

Web of Things (IoT) has a few assortments of utilizations together with mind and mechanical frameworks [1]. The minds frameworks mainly abuse the interconnected gadgets to shape relate degree. IoT organizes impassioned to evaluation, mechanically sleuthing things and screens the patients, wherever the medicinal obstructions square measure important. In this way, IoT alone will kind partner degree information organize that interconnects clinics, people groups, mind gadgets, home environment and diverse workstations. Execution of the net of things is flexible and open outcomes to allowing the care applications to serve patients with higher treatment [2]. This square measures totally required to execute the care benefit inside the air. Anyway, a considerable measure of important prerequisites is existing for human wellbeing inside the field of Medical. One among the higher approach the specialists are fit to and rapidly ideal to utilize the applicable patient data's and together with the patient case history. Through the net of things, stunningly enhances the standard of information and thusly the patient care inside the Medical field. Along these lines, web of things offers an associate in nursing genuine stage to interconnect the every one of the assets.

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A) Ontology Assessment

In this, half inputs are regenerate into operating the patient's symptoms, some diseases were settled and everyone in the information placed into the remote information. The determined functions divided into the categories and subcategories. Categories represent the patient's underlying data and subclasses represent elaborated diseases data. By the utilization of IoT challenges square measure rehabilitate, that consumes longer, resources and workforce. As per the meanings of the idea Ontology [3], it is a progressively organized arrangement of terms for portraying a space. In most recent years, the fundamental enthusiasm of the analysts in this field is worried about the exceptional apparatuses that assistance learning catch and organizing [4]. In any case, it is to a high degree valuable to draw the metaphysics utilising plainly understood to everyone. Ontologies are important organizing devices, in which they give a sorting out. Execution of the net of things is flexible and open outcomes to allowing the care applications to serve patients with higher treatment. This square measures totally required to execute the care benefit inside the air. Anyway, a considerable measure of important prerequisites is existing for human wellbeing inside the field of Medical. One among the higher approach the specialists are fit to and rapidly ideal to utilize the applicable patient data's and together with the patient case history. Through the net of things, stunningly enhances the standard of information and thusly the patient care inside the Medical field. Metaphysics configuration likewise might be utilised as an evaluation method [5]. Students go to the college after they have effectively passed their exams. These days a significant portion of the exams have a type of tests. To pass the exam understudies do not need to indicate profound learning of a subject. It is sufficient to learn by heart how to answer a significant portion of inquiries accurately. It is conceivable even to figure the correct answer. So, utilising the tests does not have target outcomes. Utilizing cosmology based way to deal with the understudy appraisal has not such disservices. It unmistakably demonstrates the comprehension of the subject. In any case, it is difficult to ensure unbiased imprints. So the thought is to utilize the Ontologies as the appraisal device somewhat comprehend the level of their upgrades after a course.

B) Universal Ontology Evaluation

In this evaluated ontology model compared to the globally hold on various Ontologies on the bottom of the object system. World ontology groups contain two varieties of ontology. These are illness ontology and resource ontology. Illness ontology contains the patient primary and medical data and resource ontology covers medical resources specified by doctors, medical devices etc. These days a significant portion of the exams have a type of tests.

Document details - Dramatization practices: A proactive framework to enhance communication skills among aspirants of professional courses from rural foundation in the northern districts of Andhra Pradesh, India

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Dramatization practices: A proactive framework to enhance communication skills among aspirants of professional courses from rural foundation in the northern districts of Andhra Pradesh, India(Article)

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Abstract

The information and standard concerning to correspondence should join the valuation for the spirit of ideal transmittal of messages and the physical bits of non-verbal. The motivation behind adapting any language is to convey adequately. Language assumes a pivotal part in correspondence and English is the chief and most vital device of communication throughout the world. The urban foundation aspirants display a significant proportion of systems for learning English for healthy communication and arrangement to upgrade their fundamental aptitudes for learning language, though country student's hopefuls have just constrained introduction. Today, standard empowering techniques supplements with present-day framework rely on performance and media resources with the help of 'dramatization' and 'learning by doing' strategies develops a moving perspective among students to take the language. It would enable them to meet the demands of the day in imaginative. The motif to study is the keen observation on 'performance of language abilities obviously of rural learners'. The observation and discussions suggested that the 'dramatization' and 'learning by doing' method suits to enhance communication skills. This article will exemplify these techniques and present research the accomplishment of the use of theatre and dramatization works on upgrading core competence skills among rural background. © BEIESP.

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Article

Optimization of deep neural networks for modeling traffic data using GPS

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Citations (1) References (8)

Abstract

As accident is increasing continually.GPS created traffic data need to optimal .Deep neural networks having more number of hidden layers are the rest portable to solution .Selecting proper DNNs the main objective . By trial and error proper the selective of DNN has been achieved for optimization of traffic data. © 2019, Blue Eyes Intelligence Engineering and Sciences Publication. All rights reserved.

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Design of intelligent controller for reduction of chattering phenomenon in robotic arm: A rapid prototyping☆

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Electro magnetic interference

ABSTRACT

Robots functioning in the place of living beings is becoming more reliable as they can endure drastic physical conditions and can operate in airless conditions. Further, they can perform risky jobs and be not bothered by the job security and reputation. Sliding Mode controller (SMC) is a robust controller that has high stability, but it suffers from the problem of chattering. Power losses and severe electromagnetic interference (EMI) noises produced by the converter due to high switching frequency yields chattering. This paper puts forth the design of a hierarchal controller using differential flatness property to track the angular velocity trajectory of permanent magnet DC motor driven by a DC-DC buck converter. A cascaded control is used to regulate the DC-DC buck converter and it aids to reduce the chattering phenomenon to a minimum level. In addition, this control enhances the performance of the system by maintaining fixed switching frequency. Experimental observations show that the angular velocity is well traced under abrupt conditions.

1. Introduction

An Intelligent system is a collection of devices interconnected to one another, which is simple and compact in design. It is used in digital televisions, traffic lights, robotics, automobiles, gaming and airplane controls. Permanent magnet DC motors have various applications in the fields where speed ranges from small fractions to several horsepower. They can be widely used with high precision control strategies. They are best suitable for position control in robotics, coil winding, textile industry, welding, printing, pharmaceutical machinery, and in conveyor machine tool industry. Most of these applications demand velocity control or position control of the motor. Electromagnetic compatibility (EMC) is a property of power electronic devices that helps to coordinate various electromagnetic environments and enables them to work effectively and appropriately. The purpose of EMC is to allow a power electronic device to get habituated to a variety of external interferences and to assist the device to work in appropriate electromagnetic environment. Besides, EMC also ensures that the device is not affected by the electromagnetic interference with other electronic devices.

In literature, the adjustment of armature voltage is used to control the DC motor; several controllers are designed, which mainly focus on tracking of velocity trajectory of the DC motor. Linares- Flores et al. [1] proposed a smooth starter for angular velocity regulation of DC motor driven by DC-DC power converter. This method is designed based on the second-order model, where the parameters like converter-output-current and armature-inductance are neglected. Flores et al. [2] tracked

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A Low Power and High Speed Array Multiplier Using On-The-Fly Conversion

S Aruna, S Venkatesh, K.Srinivasa Naik

Abstract:A low power and high speed On-The-Fly Conversion (OTFC) array multiplier is proposed with optimum design resulting in reduced delay, low power intake and dwindled silicon area. In the multiplier design (single precision truncated) recommended earlier, the product of 2N-bits produces 2N but partial products, excluding this 2N bit partial products, are going to be divided into 2N-(N/2) bits and N/2 bits. As a result finally, 2N bits are created by the adding of above bits using ripple carry adder. The array multiplier outlined in this paper is designed and implemented with no truncation or addition technique, instead, it is executed using a typical array multiplier scheme. The proposed array multiplier in this paper produces the high order bit (MSB) of the final product. The multiplier design outlined in this paper leverages the On the Fly Conversion converter that is implemented at the tail end of the multiplier. This is to achieve the expedited carry propagation in the last leg of the multiplication. To highlight and contrast the benefits of the proposed array multiplier we have considered the previous designs proposed for different bits (8, 16 and 32) for features and critical parameters like silicon area, delay and power. As part of the implementation, we are able to attain remarkable results with low power consumption, minimum delay, smaller area and less energy.

Keywords-Array multiplier, Truncation, OTF Conversion, Ripple Carry Adder

I. INTRODUCTION

Binary multipliers in the digital components widely used in the microprocessors, microcontrollers play a critical role. Historically multipliers have been complex and taxing on the efficiency. The process as such entails multiplication and addition and is slow as it involves multiple intermediary steps. Complex operations lead to greater power consumption and decreased speeds. Multipliers being core components of processors, optimizing designs and layouts for low power and rapid multipliers is of paramount importance. Low electricity consumption is likewise a vital difficulty in multiplier layout.To lessen giant electricity intake it is ideal to lessen the variety of operations, thereby decreasing dynamic power which contributes to a greater part of overall power consumption.

To tackle these challenges, a high speed and optimal consuming array multipliers is the need of the hour. The performance and accuracy of any system depend on the robustness of the critical components, that's a multiplier in most of those sorts of applications.

When a couple of n bit numbers are multiplied using a multiplier it yields a 2n bit result. To retain the full output and precision of the operation, Digital Signal Processor design would have to accommodate an ever increasing bit width which is unfeasible. To overcome the challenge of reducing the bit width Truncated multipliers are generally employed [1], [2].

The advantage of these multipliers is that some cells could be switched off when the result is known. Multiplier with truncation scheme produces (n + k) significant columns (MSB) instead of 2n. To compensate for the truncation, the error correction method is used and can be contained by using different schemes [3]. The truncation error when under the acceptable tolerance (< Ulp/2) is still applicable in the majority of DSP implementations. The combination of the multiplier and the truncation block along with the ripple carry addition component make up for the error in approximation during the addition step [3],[4]. These implementations with partial product reduction come with a shortcoming of limited applicability in DSP applications. The major concern here is the delay that is introduced during the addition operation. To tackle this challenge a full precision multiplier with On-The-Fly Conversion is being proposed and implemented which could be applied for multiplication operations [5]-[7].

Design and features of High Precision Multipliers along have been contrasted in this paper. We have evaluated our proposal pertinent to latency and magnitude of the multipliers. Following which, the design was gauged for constraints, power and area. CMOS 45 nanometer (45 nm) process has been leveraged in the RTL Compiler for logic synthesis using Cadence Tool. Physical design has been implemented via Encounter tool.

This paper has been segmented to detail the below work:

1) Multiplier design has been optimized for less Delay Area, lower consumption of Power and Energy in comparison to Other Multipliers.

2) Constant and consistent delay generation and faster carry propagation summation has been achieved by means of The OTF (On The Fly) Conversion Logic and irrespective Of the number of input bits [6].

3) Comparative analysis of size and delay of the proposed design versus current designs have been laid out [9].

In the below section details about the Multiplier, low power consuming, leveraging the algorithm that leveraging the algorithm that executes using the left to right method, in turn, resulting in reducing the overlay of fractional products in the last carry and save/total generating step. Section 3 in this paper explains the current state of the multipliers.

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Design and Analysis of Different Patch Geometry and Complementary Split Ring Resonator for X-band Applications

K.Srinivasa Naik, S.Aruna, Kondalu Banavathu, P.Vamsy Prasad

ABSTRACT--- In this paper, a comparative study between the probe feed and strip line feed on a circular, rectangular, triangular and hexagonal Patch Antenna are presented in this paper to compare the performance of antenna parameters. Rectangular and Circular configurations are most popular because they exhibit better characteristics but here triangular and hexagonal shapes are also taken due to advantage of compact size. At later stage, two metamaterial inspired rectangular and circular complementary split ring resonators are proposed and designed using microstrip line feeding to achieve antenna miniaturization. The proposed antennas are structured with flame retardant FR4 Epoxy substrate has thickness h=1.6mm and relative permittivity εr=4.4. The proposed microstrip patch antennas are designed for X-band application. The proposed antennas are implemented and pretended utilizing High Frequency Structure Simulator (HFSS) software version v17.2.

Keywords— Complementary Split Ring Resonator(CSRR),Metamaterial, Probe feeding, strip line feeding, FR4 Epoxy, HFSS, Microstrip Patch Antenna(MPA), X-band

I. INTRODUCTION

Microstrip patch antennas(MPA) are utilized in numerous applications because they have certain advantages like less space occupancy, inexpensive to manufacture and is easy to design when compared to the other antennas. Different kinds of shapes available for patch antennas. In literature traditional shapes like circular and rectangular patch antennas are given more importance. Right now specialists are extremely pulled in by the triangular shape and hexagonal shape than the traditional shapes because of their less size contrasted with old structures. The merits and demerits of each shape is evaluated by comparing their performance parameters. Coaxial probe feeding and microstrip line feeding are used to excite the proposed antennas. These two feeding techniques are utilized to fed the RF power directly to radiating patch utilizing an associated element.

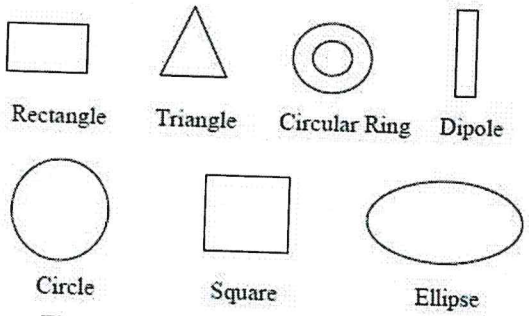

Fig.1.Different Shapes of Patch Antenna

In recent technology trends in integrated circuits results rapid decrease in size of antennas and cost effective as well. Rectangular CSRR and Circular CSRR are proposed in this paper to reduce the metalized area on the substrate. Designing this CSRR is a tough task because of its complex structure. SRR is a subset of Metamaterial structures, which has a pair of enclosed loops that are separated by a gap with splits are having 180 degrees phase difference between them.FR4 Epoxy with dielectric constant 4.4 is chosen as substrate because of low cost. The frequency range for X-band specified by IEEE is 8 to 12 GHz. These antennas are proposed for radar application.

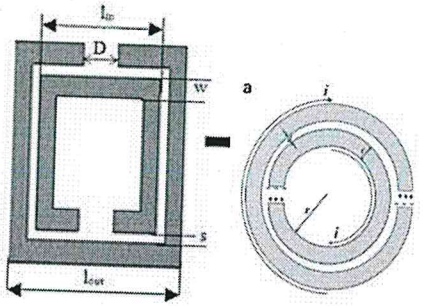

Fig.2 Rectangular and Circular CSRR

II. ANTENNA DESIGN FORMULAE

A. Selecting a Template (Heading 2)

The formulae utilized in calculating antenna design parameters of circular, rectangular and triangular patch shapes are as shown below.

A. Rectangular Patch Antenna

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Design of 9-T QSTCAM using LECTOR Low Power Technique in 45nm CMOS Technology

S Aruna, K. Sravan, K.Srinivasa Naik

*Abstract: Hardware search engine constitutes of an important role to enhance the speed of the process towards search of the high speed appliances. TCAM is that sort of a hardware which completes the search cycle in a single clock and it uses different mask storage and content storage. A 128*32 bit TCAM is implemented with selective match line evaluation scheme in predictive 45nm CMOS process and in this paper a TCAM is designed using LECTOR low power technique.*

Keywords— TCAM, LECTOR, 45nm CMOS process

I. INTRODUCTION

Depending on the response time of the data in the computer it distinguishes the memory into a order. Since feedback time, density, and quantity are interconnected, the phases may also be distinguished by its working and regulating technologies.

Memory order alters the performance in computer design, algorithm approximations and lower level of program writing units connecting the area of reference. Making the design for high-performances requires the knowledge of limitations in the order of memory, i.e. the abilities and range of each and every single type. Every type is seen as the fragment of the order of memories as shown if figure 1.1.

In which each member is lesser and quicker to forthcoming extreme member $M_{i+1}$with in the order. To lessen the making time for advanced levels, The reaction in lower stages will be by reacting to it in the way of complete loading a buffer and then transferring data by initiating the handover.

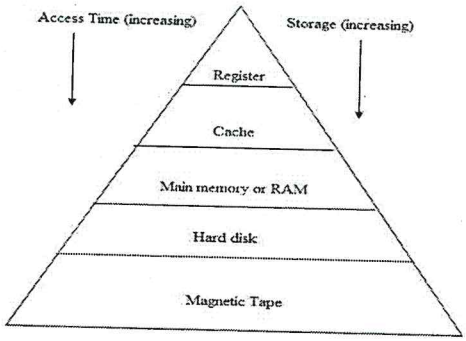

Figure 1.1: Order of memory diagram

Cache is designed for memory that is repeatedly utilised over and over again by the CPU. Rather than calling that for all times from the main memory, it is put in cache in order achieve high speed utilisation[2]-[4].Cache was altogether divided into C1, C2 &C3. C1 cache retrieving is done by not having any delay.C2 cache requires few additional clock cycles to retrieve compared to C1 cache.C3 cache requires few additional clock cycles to retrieve compared to C2 cache.

Main Memory is a hardware component and computer memory. Computer memory can be enhanced if the operating system used meets it requirements. Now a days PCs use 8GB of RAM. When compared to cache it reads slowly.

Internal register is designed for storing temporary results and variables. They have a very small storage they are easy to read. reading information as of the internal register will be the quickest means to utilise memory.

Hard disk is where data is saved forever it is a hardware unit where the memory is stored in a computer. Memory in hard disk is slower since it is not directly opened by the CPU. Comparing the RAM and hard disk, hard disk is cheaper per bit.Retrieval time for the memory is sluggish in Magnetic tape. Retrieving data from a tape takes very less time. Magnetic tape is generally used for storing big data.

In a PC the memory units RAM and CPU gives the addresses of the information put away in the Register which is utilized to query information from that memory area. If there should arise an occurrence of CAM, as the name recommends the memory is content addressable. Which means you don't have to give the memory address, rather the substance or a word in the memory to be looked. It is substantially quicker than RAM since it permits parallel inquiry, which turns out to be considerably quicker with the utilization of TLBs (Translation Look aside Buffers). Changes utilize CAM to store MAC Address Table

CAM is an uncommon sort of PC memory utilized in certain high speed applications. Or else this is called associative memory or associative array, despite the detail that the final stretch is more regularly operated for a programming. (It thinks about information seek information (tag) against a table of put away information, and returns the location of coordinating information or on account of acquainted memory, the coordinating information). A few convention PCs, similar to the Goodyear STARAN, are operated to execute CAM. Network Processing Forum created the Look Aside Interface (LA-1 and LA-1B) which is more prominent and trustworthy definition for the CAM later the network processing forum has joined hands with the OIF Further Various Gadgets Have been developed by many companies based on this understanding.

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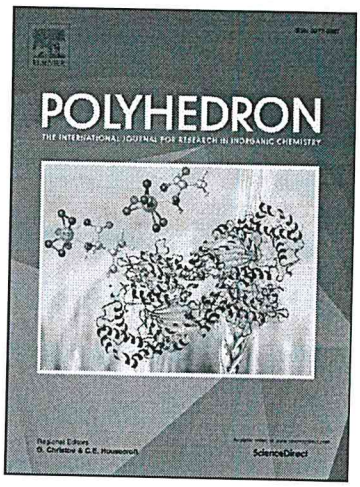

Catalytic activity of supra molecular self-assembledNickel (II) coordination complex in synthesis of indeno-pyrimidine derivatives

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Green Data Science in Cyber Security: Network Security Threat Detection and Prevention Techniques

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Abstract

Nowadays a business models, supported the merchandise sales, to new product-service systems is chance for industrial corporations to realize and new advantage. Because it needs elementary changes within the structure, culture and competencies of the corporate and ne'er the less makers overtime fight with this innovation. Rarely, however industrial perceive they ought to reconfigure the weather of the business model (BM). Additionally, Product-Service System is a business models extensively and tiny support to the still offers and decision-making method relating to the service transformation. An application of the framework during a capital product manufacturer and supply analysis insights. The tools to work out the business model for any organization for the innovation of the business. The business model innovation for achieving profitable, growth of business model. Business models the method of the methodology to sensible, toolkit has been developed by the used of techniques. A business model produce, describe, creates, delivers and captures worth. The business model method is modification,

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The Role of Risk Management and Business Control for a Small Business

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Abstract

Now a days, economic environment is growing widely, so the risk management become popular as compare to earlier year. The growth of any economy is always related to these small and medium size enterprises. Business management is most important factor in any type of business, as it relates to growth of business. Any business always comes with multiple risk factors in market place. So risk management is important for maintaining balance of our business and there growth. Business risk can destroy small business, so the risk management is important to prevent business. In the paper, the risk management process is studied and business controls are introduced to prevent small and medium size company. It has given effective solution for business control in marketplace. This paper proposed the role of risk management in corporation, internal and external risk management, and project risk and business control management process.

Keywords: Risk Management, Risk, Small Companies, Enterprise Risk Management

Corpus ID: 213061523

The Influence of Demographic Factors on Problems Encountered By Home Loan Borrowers in India

C. Rao, M. Srinu, P. Rao · Published 5 December 2019 · Economics

Housing is one of the basic human need and is next in importance to food and clothing. Housing finance is more discriminating in economically developing countries like India. Housing circumstances are a key pointer of socio-economic development. There is a hasty growth in housing and related housing finance activity has understandably led to the growth of Indian housing finance market. The customer of housing finance today has also become conscious about his requirements and necessities of... Expand

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Effectiveness of CRM Practices in Housing Finance Schemes: An Empirical Analysis in the Selected Private Banks

Dr.M. Sivakoti Reddy and Dr.S.M. Murali Krishna

Abstract

This paper is aimed to understand the customer relationship management practices followed by the private sector banks in India. In the existing excessive competition, how the banks are surviving with the implementation of CRM practices to retain the existing customers and to attract the new customers. Review of literature facilitated to understand the current CRM trends of private banks, hence the researcher found that the factors such as inter-personal communication, accessibility, convenience and customer experience are the considerable factors of effective CRM practices and the author attempted to test the impact of concerned independent variables impact over the intention to attain the housing finance in the private banks. Further it has been tested the impact of intention to attain the housing finance to take a purchase decision of housing finance. There are 575 samples drawn from the different private sector banks in the state of Andhra Pradesh. The data is analyzed by using simple linear regression analysis. The results evidenced for the existence of CRM practices in the private sector banks and necessary recommendations are provided to the banking sector with this study.

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Green Cloud Computing Ideas with Security Threats and Solutions

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Abstract

Cloud Computing gives the capacity to utilize computing and capacity assets on a metered premise and lessen the interests in an associations processing foundation. Cloud computing has been on the ascent for a long time yet the threats to this innovation are currently more unambiguous than any time in recent memory. On the off chance that the business is to be legitimized by the concerned native it should initially defeat a genuine of potential threats, past just cyber-crime. Peoples are not very much aware about the security issues and the dangers worried about cloud computing. It is by all accounts a tremendous boundary to the selection of cloud administrations. The data in regards to how to oversee information security inside a cloud, information protection in the cloud, cloud security principles, the administrative and consistence ramifications of relocating to a cloud model, and so on ought to be surely known before receiving the cloud administration and arrangements. This paper introduces a comprehension of this intricate situation and explains every one of these issues by distinguishing and ordering the fundamental security concerns and arrangements

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A Study On Tools And Techniques For Business Models

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Abstract

In this new time of digitalization, cyber-attack are constrained by inventive, wise and profoundly expert people. Continuous synchronization enables an attacker to bit by bit get familiar with the objective system, adjust to any protective measures, and advance the attack after some time. On the off chance that we have not actualized any system security risk recognition benefits from our association, it will uncover the closure of our forthcoming overwhelming voyage. System security threat identification centers around individual stages, frameworks, systems, endpoints or practically some other IT asset. System security threats recognition is juvenile (and remarkable) in real digital security tasks. By and by digital protectors by and large rebate these methodologies for mark location and instinct. The progression for this is most likely special, including getting designs, chance hunger and choice focuses. We require a total comprehension of all parts of the information age process. Information science will deliver specialized information that takes into consideration "strategic"

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The Effectiveness of Human Resource Management Practices on Employee Retention– An Empirical Study of Commercial Bank of Ethiopia, Hawassa City.

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Abstract

Our strategic importance related to age and retention of employees is an organization this is important because not only the most talented and the best competitors, but also to protect the long-term benefits for themselves and for the people. Human Resources are a very valuable resource for any organization, and for any organization around the world. Therefore, it is not necessary to take the stairs for the wise of heart, to maintain the norm that gives life. HR organizations can effectively help stop important customers. The church branch of the Commercial Bank of Ethiopia, Hawassa, and intensely lives in a particular way, is headed down by competition, effort and billing risk. This study examined the effectiveness of sensitive HRM practical knowledge of TV retention in the branches of the Commercial Bank of Ethiopia in Hawassa. Specifically, life development opportunities, work environment, work-life balance, and employee engagement were rewarded for retention of impacted developers. Section of the plan with another follow-up study becomes Hawassa his cross. The study was conducted in 10 branches in the city of Hawassa. General sample, all employees. Stratified random sampling was used to select a selective sample of 156 employees out of 260;. only 150 interviewers received six (6) poorly completed answers or less in the analysis. The total of 150 questionnaires used is 96.16%. Movement, keep an employee. When the balance between work and private life, and the participation of young people, human resource management workers to seek more accessions of new things, things that have been discussed before, then this competition can only not be maintained long. Improve the retention of employees on the banks of the river is recommended as a developer, to acquire them, please pay attention to the human momentum. If banks offer a certain degree of flexibility to reconcile life and compensation of employees, you employ them. It is also recommended that banks join forces and unite with academic research universities and other institutions to address issues that derive

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The Application System to Know the Attendance List

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Abstract: SMP 1 Ambawara is one of the biggest junior high schools in this district. Among them there are many prospective students who register at junior high school. The students are enrolled in junior high school, the learning activities experience problems or problems. Some of them have problems in knowing attendance students every day. In today's modern era many advanced technologies are applied by the school. One of the application systems is to be able to know the attendance list of students. With the application system, the problems in presence can be identified quickly using the Delphi 7 application.

Keywords: *students, presence, application system, operator.*

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A Dynamic Business Model for IT Industries

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Abstract

The business models is summarized into two distinct approach by the static and also the transformational. This aim of proposes a 3rd approach for business, particularly a dynamic approach to business models and the versatile and adaptive of business models is developed more supported the commercial network and structure approach. The business model is embedded system in business contents and business networks model, and relies on changes within the business setting. Because of these mutual dependent between business network peoples, and within of the recent capabilities and the business models of resources, the business model might also depend upon production and co-production, collect and share, and be utilized by the numerous actors embedded system in worth networks business of IT industries. This differs from the normal read, during which corporations produce worth severally of every different. A network model, flexible, and co-produced business model works a unique tool for business model environments.

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Impact of Long Term Planning on Revenue on Business

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Abstract

Developing a selling set up takes time. It is a in small stages method that has distinguishing and searching your goals of market, understanding your level of competitive position, rank, dividing your business from the Contention, graphing out your sale combine. Establish a selling set up is one amongst the foremost vital belongings you will do to confirm the victory and property of revenue on business. In order to make a sure fire selling set up, you first ought to outline your selling methods short and long run. Revenues area of unit bill book your company create from fees it charges for services it make or merchandise it sells. These revenues area unit divided as operative revenues, as a result of they are available from the most business and company. Revenues that come back from profit on sale of assets or profit attained on investments area unit thought about not work on revenues. Revenues area unit the highest line on an operating word.

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Need of Ontology Based Systems in HealthCare System

Sulistyo Andarmoyo[1*], Gusmaizal Syandri[2], Phong Thanh Nguyen[3*], E. Laxmi Lydia[4], K. Shankar[5]

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Abstract

Recently on the Semantic Web the healthcare is consider as one of the finest topic. To match the concept to the indexed documents into s set of representative the textual query is transformed. For apt documents manually the end user still has to search. In this way it becomes a crucial task to detect the information of patients. The theory of object is its relationship is considered as Ontology. In information science and computer science the ontology encompasses a definition, representation and formal naming of the relations, categories and properties between entities, concepts and data that substantiate all, many or one domains of discourse.

Keywords- Semantic Web, healthcare, Ontology, theory of object.

TEST Engineering & Management

November-December 2019
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Automatic Document Clustering and Indexing of Multiple Documents Using KNMF for Feature Extraction through HADOOP and LUCENE on Big Data

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Abstract

The existence of unlabeledtext data in documents has become larger and excavating such datasets is a provocative task. The objective of Big Data is to store, retrieve and analyse multipletext documents. *Problem Statement:*The retrieval of the identical data over large databases is of major concern. *Existing Solution:*Existing problem is solved by Full-Text Search (FTS) which means pattern matching technique that allows searching of multiple keywords at specific time.*Proposed Solution:* In this paper, we consider multiple text documents as input and processed using text mining pre-processing algorithms like Key Phrase extraction, Porters stemming for tokenizing and TF_IDF toobtain all non-negative values. These values further processed to get matrix data throughNonnegative matrix factorization (NMF). On performing NMF, K-means algorithmis upgraded with NMF to obtain quality clusters of data sets.Performances of the algorithms

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Materials Research Express

PAPER

Investigation of Caryota urens fibers on physical, chemical, mechanical and tribological properties for brake pad applications

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Keywords: brake pad, Chase test, Caryota urenus fibers

Abstract

The idealization of this research work is to extend the utilization of the naturally available fibers as a key ingredient in the development of a non-asbestos free brake pad. The fibers used in this work are *Caryota urens*, which is found all over the Asian regions and abundantly available. The compression molding machine was used to develop the non-asbestos free brake pad. The fibers were added in weight percentages of 5, 10 and 15. The various physical, chemical, and mechanical properties were evaluated. Chase test rig was used to evaluate the tribological properties. The combination of *Caryota urens* fiber with the barytes had a more significant influence on the tribological properties. The brake pad composites with ten weight percent of *Caryota urens* fibers based brake pads possessed a good coefficient of friction values with less fade values and less fluctuations. Increasing the weight percentage of *Caryota urens* fibers in the brake pad formulation had a decreasing trend in the wear performance but increased recovery properties.

1. Introduction

The purpose of brake is to stop or slow down the vehicle at the required period. The stopping of vehicles takes place due to the frictional surfaces between two mating services. Frictional and wear resistance are the important parameters of the brake pad for better operation [1]. The brake pad generally consists of 13–15 ingredients that are used to satisfy the required frictional properties [2, 3]. They are generally classified as binders, fillers, friction modifiers (abrasives and lubricants), and reinforcements. Fillers are used further classified as inert and functional. Initially the era of brake pad started by using the asbestos as the predominant material. Later it was identified as carcinogenic, so replacement of asbestos came into existence. Owing to the concern about eco-friendliness many researchers are showing interest towards the natural fibers which are available and present abundantly. Due to its unique advantages as excellent mechanical properties, lightweight, low cost and high strength it has been selected as the best alternative for various synthetic fibers. In recent years many natural fibers were used in multiple applications such as automobile, household appliances, textile industries, aerospace industries, etc. The various natural fibers used for various applications are jute, kenaf, bamboo, hemp, flax, cotton, areca, *Tridax procumbens, Cardiospermum Halicababum* etc [4–7]. These natural fibers are selected based on the ease of availability and its effectiveness in its applications. It is used in different applications by changing the physical, chemical properties and biocompatibility nature [8, 9]. The different types of fibers were used, such as short fiber, long fiber and chopped short fiber for its applications. To have better wear resistant the short random fiber is appropriate. Though natural fibers have many advantages it also has various other disadvantages on the other hand such as decreased mechanical property, stiffness and varying strength which is enhanced using various techniques like chemical treatment [10, 11]. Suryarajan *et al* [12] investigated the fade and recovery performance of the silane treated, alkali-treated and untreated *Prosopis juliflora* fibers based brake pads using

Document details - Benefits of corporate mentoring for business organization

Journal of Critical Reviews

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Benefits of corporate mentoring for business organization(Article)

Kembauw, E., Soekiman, J.F.X.S., Lydia, E.L., Shankar, K., Huda, M.

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Abstract

In today's business world it require high-quality and low-cost arrangements. Beginning a mentoring program in the business enables to exploit the most prominent asset, representatives. Deliberately building up their ability adds to the organization's development, advancement, and main concern. It shows the executives' help, intrigue, and worry for a worker's potential with the organization. It shows to representatives that administration is happy to contribute the time and assets important to assist workers with prevailing in their vocations. Consequently, employees are bound to be progressively gainful and faithful to the organization. © 2019 BY ADVANCE SCIENTIFIC RESEARCH.

Author keywords

business world | Organization development | Potential | Sweet mentoring

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Labor Disputes Prevention and Resolution for Healthy Environment of Business Organization

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Submission ID: 1368717009
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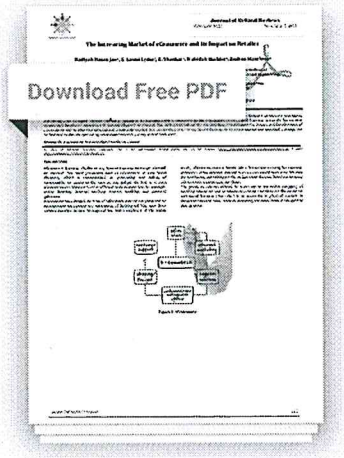

The Increasing Market of eCommerce and its Impact on Retailer

Radlyah Hasan Jan

2020, Journal of Critical Reviews

Abstract

Corpus ID: 213723324

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Concept of Electronic Document Management System (EDMS) as an Efficient Tool for Storing Document

A. Rosa, I. Pustokhina, +2 authors M. Huda · Published 2019 · Computer Science

In multiple formats for managing the use, storage and creation of documents that are made all through an association a framew ork of tools isconsider as electronic document management system (EDMS). For managing and capturing the both images and digital files of scanned documents thedocument management generally consider as a centralized software system. With enterprise content management (ECM) system the Electronicdocument management systems share numerous comparable features, be that as it... Expand

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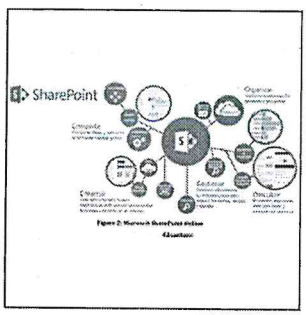
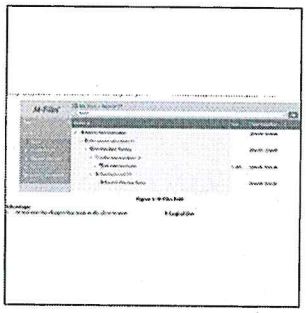


Figure 2



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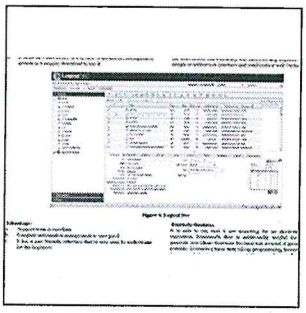

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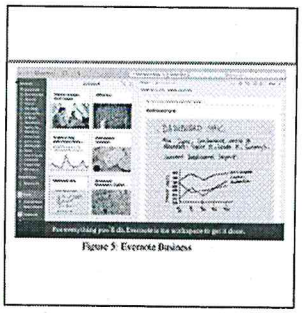

Figure 5

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Document details - How data analytics and survey data is importent for the long term decision of business

Journal of Critical Reviews

Volume 6, Issue 5, 2019, Pages 117-121

How data analytics and survey data is importent for the long term decision of business(Article)

Pitanatri, P.D.S., Hamidi, D.Z., Christianty, R., Lydia, E.L., Shankar, K.

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View additional affiliations

Abstract

In today's tumultuous business environment it is very difficult to have the ability to make the efficient and effective decisions. To make informed choices and to evaluate alternatives in order for firms they should have timely and reliable information upon which they make their decisions. To an organization the effective data management techniques development is of significant importance, with nearly overwhelming quantity of information as they find themselves inundated many organizations are learning that this is not an easy work. Keywords- data management, organization, techniques. © 2019 by Advance Scientific Research.

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Journal of Critical Reviews

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A Study on Managing Fake Customer Review and Order Claim using Loop holes in e-Commerce Strict Consumer Friendly Policies

Syamsul Alam [1] Mustapa T [2] E. Laxmi Lydia [3] K. Shankar [4] Satria Abadi [5]

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Abstract

E-Commerce has changed the lives of individuals around the globe and its development isn't giving any indications of backing off. In our routine life internet plays an important role. We use web day by day nearly for each and every work. The points of interest offered by e-commerce are online shopping of anything whenever and at wherever, clients can discover the items on web based business sites which is no accessible in physical markets, it decreases cost and time, without venturing out from home it can get our item at home. It have most likely been blamed for selling fake things by a client despite the fact that it can vouch that it got items straightforwardly from the producer or was preferred choice to get from their apparatus when it was made.

Author Keywords

Electronic commerce, Products, Markets, Internet

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The Role of Decision Support System and Risk Management

Emy Yuliantini[1], Jacky Chin[2], Tatyana Nikolaevna Tukhkanen[3], E. Laxmi Lydia[4], K. Shankar[5]

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Abstract—
A computer based information framework that supports organizational or business decision-making activities is known as decision support system (DSS). For risk managers decision support system would be useful. Decision support system serve the operations, planning and management levels of an organization and help to decide, which might be quickly changing and not effectively determined ahead of time. In distributed software development risk management is a well-inquired about territory, giving various techniques to suggesting and assessing control procedures. Numerous concentrates in chance the executives have been centered around the management procedure, contract connection, and risk examination in the previous decade, however not many contemplates have tended to extend dangers from the viewpoint of hazard effectiveness. Risk management decision models are chosen from a broad writing survey. Into a decision support system these models are incorporated.

Keywords- *Decision Support systems,information system, Risk Management.*

 DOI: http://dx.doi.org/10.22159/jcr.06.05.19

INTRODUCTION

A computer-based, interactive system that intended to help decision-makers to take care of ineffectively organized issues described as decision support system. Utilizing a mix of information retrieval, models and analytical techniques, such frameworks help evaluate and develop assess suitable other options.

A computerized program that used to help courses of action, determinations and judgments in a business and organization referred as DSS. A DSS filters through and breaks down enormous measures of information, incorporating exhaustive data that can be utilized to take care of issues and in basic leadership. A DSS assembles and breaks down information, combining it to deliver complete data reports. Along these lines, as an instructive application, a DSS contrasts from a common activities application, whose capacity is simply to gather information.

An appropriately planned DSS is an intelligent programming based framework proposed to help decision makers valuable data from a blend of personal knowledge, business models, raw data or documents to make decisions and identify and solve problems. The decision support applications present and gather typical information like:

- comparative marketing projections between one period and the following
- Projected income figures dependent on item deals suspicions
- inventories of data resources

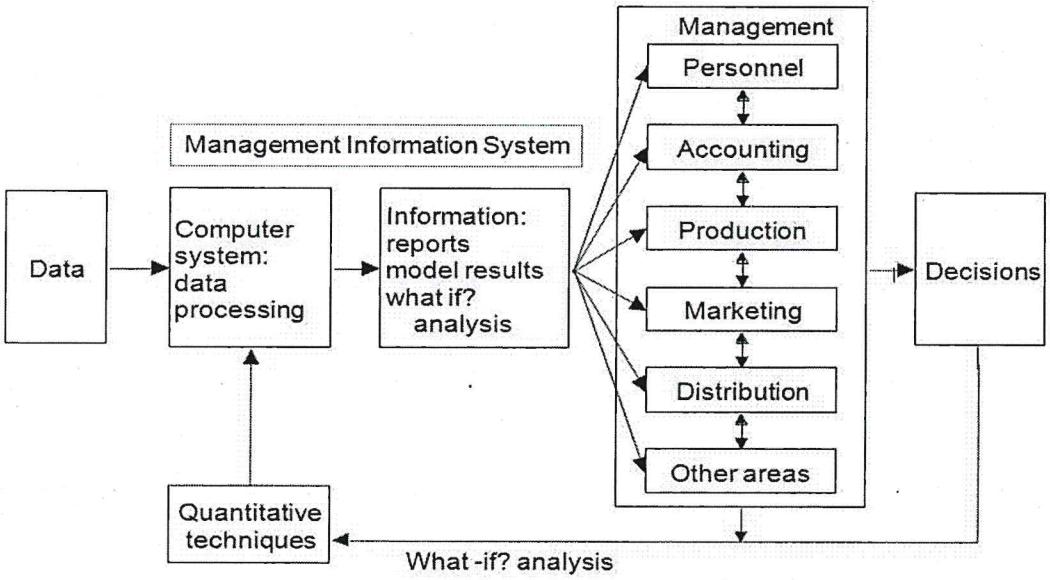

Figure 1: Decision Support System

DECISION SUPPORT SYSTEM CHARACTERISTICS

Some characteristics of decision support system are as follows:

- They support administrative judgment; instead of supplanting it.
- DSS improve the adequacy of the choices; not the effectiveness with which choices are being made
- Both models and data incorporate in decision support system.

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Concept of telemarketing study and its type and importance

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Dublin Core

Title

Concept of telemarketing study and its type and importance

Subject

Economic

Description

The telemarketing thought covers superb technique of telemarketing all over world. This technique is additionally called the within sales. It practices marketing, a technique wherever a sales person calls on to prospective customers and patrons to sell and gift the businesses' merchandise and services within the use of telephones and therefore the web. The telemarketing thought has been a rave technique within the business arena owing to the positive outcome and several other advantages. Many Businesses produce their own centre company to try to to the telecommerce task. These decision centres will either be in outward-bound or arriving calls. Either way, an enormous revenue come back comes by through these processes. The telemarketing thought has stunned folks within the business domain in many ways. This has several method of telemarketing coaching. These trainings area unit designed for various jobs. For a business to thrive, it is necessary for the top of workplace to follow a precise methodology or technique. A bit like in enjoying games, businesses would like a technique that's constant in manufacturing a positive outcome. Businesses have planned many strategies simply to seek out the proper approach for fulfilment. Through years of discovering and experimenting what methodology would satisfy these businessmen's desires and necessities, the selling construct has been born.

Creator

Adya Hermawati
E. Laxmi Lydia
K. Shankar
Wahidah Hashim
Andino Maseleno

Publisher

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Importance of Telemarketing (/items/browse?tags=Importance+of+Telemarketing), Telemarketing (/items/browse?tags=Telemarketing), Types of Telemarketing (/items/browse?tags=Types+of+Telemarketing)

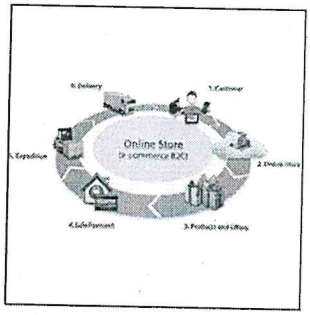
Corpus ID: 213672873

An Integrated Management System for Online Shopping Portals

E. Zulaikha · Published 2019 · Business

Presently days the way of life of the individuals is unique. People feel awkward and tedious for going swarmed markets. In this way, online Shopping is a help as it spares parcel of time. Online shopping is the procedure whereby buyers straightforwardly purchase services or goods from a vender progressively, without go-between services, over the web. Likewise with most online exercises, there are unmistakable tradeoffs in online shopping between cost savings, privacy, convenience, and choice... Expand

Figures from this paper



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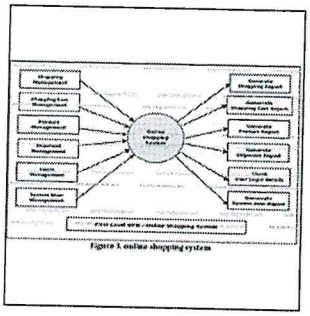

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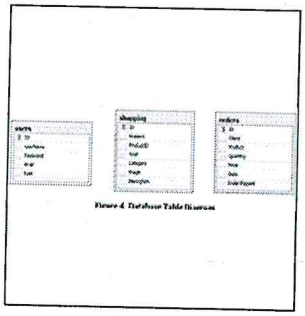

Figure 4

One Citation

An Enhanced Online Shopping System using M-Wallet

C. Nwachukwu, F. E. Onuodu · Computer Science · International Journal of Computer Applications · 2021

TLDR An enhanced online shopping using M-Wallet has been developed and implemented and used encryption algorithms such as MD-5 algorithm to guarantee confidentiality of user's information. Expand

Document details - Public–private partnership: A bridge between public and private sector

Opcion

Volume 35, Issue Special Issue 20, 2019, Pages 2899-2921

Public–private partnership: A bridge between public and private sector(Article) [Asociación público-privada: Un puente entre el sector público y el privado]

Jermsittiparsert, K., Nguyen, P.T., Nguyen, Q.L.H.T.T., Huynh, V.D.B., Shankar, K.

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View additional affiliations

Abstract

To operate, finance and develop a project like convention centers, parks and public transportation networks the collaboration of company of private sector and government agency is known as Public-private partnerships (PPP). A project can take less time when it financing through public private network. This Public private network provides a bridge between public and private sectors. This partnership is important for developing several business aspects. © 2019, Universidad del Zulia. All rights reserved.

Author keywords

Business Government Network Private sector Public private

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Document details - From a business point of view study the importance of event management services of specific company

Opcion

Volume 35, Issue Special Issue 19, 2019, Pages 2899-2921

From a business point of view study the importance of event management services of specific company(Article)

[Desde un punto de vista comercial, estudie la impor-tancia de los servicios de gestión de eventos de una em-presa especifica]

Nguyen, P.T., Nguyen, Q.L.H.T.T., Huynh, V.D.B., Lydia, E.L., Shankar, K.

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View additional affiliations

Abstract

Organizing, planning and execution of live events are including in event management. In current days a number of event management services are available, it include a conference, a product or brand launch, a concert, an exhibition, a wedding planning and many more. It can consider that event management is the extended type of advertisement so it will become more attractive. With a survey it is projected that as separate industry it grows 30% per annum. This paper studies the different factors of event management and importance of with business point of view. © 2019, Universidad del Zulia. All rights reserved.

Author keywords

Advertisement | Event management | Execution | Organizing

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Original language: English

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A Framework of Brand Management to Build Business Strategies as a Function of Market

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[5]Department of Computer Applications, Alagappa University, India.

Abstract

TIn the market how a brand is perceived the planning and analysis in marketing is known as brand management. For brand management with the target market develop a good relationship is very necessary. The product itself include in tangible elements like packaging, price and looks in brand management. The relationships with the brand and experiences that the consumers share are known as the intangible elements. Relationship with members of the supply chain and all aspects of the brand association of consumer are analyzed by a brand manager.

Keywords: market, brand management, consumer, supply chain, tangible element, intangible element.

Journal of Environmental Treatment Techniques 2019, Special Issue on Environment, Management and Economy, Pages: 1157-1160

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Biotechnology in Veterinary Medicine

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Abstract

In various areas of medicine biotechnology is consider as already established approach, but to revolutionize veterinary practice with the potential in veterinary medicine field it has only begun to emerge. For animal breeding and veterinary medicine it has proposed new dimensions with the continuous growth of modern biotechnology. To discard any possible genetic disorder it ultimately permits to consequently and detect through genome analysis of important breeding species. It can also detect more reliably and easily the infectious diseases. With improved productivity and health it opens the possibility to generate animals with the production of transgenic livestock and it introduced a less time taking program of breeding.

Keywords: biotechnology, veterinary medicine,genetic disorder, breeding.

1 Introduction

To reconstruct or improve a product, for peculiar purposes to evolve micro-organisms, to ameliorate plants or animals, to use substances or living organisms ability is defined as the term Biotechnology (1-3). The gathering and reproducing of phenotypically wanted people is a perfect outline of a settled use of biotechnology involve in conventional animal breeding (4). From the recent breakthroughs like limits and directs every one of the elements of living life forms, the innate substances in every single living creature from microbes to an elephant, recombinant Deoxyribonucleic Acid (DNA) comes the latest biotechnology (5, 6). For the well-being of humanity by genetic manipulations utilizing vector and microorganisms hosts embryo manipulation technology, DNA technology and its corresponding techniques, Polymerase chain reaction (PCR), monoclonal antibody techniques have underlined attain abilities. (7, 24). The usage of natural procedures, life forms or frameworks to deliver items that are foreseen to improve human lives is named biotechnology. Comprehensively, this can be characterized as the building of creatures with the end goal of human use. It can likewise be characterized as the range of abilities required for the usage of living frameworks or the affecting of regular procedures in order to create items, frameworks or situations to support human improvement.

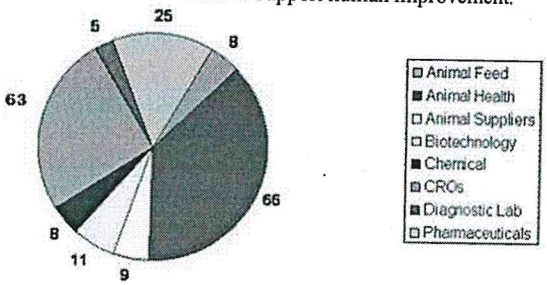

Figure 1: In industry role of Veterinarians

Right now biotechnology puts more accentuation on the foundation of half breed qualities pursued by their exchange into living beings in which a few, or all, of the quality isn't typically present. In ancient occasions, a crude type of biotechnology was rehearsed by agriculturalists who built up better-quality types of plants and creatures by techniques for cross-fertilization or cross-rearing. Past types of biotechnology incorporate the preparation and specific rearing of creatures, the development of harvests and the usage of small scale living beings to deliver items, for example, cheddar, yogurt, bread, lager and wine. Early horticulture focused on delivering nourishment.

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Clinical Decision Support and Predictive Analytics

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Abstract

Every year millions of people are dying because of the not getting treatment on time or the treatment is very expensive. But the CDS and PA may play a vital role in order to identify the disease and treatment may be provided in the early stage of disease. Such way may help to reverse the growing of disease. If the disease is identified at the early stage then antimicrobial therapy may reversal the disease. For this purpose a large number of experiments and research is required. The data sets are required obtained from many health organizations, hospitals and other previous research data. The trials of such experiments required decision support tools, self analyzed reports the experts in clinical predictors for self-performance evaluations and performance depends on neurocognitive tests are very expensive and takes too much time. Although the experiments are not strong enough to take a decision as every person may have different immunity and his body may react differently on every experiment. But CDS and Predictive analysis helps the researchers to reach the closest to predict the treatment..

Keywords: Prediction Analysis, Disease Reversal Process, Clinical Data Analysis, Clinical Decision Support System

1 Introduction

Presently the CDS technology research is one of the most popular as the hospitals and research organizations are getting a very large volume of data and ensure that such data will be very helpful for the patient care system. The artificial intelligence, clinical data sets and the machine learning is the key assets of this research and helps to diagnose the new methods in the area of pathology, radiology or healthcare digital image processing (1-5). The CDS provides many number of options where it will be optional that which tool or method have to test in initial and provides the guidance in deep way. The hospitals and research organizations are continuously doing research in adoption the artificial intelligence based tools and programs. On the off chance that the infection is distinguished at the beginning period, at that point antimicrobial treatment may inversion the sickness. For this reason countless examinations and research is required (6-13). The informational indexes are required gotten from numerous wellbeing associations, emergency clinics and different past research information. The preliminaries of such analyses required choice help apparatuses, self investigated reports the specialists in clinical indicators for self-execution assessments and execution relies upon neurocognitive tests are over the top expensive and takes an excessive amount of time. Despite the fact that the trials are not sufficiently able to accept a choice as each individual may have distinctive insusceptibility and his body may respond contrastingly on each analysis. In any case, CDS and Predictive investigation causes the scientists to come to the nearest to anticipate the treatment (14-20).

2 Predictive Analytics Algorithm Steps

Although the worldwide research in this area has many methods to do predictive analytics for clinical decision support system. But below the basic foundation steps are given in the algorithm steps below:

[Start]
Step 1 Problem Statement
Big Data or Data Sets Required
Step 2 Proposed Methodology
Which Disease is the Study Focus
Study of Importance of Research
Real Need of Analytics
Historical Data
Step 3 Methodology and Technique
Propositions

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Image Classification using Deep Neural Networks for Malaria Disease Detection

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ABSTRACT: Since the 19th century, Malaria has become a terrifying life-threating disease in most of the countries. Its been identified that five countries namely Nigeria with 25%, Congo with a ratio of 11%, Mozambique with ratio of 5%, India with ratio of 4% and Uganda with ratio of 4%. World Health Organization stated that above 90% of malaria death cases were recorded every year. Most of the Indian states like Odisha, Madhya Pradesh, Maharastra, northern countries, Chhattisgarh got affected by Malaria. India spotted death cases of malaria from millions to thousands that have reduced in recent years. Directorate of National vector Bore disease control program has started malaria control strategies using early case detection and treatments, vector control, protective measures against mosquito bites and management of Environment. The major challenge was to identify the disease at early stage. The key contributions avoid malaria disease is to provide antimalaria drugs, using indoor spray with residual insecticides, mosquito nets. For the treatment, medical technologies, deep learning architectures related to Convolutional Neural Networks to train and test performing different combinations for image classification using ResNet34 which helps patient go through prior examination for microscopic diagnosis. For patients examination, this paper considers Malaria Cell Images dataset with Parasitized and uninfected images. Thus, this clearly shows that one can easily identify person's condition whether he is infected or uninfected by enabling open-source Artificial Intelligence. It shows the start-of-the-art accuracy by checking individual details.

Keywords: Malaria, ResNet34, Convolution Neural Network, Image Classification, convolutional, neural network.

I. INTRODUCTION

Millions of people all over the world were affected by malaria. The major different Parasites that led to malaria are p.knowlesi, p.ovale, p.malariae, p.vivax and p.falciparium. These parasites are like small insects that grow through stages inside the human body and transforms into harmful bacteria, which leads to malaria. They change in their morphological behavior, size, color at each level of their stage. The main cause of malaria is due to climatic conditions in tropical region areas. Mosquitoes causing malaria, it is a parasite which gets transmitted into human blood through mosquito bites. Millions of people are getting sick from high fever to deadly states. It is a transmission process from mosquito to the human body, human body to liver, liver to red blood cells. The three different modes of malaria transmission are from mother to child (in womb, who are unborn), one to another person blood transfusions, giving similarly injected needles too other persons.

Existing approaches for malaria diseases, implemented methodologies such as automatic detection through RBC count, applying Log filters to identify unique cells, use of model variance, minimizing the variance provide solutions but not with optimal results. An automated detection system to recognize and distinguish malaria parasites in human blood varies from different stages like trophozoites; schizonts analyze blood slides through a microscope.Detection of RBC count and segmentation of cell images uses multiscale Laplacian of Gaussian, another contour-based segmentation for the detection of morphologies that detects both annular and disk-like structures among cells.Microfluidic devices used to track the red blood cells in videos to control the concentration levels of oxygen. Due to large number of varying characteristic features, the video of blood flow of RBC cells process cell classification for accurate segmentation [19]. In real-time data processing [31], implemented and performed an iterative voting-based detection of cells. To identify the local extreme and approximate centroids, multiscale LoG filter implies to know the individual cells, which help in speed up the processing and accuracy. This will result in the extraction of offline features of color and texture for further evaluation of classification and reduction of dimensionality. Some of the techniques like normalized red green blue for the extraction of color feature information and joint adaptive median binary pattern for extracting texture feature information [29]. Classifiers such as artificial neural networks result in classifying infected and uninfected cells.

The aim of the work is to provide the construction of models using neural networks by detecting the images and by decrease the model variance. This will enhance the robustness and analysis for detection. The efficiency of the CNN classifies the thin-blood smear images [22] by allowing cross-validation. Some of the performance metric calculation on finding classification accuracy is receiver-operating characteristic, mean squared error, precision, and Matthews Correlation Coefficient.

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Analysing the Performance of Classification Algorithms on Diseases Datasets

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ABSTRACT: Change in regular food habits and physical activities of the human body, some of the genetic diseases were inherited from generation to generation. The most common hereditary diseases that stay lifetime are thyroid, diabetics, cancer. Predicting cancer-like diseases consumes time; cure for such hereditary diseases can be identified at an early stage. Medical technology has been improved for the prognosis of healthcare. Healthcare using prediction analysis enhances medical technology. Researchers have advanced Prediction modelling under three phases. In the first state, they define the issue, collection of data and progress the data. In the second state, they choose a model and perform training and testing and in the third state, they apply the model in real-world. This has become a crucial task in the medical field for immediate disease diagnosis. To advance such automatic healthcare prediction system, modern Artificial Intelligent technology has been developed an easy way to identify the existence of the diseases. The proposed research papers examine the diseases through the disease parameters and classify them using various developed intense classification algorithms such as Support Vector Machine, Decision tree, Logistic Regression, K-nearest neighbor, Naive Bayes. The proposed classification algorithms measure the diseases using the disease datasets which estimates the accurate prediction. The experimental analyses have been carried out over three disease datasets namely Thyroid dataset, diabetics data set, cancer dataset.

Keywords: Classification techniques, Disease Datasets, Healthcare, Support Vector Machine, Prediction accuracy.

I. INTRODUCTION

Healthcare using prediction analysis enhances medical technology. Researchers have developed Prediction modelling under three phases. In the first phase, they define the problem, collection of data and process the data. In the second phase, they choose a model and perform training and testing. And In the third Phase, they apply the model in the real-world.

Diabetes is a disease that is deep-rooted (continual) into the human body. It mainly occurs due to the changes obtained inside the blood such as a change in insulin levels and an increase of the sugar levels in the blood. Nowadays diabetes has very advanced that young people without any perceptive knowledge getting diabetes [19]. In general, diabetes is classified as type1 diabetes, type 2 diabetes, and gestation diabetes. Diabetic patients under these type1 are known as Insulin Diabetes Dependent Patients, types 2 are known as Non-Insulin Dependent patients [21], gestation diabetes occurs during pregnancy period. Diabetes instances are fatigue, hungry, excess thirst, and urinary, weight gain or loss, blurry vision, change in BP high pressure or Low pressure, smoking and Body Mass Index. Based on the different parameters of the body selects optimal features like BMI, sugar levels, blood pressure is used to predict thyroid disease.

Thyroid disease is the most commonly affected worldwide disease in humans. It disturbs the major functioning parts of the body and led to many other disorders like diabetes, heart problems, depressions, hormonal imbalance so on. Thyroid disease is classified into two categories such as Hypothyroidism and Hyperthyroidism. This occurs mostly due to the thyroid gland that exists over our neck part in a butterfly shape. This gland generates hormones to all parts of the body. Hormones that are released by the thyroid gland are T3 and T4. The pituitary gland releases TSH hormones. A person who has hypothyroidism shows that the thyroid gland produces fewer hormones required for the human body, which leads to muscle weakness, infertility, puffy eyes, etc. Simply it is described as the deficiency of hormones. A person who has hyperthyroidism indicates that the thyroid gland is generating an excessive number of hormones into the body, which causes weight loss, increase in heart rate, nerves weakness, etc. Based on the different parameters of the body selects optimal features like T3, T4, TSH, blood pressure are used to predict thyroid disease [17].

Breast cancer disease is caused by cancer tissues/cells inside the body. Cancer cells gradually increase inside body causing damage to the organ. This can be diagnosed in many different stages. Once effected in body, hard to be cured completely. People with cancer need to undergo a biopsy to get clarification of any tumors. The early stage of predicting cancer is very advantageous for a person's life [20, 23].

Algorithms like Support vector machine classification is used to operate on continuous and categorical values. Any classification process divides the input dataset into two sets, i.e., training data and testing data, Decision tree find out regression as well as classification problems. It follows a tree structure, Logistic Regression identifies the relation between the dependent and independent variables, K-nearest neighbour algorithm provides fast training phase and slow testing phase, Naive Bayes is a statistical approach. More detail

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Parametric Instability and Property Variation Analysis of a Rotating Cantilever FGO Beam

Surya Narayan Padhi, Trilochan Rout, K. S. Raghu Ram

Abstract: This report is presented on the parametric excitation and dynamic stability of functionally graded ordinary (FGO) rotating cantilever Timoshenko beam. The equation of motion is derived using Finite element method in conjunction with Hamilton's principle. Floquet's theory is used to establish the stability boundaries. It is assumed that the properties along the depth of the FGO material beam follows the power law with different indices as well as exponential distribution law. The elastic property variation using power law at different indices and a comparison of elastic property variation between using power law at n=0.5 and exponential law along the thickness of FGO beam have been investigated. The properties drawn by Exponential distribution confirms better stability compared to properties drawn by power law.

Index Terms: Exponential distribution, FGO beam, load factor, Power law, Stability.

I. INTRODUCTION

Vibrating structures under rotation such as compressors, motors, pumps and micro-electro-mechanical systems is a naturally occurring phenomenon and results severe vibration in a structural resonant mode with an excitation by harmonic loading because of imbalanced rotor or variable fluid dynamic force, which causes heavy mechanical damage. Thus, the understanding of stability and dynamic response of rotating structures in service is highly important to avoid the risk of such resonance problems. In real life, the above mentioned rotating structures are normally pre-twisted and the cross-section is asymmetric in nature. However, Prismatic beams under rotation may be used as a sample model and compared at par with the actual rotating structures for investigation of stability and dynamic response. The research on functionally graded materials (FGMs) is rapidly growing because of its ability to meet desired material properties in contrast to the conventional homogeneous and layered composite materials which suffer from debonding, huge residual stress, locally large plastic deformations etc. An FGM can be a good replacement for the material of rotating beams. The present research work has been carried out with a good amount of literature survey on the rotating beam structures and reported below.

Brown et al. [1] have used the finite element method to study the parametric instability of uniform bars. Eisenberger et al. [2] have presented and compared the two methods for solving the eigenvalue problems of vibrations and stability of a beam on a variable Winkler elastic foundation. Heyliger et al. [3] have studied the influence of in-plane inertia and slenderness ratio on the non-linear frequency for beams with different support conditions. Datta et al. [4] have studied the parametric instability behaviour of a non-prismatic bar with localized zones of damage resting on an elastic foundation by using finite element analysis. Masashi [5] has examined the effects of coordinate system on the accuracy of corotational formulation for planar Bernoulli-Euler's beam. Murin [6] has studied the Cartesian stiffness matrix using methods of differential geometry. Kosmatka [7] developed the linear flexural stiffness, incremental stiffness, mass, and consistent force matrices for a simple two-node Timoshenko beam element based upon Hamilton's principle. Lee [8] has reported on the stability of a rotating cantilever beam using Hamilton's principle and assumed mode method. It is found that a rotating beam is not likely to experience parametric instability when the beam is short and the rotational speed of the beam is large. Dufour and Berlioz [9] have verified their simulated results of the investigation on the stability of an axial loaded beam with periodic force and torque.

Sabuncu et al. [10] have studied the dynamic stability of a blade having asymmetric aerofoil cross-section subjected to lateral parametric excitation using the finite element method considering the effects of the shear coefficient, the beam length, coupling due to the centre of flexure distance from the centroid and rotation on the stability and found that as the length of the beam decreases, the effect of the shear coefficient on stability becomes significant and with an increase in the rotational speed, the blade becomes more stable. Aminbaghai et al. [11] contributed on modelling and simulation of a free vibration of the 2D functionally graded material (FGM) beams with continuous spatial variation of material properties and reported that the continuous variation of the effective elasticity modulus and mass density can be caused by continuous variation of both the volume fraction and material properties of the FGM constituents in the transversal and longitudinal direction.

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Heterogeneity of human brain tumor with lesion identification, localization, and analysis from MRI

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Abnormality detection
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ABSTRACT

Objective: Accurate identification of brain tumors and their heterogeneity is a critical task in planning for proper therapy. A reliable fully automatic detection and analysis method for the brain tumor is necessary for an efficient measurement of the tumors and their extent. This paper presents a computerized approach to brain tumor-edema detection and analysis from the MRI of brain sequences.
Method: Computer-aided diagnosis systems are focused on several research activities, and the ideas of the study of brain images with the diverse modality of heterogeneity by applying better image analysis algorithms. The proposed automated modern approach includes several stages of image segmentation, area and volume calculation, and locational findings using statistical and an unsupervised clustering prediction method.
Result: The outcome of the proposed computerized method is compared with reference images and gives very promising results. Performance of our proposed methodology is also assessed with the gold standard recent comparable method, and our method gives better results in the context of accuracy and error metrics.
Conclusion: The proposed method is capable of improving the overall detection, segmentation, and quantification of a variety of tumors for different cases from multiple standard datasets.

1. Introduction

Recently, automated diagnosis has involved medical image segmentation to extract the abnormal lesions from magnetic resonance imaging (MRI) of brain. The types of tumors vary due to several characteristics such as nature, volume, shape, number and locations of lesions. MRI offers an advanced concreteness of flexible tissue composition to appropriate segmentation. The correct segmentation methods have a high correlation with image modality and the significance of tissues. Thus recognition of abnormalities is critical in diagnosis and treatment due to the multiplicity of intracranial diseases including brain tumor, edema, cerebral aneurysm, characteristics, vascular malformation, trauma, heterogeneity or changes in radio and (or) chemotherapy. Computer Aided Diagnosis (CAD) methods have added a new dimension for physicians to achieve a faster and more perfect identification.

The CAD is field-explicit because it is precise for a particular category of diseases, focuses on a specific portion of the body and is diverse in diagnostic technique. The diverse kind of input includes stated indication, pathological tests, health checkup, and brain images corresponding to domain-specific areas. Development of such CAD systems is demanding because they unite the basics of segmentation, artificial intelligence, machine learning, statistics, deep learning and MR image analysis. This effort proposes a CAD structure to assist radiologists in the recognition of tumor lesions in MRI scans from the human brain to predict their natures. A number of the older mechanisms [1] dealt with the problems of the segmenting area of solid tumors. The earlier effort was used by a spatially biased k-means histogram-based clustering method, while, in the later effort, the authors apply a multi-resolution computer-generated annealing technique. A more modern work - a thresholding method based on Fuzzy C-Means (FCM) cluster [2] was used to eliminate the entire non-brain area. The outcome of that

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Paraphernalias of Entrepreneurship – A Contemplating Outlook

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ABSTRACT

Entrepreneurship is the impetus for development of any nation. Entrepreneurship has been the modern way of the industrialisation process which revolutionised the present day of living. In today's world, entrepreneurship has become an act of inspiration which eventually has had a compounding effect on society, and nations as a whole, benefiting mankind. The world is going through a new phase where people no longer just depend on industries to thrive, but come up with an idea reinventing themselves, eventually establishing a start-up. The act of reinventing oneself is nothing but an act of entrepreneurship which is believed to all businesses. The present article deals with ubiquitous issues ranging from entrepreneurial outlook in India and globally, factors influencing entrepreneurship, Global scenario of ease of doing business and many more issues which needs to be prioritised to set the pace for entrepreneurship to flourish.

KEYWORDS

Entrepreneurship challenges, Entrepreneurship, Funding sources, Reforms, SWOT analysis

INTRODUCTION

In this ever-evolving world, to keep pace with its intricacies, humans have to reinvent themselves, this reinvention process by very nature requires an entrepreneurial mindset and constant reinvention requires long term vision, creating opportunities for growth and fostering synergies in the ecosystem. Entrepreneurship during the last few decades has gained an immense interest in academia, politics and practice, it is also argued from several spheres of society in most of the developing countries that more entrepreneurs are necessary for the economic development. In addition, nowadays entrepreneurship is also perceived as a solution to social and societal challenges. This drives a need for entrepreneurial people everywhere in society who can cope with the inconstant and uncertain world of today. As a consequence, there are around the world numerous educational initiatives trying to inspire and fuel an entrepreneurial mind-set. Here, educations of all kind become relevant contexts since they provide an opportunity to affect children, youth's and adult's interest and attitudes towards entrepreneurship, and as such give a possibility to reach a vast number of people (Axelsson, 2017).

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Data Integration and Data Privacy through "Pay-As-You-Go" Approach

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ABSTRACT: Data Analytics has taken important and demanding problems in the research areas such as computer science, biology, medicine, finance, and homeland security. This research paper has resolved the problem of Entity resolution(ER) which recognizes the database records, which referred to the same real-world entity. The latest explosion of data made ER a impeach problem in a large range of applications. This paper proposed a scalable ER approach, used on-board datasets. Our latest approaches are simple because they consider either the entire ER process or the function, which are matching, and merging records as a black box procedure and used in a large range of ER applications. Pay-as-you-go approach for ER was a limit on the resources (e.g., work, runtime). This made the maximum progress as possible as required. This paper suggests scalable ER methods and new ER functionalities that have been not studied in the previous. Entity Resolution as a black-box operation provides general mechanisms which be used across applications. Further, the issue of managing information leakage, where one must try to avoid important bits of data from resolved by Entity Resolution, to sage against the loss of data privacy. As more of our sensitive data gets unprotected to various merchants, health care providers, employers, social sites and so on, there is a large chance that an adversary can "connect the dots" and piece together our data, which leads to even more damage of privacy. Thus to measure the quantifying data leakage, we use "disinformation" as a device which containing data leakage.

Keywords: Data Analytics, Data Integration, Data Privacy, Entity Resolution(ER), ER techniques.

I. INTRODUCTION

Since large amount of data is available for the analysis, scalable integration techniques playing an important role. At the same time, the latest privacy issues arise where sensitive data can be easily is inferred from a large amount of data. The two closely major related problems are identified with the analytics: data integration [21] and data privacy, "pay-as-you-go" approach for ER to maximize the progress of ER with a small amount of work. The problem of incremental ER, is not the one time process, but is continuously improved; as the data, schema, and applications better understand. The obstacles of joint ER with large datasets of various entity types are resolved together and the issue of ER with inconsistencies.

The objectives with prospective to data Integration keeps ER results updated when the ER logic is used go contrast records evolves time and again. A malleable, modular resolution framework where available ER algorithm developed for a given record type can be endeavour in and used in concert with another ER algorithm [8-9]. Suggested methods for efficiently generating hints and investigating of how ER algorithms cab is used hints to enlarge the number of records. Disallow inconsistencies in ER solution using Negatives rules of ER. The objectives with prospective to data privacy [18] provide effective algorithms for computing data leakage and emulate their achievement and scalability. Suggested mechanisms a disinformation technique [10-11] for entity resolution in order to manage data leakage is to develop a model which captures the privacy of loss relative to the target person, on a regular scale from 0 to 1.

II. LITERATURE SURVEY

Blocking strategies centre around improving the general runtime of ER where the records are isolated into potentially covering blocks, and the blocks are settled each one in turn [5-6].

Entity goals include contrasting records and deciding whether they allude to the same entity or not [2-3]. The vast majority of the work can be categorized as one of the ER models we consider, match based clustering and distance-based clustering [4]. While the ER writing centres on improving the precision or runtime execution of ER, they, for the most part, accept a fixed rationale

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Transforming Health Care Big Data Implementing through Aprior-Mapreduce

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ABSTRACT: The healthcare industry routinely has generated massive quantities of knowledge, pushed by way of using record preserving, compliance & regulatory specifications, and patient care. The proposed paper specializes in designing of the radical Framework which consists of components and these accessories can be utilized to perform quick analysis by way of connecting clusters which is designed in this work. The proposed paper implements BigData Analytics capabilities as a part of a "Novel Framework" structure that can meet the wants of Health care vendors searching for to strengthen effects and efficiencies at the same time increasing profitability. This paper will help to establish todays and most confirmed techniques that leverage wellness care knowledge enabling corporations to attain excessive first-rate, cost-effective care. The "Novel Framework for health Care massive data" paper is constituted of members from the provider, well-being a procedure, health expertise technological know-how, academic, and wellness policy domains. This numerous staff is well-versed in information evaluation, patient-centered care, health knowledge science, determination support method, and the vital to transform health care supply with revolutionary makes use of wellness knowledge.

Keywords: Novel Framework, Big data, Zettabyte, gigabytes, clusters, healthcare.

I. INTRODUCTION

Most information is saved in problematic reproduction variety, the present pattern is towards rapid digitization of these enormous quantities of data. Pushed with the aid of necessary necessities and the advantage to strengthen the high-quality of healthcare supply in the meantime decreasing the expenses, these enormous quantities of knowledge (often called 'Big Data') Continue the promise of supporting a broad form of clinical and healthcare capabilities [20], together with among others clinical resolution support, sickness surveillance, and populace wellbeing administration. The healthcare industry traditionally generated colossal quantities of knowledge, pushed via document protecting, compliance & regulatory specifications, and patient care [1]. The healthcare manufacturer traditionally has generated giant quantities of knowledge, driven by way of record preserving, compliance & regulatory standards, and sufferer care. While most know-how is saved in intricate reproduction sort, the present progress is toward speedy digitization of these significant quantities of knowledge. Pushed by using compulsory specifications and the skills to enhance the ample of healthcare delivery meanwhile decreasing the fees , these huge portions of information referred to as huge information maintain the promise of helping a vast range of clinical and healthcare services [4], including amongst others medical selection support, disease surveillance, and population well-being management [2-5]. Experiences say information from the healthcare method reached, in 2011, 100 fifty Exabytes. At this rate of development, colossal capabilities for healthcare will swiftly attain the zettabyte (1021 gigabytes) scale and, no longer prolonged after, the yottabyte (1024 gigabytes) [6]. Kaiser Permanente, the California-centered wellness community, which has 9 million members, is believed to have between 26.5 and forty-four petabytes of potentially wealthy skills from EHRs [12-13], at the side of snapshots and annotations

II. INTERNATIONAL AND NATIONAL LITERATURE SURVEY

Getting older populations and culture alterations to pose growing pressures on healthcare techniques all over the world. The trends which are accompanied via the digitization of well-being and sufferer knowledge by way of advances in understanding science, together with clinical sensors, have led to the iteration of massive

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An Unsupervised Deep Learning Methods for Fabricating Text Mining Analysis based on Topic Modeling and Document Clustering Techniques

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ABSTRACT: The complex-manufacturing digital and textual knowledge is further moved into the web in the form of unstructured text. Problem Statement: To organize and search vast data better computational tools are required and extract them by understanding the knowledge patterns invisible and unlabeled in the data. To notify various decision-making activities all over the product value chain and manufacturing areas, it evolves a challenging way to identify important information taken away through the web. This was the problem identified by many of the organizations. Proposed Solution: In this proposed research paper, a novel approach to provoke the progress of the Search and Organize text documents as well as extract patterns in manufacturing corpus by applying unsupervised document clustering and topic modeling which is statistical modeling technique through Deep Learning are proposed. Topic modelling is an effective technique for both classifying and characterizing hidden patterns in corpora. Topic modeling implements processing of data similar to text mining. The proposed method choose LDA technique and topic modeling algorithm, where web pages of various manufacturing service providers are used to construct the corpus and manufacture suppliers are used to generating the area of application. For complex unstructured and unsupervised data, use of Document Clustering in association with topic modeling aids the progress for automated annotation and web pages classification. This improves the domain supplier search and information retrieval tools. Moreover, the terms that are extracted from topic modeling process are collaborated with other reference models such as Thesauri and Ontologies of manufacturing industry to enable bottom-up Knowledge Extraction.

Keywords: Deep Learning, Clustering, Topic Modeling, Manufacturing corpus, Text Analytics.

I. INTRODUCTION

Text Mining is one of the complex analysis in the analytics industry performs mining with unstructured data. In 1998, Merrill Lynch flourished rule that around 85-90% of all usable business information may arise data in the unstructured form. By 2025, IDG and EMC projects lead growth to 160zettabytes of data in the world and estimate that 70-80% of this data is unstructured. In 1958, the research in business intelligence focused on unstructured data the researcher like H.P. Luhn were particularly anxious with the classification of unstructured text [10-11]. Later in 2004, the SAS Institutedeveloped the text miner tool, which uses a technique called SVD (single value decomposition) to reduce data into a smaller dimension from hyperdimensional textual space for efficient analysis. 90% of data in digital space will be unstructured in coming forth decade, Mostly unstructured data is in the form of textual information and is being generated constantly via online web pages, electronic documents and so on. whilethe amount of unstructured data is increased with the ability to understand and make sense of utilizingthe exceptional business decision remains challenging. However, it is unachievable for traditional approaches to process a hugeamount of textual data. Automated text analytics approaches are implemented in different industries for discovering knowledge patterns and predicting textual data rends [33].

II. BACKGROUND AND JUSTIFICATION

Text Mining is one of the complex analysis in the analytics industry performs mining with unstructured data. In 1998, Merrill Lynch flourished rule that around 85-90% of all usable business information may arise data in the unstructured form. By 2025, IDG and EMC projects lead growth to 160zettabytes of data in the world and estimate that 70-80% of this data is unstructured. In 1958, the research in business intelligence focused on unstructured data the researcher like H.P. Luhn were particularly anxious with the classification of unstructured text [10-11].

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Original Article

AN EXPERIMENTAL STUDY TO DETERMINE THE COMPACTION CHARACTERISTICS AND CALIFORNIA BEARING RATIO OF SOIL MIXED WITH FLY ASH AND DISCRETE FIBRE

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ABSTRACT

Expansive soils have the ability to swell and shrink, which causes lots of structural damages. In the present scenario, soil is stabilized using different waste materials in order to improve its strength. In this study, fly ash and fibers were mixed with soil to investigate the relative strength gain in terms of California bearing ratio tests. The effect of fly ash and fibre on geotechnical characteristics of soil – fly ash and soil-fly ash- fibre mixtures was investigated by conducting standard proctor compaction tests, CBR tests. The tests were performed as per Indian standard specifications. The soil used for the study was brought from Doultabad of Medak district. The physical properties of the soil were determined as per IS specifications. Fly ash for the study was brought from Raichur, Karnataka. An experimental study was carried out to determine the compaction characteristics and California bearing ratio of soil and fly ash mixed with discrete fibre of 12mm length. The results obtained from the study indicate that the addition of fly ash and fibre to soil increases the California bearing ratio values when compared to that of unreinforced soil.

KEYWORDS: Fly ash, Fiber, Compaction & California Bearing Ratio

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INTRODUCTION

In pavements, Sub-grade is the most important element which is compacted before construction of road or railway track. The sub-grade must be able to support the loads transmitted from the pavement structure. This load bearing capacity is affected by moisture content, degree of compaction and type of soil

A sub grade, which supports huge amount of loads without undergoing any deformations, is considered to be good. As expansive soils are weak in strength and have the ability to swell and shrink in various parts of the world there is every need to improve the strength by reinforcing the soil.

BACKGROUND

Stabilization of soils using different admixtures is a technique used since primitive ages. Many researchers have used fly ash and polypropylene fibers as a reinforcing material for the stabilization of soil.

Sharma. R. K. (2012) have determined the behavior of expansive soil mixed with fly ash and Recron 3S fibre. The properties like grain size distribution, moisture density relation and CBR are studied for soil mixed with fly ash in the range of 20-80%. The mixture of soil with 30% fly ash has been selected for further modification with fibre content. The CBR of various soil samples were determined under soaked and unsoaked conditions.

Computer aided software integrated automated safety system

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Abstract: Software for safety-critical systems must deal with the hazards identified by safety analysis in order to make the system safe. Building a safety-critical software requires special procedures to be used in all phases of the software development process. In this work, we have dealt with safety analysis techniques such as failure modes and effects analysis (FMEA) and fault tree analysis (FTA)-based safety-critical approach towards to development of an integrated automotive safety critical system from a safety perspective. A proposal of software safety architecture and software safety lifecycle has developed here using some important safety techniques. A new software development lifecycle with an integration approach, i.e., Agile-V model is proposed. Driver assistance system like ACCS is a safety critical system which is helpful to prevent accidents by reducing the workload on the driver. The basic design and functionality of ACCS is done with the safety command of bypassing to braking system when needed. As a safety approach for some limitations we have introduced an integrated architecture using fuzzy logic which has less failure cases and improves efficiency. The basic design and functionality of braking system is done with ABS and without ABS so that stopping distance also decreases.

Keywords: adaptive cruise control system; ACCS; anti-lock braking system; ABS; failure modes and effects analysis; FMEA; failure modes and effects analysis; FTA; safety critical system; SCS; software safety architecture; SSA; software safety lifecycle; SSL.

Reference to this paper should be made as follows: Sowjanya, P. (2019) 'Computer aided software integrated automated safety system', *Int. J. Computer Aided Engineering and Technology*, Vol. 11, Nos. 4/5, pp.561–577.

Biographical notes: P. Sowjanya completed her MTech from the Vignan's Institute of Information Technology, Visakhapatnam. She completed her BTech in CSE from the Sri Chaitanya Engineering College, Visakhapatnam. She has published two papers for internet of things, safety critical systems and cloud computing domains. She is a member of Inventive Research Organisation (IRO). Her areas of research includes safety critical systems, internet of things, cloud computing and big data.

This paper is a revised and expanded version of a paper entitled 'Design and development of an integrated automotive safety critical system using software safety lifecycle' presented at *International Conference on Innovative Systems*, Bangalore, 16—7 December 2016.

Error tolerant global search incorporated with deep learning algorithm to automatic Hindi text summarisation

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Abstract: There is an exponential growth in the available electronic information in the last two decades. It causes a huge necessity to quickly understand high volume text data. This paper describes an efficient algorithm and it works by assigning scores to sentences in the document which is to be summarised. It also focuses on document extracts; a particular kind of computed document summary. The proposed approach uses fuzzy classifier and deep learning algorithm. Fuzzy classifier produces score for each sentence and the deep learning (DL) also produces score for each sentence. The combination of score from both fuzzy classifier and DL produces the hybrid score. Finally, the summarised text can be generated based on this hybrid score. In our proposed approach, we have achieved an average precision rate of 0.92 and average recall rate of 0.88 and the compression rate is 10% according to the experimental analysis.

Keywords: GSA; fuzzy; summarisation; hybrid; deep learning; DL.

Reference to this paper should be made as follows: Anitha, J., Prasad Reddy, P.V.G.D. and Prasad Babu, M.S. (2019) 'Error tolerant global search incorporated with deep learning algorithm to automatic Hindi text summarisation', *Int. J. Business Intelligence and Data Mining*, Vol. 14, No. 3, pp.359–380.

Biographical notes: J. Anitha is working as an Associate Professor in the Vignan's Institute of Information Technology, Vishakapatnam. She is a PhD scholar of Andhra University and she completed her MTech from Andhra University in 2007. Her interests include data mining, artificial intelligence, and image processing. She has published more than ten international journal publications, and attended several national and international conferences.

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Water Quality Testing and Monitoring System

N. Thirupathi Rao, Debnath Bhattacharyya, V. Madhusudhan Rao, Tai-hoon Kim

Abstract: Traditional methods of drinking water quality parameters like turbidity, pH, conductivity and temperature etc., may consume time as samples are tested manually in the laboratory. To overcome this, in the current article an attempt has been made for developing the smart and low-cost IoT system. The parameters considered to test the quality of water are Temperature, Turbidity, pH, Conductivity. Sensors immersed in sampled water are used to measure the above said parameters. The sensed data from the sensors was sent to the Raspberry Pi Unit. The sensed data parameters compared with the standard values which already exist in Raspberry Pi Unit. The data stored in Raspberry Pi accessed from the IOT (cloud). If any change in the standard values was observed, a message or a mail will be sent to the Smartphone through Wi-Fi. In the current work, samples of water were collected to test the purity of water. Also to check the variety of particles those were present in the water. In this work, we use sensors for testing purity of water. The current developed model will detect the particles that are present in the water and also the level of purity in the water. The results were displayed in the form of the numerical values at the display unit that was fixed on the IoT unit.

Keywords: IoT, Water Quality, PH Value, Water control.

I. INTRODUCTION

The Internet of Things (IoT) is a plan of combining devices belongs to various areas like mechanical and propelled machines are used to enable novel identifiers and to trade data over a framework without anticipating the personnel computer association[1,3]. IoT had created from the gathering of remote developments, scaled down electromechanical structures (MEMS), small-scale organizations and the web. Pv6's large addition in address space is a primary factor in the progression of the IoT. A development in the number of sharp centers and likewise the measure of upstream data centers make is depended upon to raise new stresses over data insurance, data influence and security [2,4]. Practical employment of IoT development can be found in various ventures today, including precision cultivating, building the organisation, restorative administrations, essentialness and transportation. The product designers could connect with the device over the web, check the status of the developed model and choose if there would be any cold drink suspecting them, should they make the trek down to the machine [6].

A. Characteristics of the Embedded Systems

Two significant regions of differentiation are cost and usage of electricity. Since various embedded structures are conveyed in few thousands to many runs, reducing cost is a vital concern. Embedded structures often use a (by and large) direct processor and little memory size to confine expenses [5]. The progressiveness isn't just clock speed. The whole building of the PC is routinely deliberately enhanced to cut down costs. Various previously introduced structures often live in machines that are depended upon to run continuously for a year without botches and once in a while recover autonomously from any other individual if a bumble happens [4]. Like this, the item is by and large made and attempted more meticulously than that for PCs and dangerous mechanical moving parts for instance circle drives, switches are avoided. Specific resolute quality issues may include as follows,

1. The system must be kept running for prosperity reasons. As often as a director picks possible fortifications. Delineations in the IoT models are join aircraft course, reactor control systems, essential security compound assembling plant controls, etc.
2. The system will lose a considerable measure of money when shutting down like: Telephone switches, preparing plant controls, framework and lift controls, save trade and market making, robotized arrangements and the organisation.
3. A combination of strategies used rarely in the blend to recover from bumbles like programming bugs, memory spills, and moreover fragile slip-ups in the hardware.
4. The watchdog clock that resets the PC unless the item irregularly tells the protect pooch subsystems with additional abundance items that can be changed over to programming "limp modes" that provides a central limit.
5. Designing with Trusted Computing Base (TCB) outlining assurances a significantly secure and robust structure condition.
6. A hypervisor expected for embedded structures can the give secure epitome to any subsystem portion so that an exchanged off programming part can't intrude with various subsystems, or advantaged level system programming. This representation shields issues from inducing beginning with one subsystem then onto the improving steady quality. This may moreover empower a subsystem to be shut down and restarted on accuse distinguishing proof.

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Article

Optimization of training sequence based sparse channel estimation for mmwave communications in 5G

January 2019

Authors:

R. Umamaheswari C. Sumanth Kumar

Abstract

In this paper to achieve higher data rates with high spectral efficiency and high accuracy we designed training sequence sparse channel estimation based on BAT, Cuckoo and Firefly algorithms. By using the above techniques we design a Training sequence channel estimation to reduce the bit error rate, mean square error and accurate recovery of data. The firefly optimization is the promising technique to reduce the bit error rate and to increase the signal to noise ratio to achieve high spectral efficiency Gbps.

Article

Development of FPGA based multi-channel temperature controller using thermistors for under water vehicles

January 2019

Authors:

K. Lakshmi **A. Suresh** **A. Gubbala**

Abstract

Under water vehicles with electrical propulsion such as underwater autonomous vehicles are designed to propel with high energy batteries. These batteries are the main source of power to motor and other electronic subsystems. Temperature of the batteries is one of the critical parameter that gives the information about the health of the battery and whether the battery is able to deliver the required power to other subsystems. In case of any abnormality such as battery short circuit or other reasons, the temperature of the battery may shoot up to the alarm levels at various places of the battery and other sub sections near to the battery because the temperature is transferred from battery to the nearby shell and other subsystems. For this application, Multi-channel temperature controller is designed, verified and tested in the battery assembly. The proposed system can monitor and control up to the 32 temperature channels by integrating thermistors in the complete test set-up and it is designed in such a way that the battery is disconnected from the other subsystems in case of any abnormality or temperature is increased beyond the safety limit. In this paper, design, calibration and integration and testing of multi-channel Temperature controller using FPGA with thermistors is discussed and the system has internal memory and it can store the temperature at various channels in flash memory so that the system is well suited for not only self-controlled underwater vehicles but also thermal engine based systems. The system can also monitor and control the temperature in harsh environment even also in industrial applications. The system is designed in Spartan 3FPGA using VHDL and verification of the design is done Xilinx chip-scope-pro. The front end Graphical User Interface (GUI) is designed for online monitoring, data downloading and processing using visual C++ and MATLAB.

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LAND USE AND LAND COVER CLASSIFICATION FOR VISAKHAPATNAM USING FUZZY C MEANS CLUSTERING AND ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM

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ABSTRACT

In current decades, Land Use (LU) and Land Cover (LC) classification is the most challenging research area in the field of remote sensing. This research helps in understanding the environmental changes for ensuring the sustainable development. In this research, LU and LC classification assessed for Visakhapatnam city. After collecting the satellite images, Hybrid Directional Lifting (HDL) technique was used to remove the saturation and blooming effects in the input images. The pre-processed satellite images were used for segmentation by applying Fuzzy C means (FCM) clustering. Then, Local Binary Pattern (LBP) and Gray-level co-occurrence matrix (GLCM) features were utilized to extract the features from the segmented satellite images. After obtaining the feature information, a multi-class classifier: Adaptive Neuro-Fuzzy Inference System (ANFIS) was used to classify the LU and LC classes; water-body, vegetation, settlement, and barren land. The experimental outcome showed that the proposed system effectively distinguishes the LU and LC classes by means of sensitivity, specificity, and classification accuracy. The proposed system enhances the classification accuracy up to 7% compared to the existing systems.

Key words: Adaptive Neuro-fuzzy inference system, Fuzzy C means clustering, Gray-level co-occurrence matrix, Hybrid directional lifting, Local binary pattern.

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Evaluate Compressive Strength of Geopolymer by Using Different Fibers and Curing Conditions

Kalla Jagadeeswari,.K. Srinivas,.M.Padmakar,.R Hemasri Phanindra

Abstract: Day by day conservatory emissions is increases on earth. In manufacture of Portland cement(PC), obliquely we are escalating the carbon dioxide in atmosphere by the invention of PC.. Industrial by-products such as fly ash(FA), ground granulated blast furnace slag(GGBS), rice husk, bagasse, etc. are mainly used in manufacturing industry because these resources contain good bonding assets, amplified stability and decreased the porosity. evaluate to PC these assets are inexpensively good. Auxiliary by means of these manufacturing by products we are eventually lessening the carbon dioxide. PC with the manufacturing by products such as FA, bagasse , GGBS, Rice Husk Ash, Metakaolin etc., In these materials GGBS, FA, bagasse are commonly used for bursting substitution of PC. match up to PC GGBS, FA, rice husk be as well offer privileged compressive strength results when activate by alkali with similar curing's. This concrete is known as Geo polymer concrete(GPC). To prepare the GPC we require alkali solutions(AS) like NaOH and Na_2SiO_3. arrange the AS, by considering singular molarities of NaOH like 9M and 14M and singular concentrations of Na2SiO3 like 40%. get ready the AS of NaOH and Na2SiO3 discretely one hour before the mixing of GPC. dispose the cubes to find the mechanical properties such as compressive strength, and density of GPC. The specimens were tested after 28 days of special curing's. To improve the properties of GPC, we are accumulation different fibers and go on it for 28 days of different curing conditions of GPC. finally we know the compressive strengths of different fibers and curing conditions of GPC

Keywords : GGBS, Silica fume, Na2SiO3, NaOH. Gypsum, Glass fiber, Steel fiber.

I. INTRODUCTION

Geo polymer concrete is a free cement concrete which is made up of manufacturing by products made up of FA, GGBS, SF, bottom ash, bagasse. As the infrastructure development growing worldwide the demand for concrete increases and also the demand for cement greenhouse gases co_2 emission is more. Due to the emissions of co_2 global warming occurs. Due to that global warming heat increases on the earth. Co_2 emissions leads to the occurrence of pollution in the environment and also human are being effected to several health hazards & problems By replacing of OPC with industrial byproducts it leads to reducing the co_2 emissions in the atmosphere. By using Geo polymer concrete it prevents the hazardous problems in the environment.

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It also enhances the more compressive strength compared to ordinary Portland cement.

The properties of GPC is it reduces the heat of hydration, reduces the efflorescence formations on concrete structures, & it prevents the sulphate attack, chloride attack, acid attack on concrete. By incorporation of steel and glass fibers into Geo polymer concrete it prevents the cracks during plastic shrinkage and drying shrinkage. Increases the tensile strength of concrete and also increase freeze thaw resistance. By using the glass fibers it increases the heat resistance of concrete. It reduces the soundness and thermal resistance.

II. DESIGN OF MIX PROPORTION

We have to take two grades of concrete are M15 & M20. We go through various studies on the geopolymer materials we select the materials as binder are GGBS & silica fume with various percentages. These have similar binding properties like cement and these are economical and ecofriendly, so in the place of cement we use GGBS & silica fume as a binder. Selection of molarities of NaOH. From trial mixes of geopolymer concrete of different molarities (6M, 8M, 9M, 12M, 14M) tested on comparison testing machine for 7 days cured in different curing conditions ambient & water. Then according to compressive strength of cubes in7 days, 8M gives maximum strength than other molarities. So, we adopt molarities for NaOH as 8M for entire study. Selection of concentration of Na2SiO3 were 15%, 45%, 65% tested on compression testing machine for 7 days cured in different curing conditions (ambient & water). 15% & 45% of Na_2SiO_3 gives very high strengths among all other concentrations so we adopt Na_2SiO_3 concentrations are 15% & 45%. Selection of A/B. This solution is prepared by mixing of sodium hydroxide(SH) solution & sodium silicate(SS) solution. Trial mixtures of different alkaline to binder ratios 0.6, 0.7, 0.9 were tested on compression testing machine for 7 days in different curing conditions. A/B ratio of 0.6 mixture is very difficult to prepare the mixture with low workability & unable to use 0.9 due to the mixture is turned into slurry & 0.7 gives maximum results. So, we adopt A/B ratio as 0.7 for entire study. Selection of ratio of NaOH to Na_2SiO_3 from the literature study NaOH to Na_2SiO_3 was maintained in the ratio of 1:2.5. ¬ So, we adopt SS to SH value is 2.5 for entire study.

A. Mix Proportions Calculations

For conventional concrete mix design proper code of practice and defined procedure are available. But GPC there is no proper system of follow no defined procedure are available.

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GEOPHYSICAL INVESTIGATION OF GROUNDWATER POTENTIAL OF VIEW CAMPUS, VISAKHAPATNAM, ANDHRA PRADESH

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ABSTRACT

Geophysical survey involving electrical resistivity methods has been carried out at Vignan's Institute of Engineering for Women. The investigation is carried out at two points in the study area. The schlumberger configuration was used for the data acquisition. The half currents electrode (2) used range from 1 to 100m. The depth sounding interpretation results were used to generate geo-electric sections from which the aquifer was delineated. The geo-electric section drawn from the results of the interpretation reveal four subsurface layer which comprises of the topsoil, weathered rock, fractured rock, hard rock. The fractured layers constituted in all the locations, it refers aquifer zone is available entire study area. Hence, from this investigation it is recommended that boreholes can be sited in high conductivity zones in Vertical Electrical Sounding (VES) 1 & 2 as they contain probable aquifers. The depth of any borehole should be located between 7.4m and 21.7m to take advantage of the basement fractures.

Key words: Aquifer, Vertical Electrical soundings, resistivity, slope map and well location.

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Computational Modeling of Signal Transduction Pathways in Breast Cancerous Cell and Target Therapy

Prasanna Priya Golagani, Shaik Khasim Beebi, Tummala Sita Mahalakshmi

Abstract: In this paper we identify the mutated signal transduction pathways in a breast cancerous cell. A simulated model is developed for these pathways. To reduce cancer some drugs are suggested that are helpful in correcting the pathways. Some of the pathways like PKB (Protein Kinase B), MAPK (Mitogen Activated Protein Kinase), MTOR (Mammalian Target Of Rapamycin), Fas Ligand (Type-II Tran membrane Protein), Notch (Single Pass Transmembrane Receptor), SHH (Sonic Hedgehog), Tnf (Tumor Necrosis Factor), Wnt (Wingless/Integrated) Pathways are simulated. Converting these biological pathways into a computable model helps in analyzing it rapidly. For Computational modeling of signal transduction pathways, SBML (Systems Biology Markup Language) is used. Programming is done in SBML and executed in Cell Designer. In this paper simulated models of PKB, MAPK, MTOR, FasL, Notch, SHH, Tnf, Wnt pathways are developed and shown in the results. Target Therapy can be implemented to these pathways. Drugs like Wortmannin, Perifosine and Rapamycin are suggested. These drugs help in modifying the pathways in such a way that, their metabolism is converted into the metabolism of a normal breast cell. This helps in reducing breast cancer.

Index Terms: Cancer, Benign Cancer, Malignant Cancer, Breast Cancer, PKB, MTOR, MAPK, SBML, Cell Designer.

I. INTRODUCTION

Cancer causes severe metabolic changes in the cell [1].In cancer, the cells do not die when they have to die and new cells are born when they are not required. Cancer cell divides uncontrollably and produce numerous new cells. Cancer is of two types benign and malignant. Malignant tumors are cancerous and can invade to the surrounding tissues, benign tumors do not spread to other tissues they are local to their site and sometimes they can be quite large.

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Cancer Statistics: Cancer stands second worldwide to cause death. In 2015 8.8 million people died out of cancer [2]. In 2017 the estimated no. of new cancer cases are 16, 88,780.Nearly 6, 00,920 people are estimated to die with cancer in 2017[3].For every 8 minutes one woman dies with cervical cancer. In India an estimated number of 2.5million people are suffering from cancer. Every year an estimated number of 7 lakh cases are registered in India. Nearly 5, 56,400 people are dying with cancer every year in India [4].Based on the primary site of origin cancer can be divided into different types like 1) Breast Cancer2)Lung Cancer3) Prostrate Cancer4) Liver Cancer5)Renal Cell Carcinoma6)Oral Cancer and 7)Brain Cancer.

Breast Cancer: A malignant growth in the breast is known as Breast Cancer [5].Breast Cancer can be classified based on Histopathology, Stage (TNM), Grade, Receptor status and the presence or absence of genes in the DNA [6].

Breast Cancer Statistics: There is an estimation that in 2017, 2, 52,710 new cases of invasive Breast Cancer will be detected in females and 2,470 in males. Along with it 63,410 new cases of in situ breast carcinoma will be detected in females. Nearly 40,610 female and 460 male deaths from breast cancer are estimated in 2017.More than 3.5 million women were alive with a history of breast cancer on January 01 2017. [7]

1.1 Signal Transduction Pathways: In the Breast Cancerous cell, the cell signaling is affected. Apoptosis in inhibited and new cells are produced continuously this is due to the changes in some of the signal transduction pathways. In this paper we studied some of these signal transduction pathways like PKB, MAPK, MTOR, FasL, Notch, SHH, Tnf and Wnt.

1.2Computational Modeling of the Pathways Using SBML and Cell Designer: Converting the biological pathway into a computable model helps in analyzing it rapidly using simulation and other mathematical methods. We used SBML for computational modeling of signal transduction pathways. The programs written in SBML for each Pathway are executed in Cell Designer.

1.3 Drug therapy and Target therapy: In this paper we studied 3 pathways in depth that is PBK, MAPK and MTOR pathways we suggested 3 drugs that are for these pathways (Wortmannin, Perifosine and Rapamycin) and specified the exact targets in the pathway where these drugs can be used to make the pathway function as it is functioning in a normal breast cell and reduce cancer.

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AN ARTIFICIAL INTELLIGENCE APPROACH TO FAKE CURRENCY DETECTION SYSTEM

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Abstract— **Everywhere throughout the globe a completely 200+ nations are utilized monetary standards for their ads and money related necessities .The present science and innovative arrangement of cash paper note perceive different order intends to finding and sifting, extricates the delicate obvious with utilize multiple case mode comparative already exist eminent imprints recognizes region of interest on existing paper money note for required effective characterization strategies, required currency paper fake note recognition and transformation every module will comparative original source through AI analyzer module supervision examination. We propose another technique for an image segmentation access by embedding sequencing ordering on input-output mapping with feature extraction technique with image separating and preparing procedure to recognizing and match the distinguished information required to analyzed filter operations, required identified picture and the first reference picture, will compilation with text, dimensions, color, bookmarks, font sizes during the execution process, each money note taken a Region of Interest (ROI) on existing currency note condition.**

A separated cash picture ROI can be utilized to different example development and acknowledgment procedures and ANN hubs recognizing systems on every module, at once numerous cash notes are distinguished by coordinated with pre processing identified note image then a web or online AI tools will seek based following framework to recognize coordinating procedure is allowed for getting to for their specific timeframe. At first we secure required the cash note by multiple level image scanning on the settled DPI shading, Font size, and dimensions with a required quantity arrangement, the dpi pixels various stages are set to get ordinary picture utilizing picture preparing strategy. Barely any cutting edge picture channels are connected to proposed picture remarkable estimation of required cash take note of, this relegated esteem or images are contrasted and the doled out information sign images to coordinate unique note esteem, at that point a web or online based AI tools getting to technique controls by microcontroller to examine all prerequisite fields and fundamental activities based on Artificial Intelligence approach.

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User Behavior Prediction Using Enhanced Pattern Tree Data Structure and Web Usage Mining

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Abstract
As we all know that, in today's era World Wide Web places a measurable role by providing lots of information to the user which will be more useful. Thus, to know the process of discovering and analyzing usage patterns of user, the paper aims to predict the behavior of the user from the web logs. The weblogs is termed as web log mining or web usage mining, every click made by the user will be automatically entered into the weblogs of the corresponding web server. The proposed data structure, pattern tree can be used efficiently to store the usage patterns and their frequency of all the users using the path sharing. The Enhanced Pattern Tree (EPT) maintains the relationship between different patterns and the corresponding users as rules. Search for the specific pattern would yield the corresponding user and vice-versa in minimum no. of searches as rule sharing is used by the pattern tree data structure. This research work aims to develop a framework for analyzing user behaviour through user patterns obtained from the web server logs and supports the use of association rules for representing the relationship between user and patterns.

Keywords
Web Usage Mining, Enhanced Pattern Tree, Association Rule, Loge Files

Introduction

Today's epoch World Wide Web plays a major role by providing a huge amount of information in all aspects so by this the user is very much familiar with the web data and the importance of the data for their daily needs, so this paper aims to predict the behavior of the user by providing the information related to the user based on their daily usage [3]. Web mining is the use of data mining technique to automatically extract the information from the web data which consist of web documents, hyperlinks between documents and usage logs of websites, etc. There are three categories of web mining viz., Web usage mining, Web structure mining and Web content mining. These categories focus on knowledge discovery from the web. Web Usage Mining focuses on extracting useful information and patterns of the user for further use [2]. The web usage mining mainly deals with the web server logs, which consists of information like IP address, client/user id, date, time, method, status code and size of the object. These log files are created and generated by the server and hence also referred to as server logs and are handled by the server administrator [5]. By using these log files this paper aims to predict the user given the pattern and also pattern given the user. By processing these data, either using more complicated data mining techniques, or by using simple statistical methods, we can identify or predict the interesting area, and patterns concerning the activity in the Web site. This process includes 5 stages, namely Data Cleaning, User Identification, Session Identification, Enhanced Pattern Tree Construction [3], and Pattern Recognition [1]. Initially, in data cleaning, erroneous data will be removed from the log file. Then each user is identified according to his/her IP address as specified in the log file which is known as user identification. In session identification, the time spent by each user on a particular website will be identified [4]. The frequency of the users visiting a particular website will be represented in the form of a pattern tree in tree construction step. Finally, the usage pattern for every user is extracted. This process is performed by considering the frequency of users visiting each page [13]. The knowledge thus extracted may be utilized to restructure the website so that efficient utilization of time is done. This work supports the use of association rules [11][14] for representing the relationship between user and patterns.

Problem Statement

This research work aims to develop a framework for analyzing user behaviour through user patterns obtained from the web server logs. This work supports the use of association rules for representing the relationship between user and patterns. The pattern tree maintains the relationship between different patterns and the corresponding users as rules. Search for the specific pattern would yield the corresponding user and vice-versa in minimum no. of searches as rule sharing is used by the pattern tree data structure. The following section deals with the experimental results include 5

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POLL PREDICTION BASING ON SENTIMENT USING NAÏVE BAYES AND DICTIONARY BASED CLASSIFIERS

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ABSTRACT
Opinion is a view or judgment formed about something or someone. General Elections are the ultimate measure of public's opinion in any democratic nation. Being curious about people's judgment in an Election, many conduct different forms of surveys to forecast the opinion of public. The surveys used to be in person-to-person mostly conducted by the print and electronic media organizations. Previously the surveys are constrained to limited and available people around offices and local areas. None of the surveys are considered to be reliable as the source of information may or may not be legitimate. The rapid advancement of technology and transformation into digital nations enabled most of the people to have an access to the social networking sites almost anywhere and everywhere. People now tend to express their views on micro-blogging sites likes twitter, facebook etc. In this paper we collect such data representing the views of public to depict the inclination of people towards a particular political party. We use machine learning classifiers viz. Naïve Bayes approach and Dictionary based approach to extract and analyze the sentiment from collected data. We hence deduce through our findings that the above mentioned algorithms in combination work with more accuracy.

Keywords: Dictionary based approach, Machine learning classifiers, Naïve Bayes approach, Opinion of public, Sentiment.

1. INTRODUCTION
Sentiment analysis is the process of determining the emotions of people and categorizing opinions that are expressed in social media or micro-blogging sites on a certain topic. It has become an effective tool to gather the opinion of public. Stock market, Business Intelligence, Law/Decision making, Political science and many such applications in which there is a huge scope for sentiment analysis.

Election poling is one of the influential applications of survey research. Polling is the process of discernment of an individual or a political body. Polls help us to understand what is really important in election, opinion of people. Earlier, Election polls were conducted through some banal survey methods such as using telecommunication like television or news paper and by finding out the opinion of a person on a political party in person-to-person. But now the scenario has changed with an advent in technology and usage of internet as a source of voicing their opinion. Hence surveying methods became smart by collecting the user data directly available on the micro-blogging sites and performing the required operations on the data to conclude the public's inclination.

In this paper, we selected three main political parties in regard of 2019 General Elections. Then we manually collected the official pages of these political parties form twitter, facebook and youtube. Regular expressions are used to clean the collected data. After a lot of research we came to a conclusion that Naïve Bayes algorithm and Dictionary Based classification algorithms work efficiently to classify textual data.

The rest of the paper will be organized as follows. Section-II deals with a few notable works on sentiment analysis. In Section-III our design is introduced along with the proposed method. Section-IV deals with the experimental process. Results are provided in Section-V. Finally we draw conclusions in section-VI.

2. RELATED WORK
There is a lot of research done in the field of research using Sentiment Analysis. Many researchers used Sentiment Analysis to extract the opinion of public in the form of reviews on various services, products etc. from micro-blogging sites like Twitter and Facebook.

In this paper [1], the author designed a system that helps the non-Japanese learners to learn Japanese in a very easy and efficient way. In the previous approaches the system was able to deliver the translation of a sentence into English along with an example sentence. In some cases the system was unable to provide an example sentence. The drawback with this system was that the given examples are context free although a word may have several meanings. To overcome this and provide a more reliable system for non-Japanese, the authors designed a Word Sense Disambiguation classifier that could translate the sentence into English along with bilingual usage i.e. it gives examples both in Japanese and English. If the sentence has more than one meaning

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Authors:

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QUEUING MODEL BASED DATA CENTERS: A REVIEW

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Abstract— **Cloud computing was the technology developed to store the info and support the users with the access to the info hold on by charging a token quantity for the storage of information and for providing necessary steps for storing the info and for providing security to the info that was held on. Typically, analytical models established for assessing the operating and therefore the performance of cloud server farms may be studied beneath kind of configurations and assumptions are supported the queuing theory, and its accuracy is verified with numerical calculations and simulations. The issues at hand create to the task of evaluating the performance of information centre with varied queuing models to grasp the distribution of the performance parameters with arrival and repair rates, traffic intensity, the range of servers and therefore the associated possibilities. The goals of this article are to supply a framework through programs associated with queuing models and value the performance parameters, try validation, sensitivity analysis and build comparisons for information centres. The steady state performance parameter formulations known are programmed in MATLAB®. The models considered for evaluation for single servers include M/M/c/c and M/M/c/k. Service rates have a fuller range of distributions including exponential, generalize and Erlang type.**

Keywords— **Cloud computing, queuing models, exponential distribution**

1. INTRODUCTION

The cloud is wherever one will use technology once required, as long together wants it. The clouds are often each code and infrastructure service. Regarding maturity, the code is far additional evolved than hardware within the cloud. The clouds are often associate degree application one will access through the net or a server [1]. With cloud computing, the first advantage for users was that the programs that may be associated with code programs associated with many applications hold on within the machine could not be dead within the native computers or laptops [2]. All the programs associated with the applications that were being connected to the cloud mechanism were being accessed by the web to figure. The web association was shall within the field of cloud processing and its connected application areas. The first advantage for the purchasers and therefore the users was the crash report. Whenever a crash happens within the system or the system connected to the cloud, the information is often still accessible because the actual data held on within the servers of the cloud, not within the actual systems that were being connected to the cloud setting. The information won't be disturbed or any harm to the

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Comparison of Routing Convention in MANET: A Survey

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Abstract

MANET is a truncation for a special versatile appointed system. It is additionally alluded to as a remote impromptu system and it is a continuous self-designing, framework-free system of phones that are associated with no utilizing wires. In MANET engineering, gadgets can proceed separately in the direction of any path and in this way, change their connections to various gadgets now and then. Since MANETs are transportable, they use remote associations with interface with various systems. In this article, a diagram of MANET alongside its use in remote frameworks will be discussed. A short thought in regards to the kinds of MANET designs and their points of interest and inconveniences in remote correspondence systems is depicted in this paper.

Keywords: *Characteristics of MANET, Architecture, Routing conventions, Challenges and applications of MANET*

1. Introduction

The recent years have seen a fast heightening in the sphere of portable figuring due to the multiplication of reasonable and generally accessible remote gadgets. In this manner, it has opened an immense open door for scientists to take a shot at Ad Hoc Networks. In a MANET, the hubs inside each other's remote transmission range can convey straightforwardly; in any case, hubs outside each other's range need to depend on some different hubs to handoff messages.

In this manner, a multi-bounce situation happens, where the bundles sent by the source host need to be transferred to influence them to achieve the goal hub. MANET is something that meets its expectations, without any assistance from the current foundation or any sort of settled stations.

This announcement can be formally defined by characterizing a specially appointed system as a self-governing arrangement of versatile hosts (MHs), (additionally filling in as switches) which can be associated with the help of remote connections, whose association frames a correspondence that is organized to be displayed as a subjective correspondence chart.

This is as opposed to the outstanding single bounce cell arrangement that demonstrates the backings of the requirements of remote correspondence with the introduction of Base Stations (BSs) as passages. In these cell systems, correspondences between two portable hubs depend

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A Survey on Comparison of Various Protocols and Key Management Issues in Manet

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Abstract

Remote Network incorporates a bigger favorable position in the present correspondence application like ecological, movement, military and wellbeing perception. To understand these applications it's important to have a solid directing convention. The self-sorting out nature of MANETs makes them appropriate for some applications and henceforth, extensive exertion has been put into anchoring this kind of systems. Secure correspondence in a system is dictated by the unwavering quality of the key administration conspire, which is in charge of creating, circulating and looking after encryption/decoding keys among the hubs. In this paper different key administration plans for MANETs are talked about. This examination work proposes a novel secure Identity-Based Key Management convention making utilization of cryptographic and Information Theoretic Security.

Keywords: *MANET, steering conventions, key administration, symmetric key, hilter kilter key, amass key administration.*

1. Introduction

The ongoing advancement of specially appointed remote advances has permitted versatile impromptu systems (MANETs) to build unconstrained associations among cell phones with none foundation. Besides, with the development of sensor-empowered keen cell phones, MANETs turned into a fundamental part inside the foundation of shrewd city and web of Things (IoT) circumstances because of people with savvy gadgets will openly and powerfully kind a self-arranging MANET to send, get and share information in an exceedingly confined zone.

In an exceedingly such a keen situation, MANETs, WSNs and WMNs speak to key innovations giving numerous IoT applications and administrations to clients. Besides MANETs have discovered a scope of uses in human services, front line correspondences, debacle recuperation, emergency administration administrations instruction associations, impromptu agreeable registering, social exercises and gathering lobbies [1].

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A BEST DOWN OVERVIEW ON REMOTE SENSOR SYSTEMS AND ITS APPLICATIONS

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Abstract— **In the recent years, Remote Sensor Structures (WSNs) have broadened making thought from both the examination gathering and veritable customers. This paper explains the probability of sensor structures which has progressed and made helpful by the joining of little scale electro-mechanical systems advancement, remote exchanges and mechanized contraptions. In any case, the seeing tries and the potential sensor frameworks applications are reviewed, and a blueprint of areas influencing the system of sensor structures is given. Advancement in the progress of sensor, for instance, Miniaturized scale Electro Mechanical Frameworks (MEMS), remote exchanges, introduced structures, passed on orchestrating and remote sensor applications have contributed an expansive change in Remote Sensor System (WSN) starting late. It accessorizes and updates work execution both in the field of industry and our dependably life. Remote Sensor System has been everything seen as used as a touch of various locales, especially for affirmation and checking in agribusiness and living space seeing. Condition watching has changed into a basic field of control and accreditation, giving reliable structure and control correspondence with the physical world. The purpose for this paper is to discuss clearly the most related problems of WSNs, from the application, chart and change points of view. For drawing out a WSN, really we need to depict the most fitting advancement to be used and the correspondence traditions to be executed (topology, hail managing techniques, and so on.). These decisions rely on various portions, over all the application necessities.**

Keywords— **WSN, Protocols, MEMS, Layers**

1. INTRODUCTION

Advances in remote correspondence and microelectronic devices, provoked the change of low-control sensors and the game plan of tremendous scale sensor frameworks. These applications yield tremendous volume of dynamic, topographically scattered and heterogeneous data[19][20]. This rough data, if viably separated and changed to usable information through data mining, can support robotized or human-started vital/key decision. In this way, it is fundamental to make strategies to burrow the sensor data for plans in order to settle on clever decisions quickly. In any case, the seeing tries and the potential sensor frameworks applications are reviewed, and a blueprint of areas

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SECURITY ISSUES AND VARIOUS ATTACKS IN WIRELESS SENSOR NETWORK: A SURVEY

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Abstract— **Wireless sensor networks is a rising field towards innovation, because of its numerous utilizations that has lead to the improvement of modest, expendable and independent battery fueled PCs, known as sensor hubs or "bits". The testing of some portion of a remote sensor system makes the security have extreme limitations than customary systems. In this paper we explore security issues that are present in the WSN alongside a few Attacks in WSN[4]. We recognize these security dangers and would like to propose this survey on security systems for remote sensor systems. Likewise, we will also look into the different security issues present in every layer.**

Keywords— **Network Attacks, Security, Sensor and WSN.**

1. INTRODUCTION

In correspondence to innovation of networks, at least two gadgets should be associated through an interface to transfer the data[1].

1.1. COMPUTER NETWORK

An arrangement of PC's, additionally alluded to as a set of computers with organized information, is a progression of interconnected hubs that can transmit, get and trade information.

1.2. TYPES OF NETWORK

a) **Wired Networks:** If all the communication devices are connected with the help of wires, then it is called as Wired networks.

b) **Wireless Networks**: If the communication devices were connected without wires, then it is called as Wireless networks.

2. WHY USE WIRELESS NETWORKS?

In remote systems, we can effectively traverse from one spot then onto the next spot such that it does not require any wires. It can deal with an enormous number of gadgets to build up a system. We can include additional gadgets all around the existing system effectively. Overall this consumes less time with low costs[9][11][12].

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Generalized Detection of Colloid Cyst in Brain using MRI Scan/CT Scan

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Abstract: Brain is one of the most important organs in the human body. The working of this organ decides the human being work and his life to success. In order to lead the good life, one should have the brain and its related parts under good condition, i.e., not affected with any diseases or any serious problems. The presence of cyst in the brain is one of the important issues to be considered and identification of such cyst in good time is very important for the health of a human being. If the cyst is not identified in appropriate times, the brain will be suffered with serious issues and it may lead to the loss of the human being. Hence, in this article a new approach is taken to consideration for identification of the cyst in the brain through MRI/CT scan images. In the current work, a new approach of matrix method with the combination of monochrome images was considered for identification of the cyst presence with MRI/CT scan images. A new algorithm was also proposed to find the presence of cyst in the brain with more accurate performance. The performance of the current model was verified with two sets of scan images and the results are displayed in the result section.

Index Terms: Neuroepithelial Cyst, Magnetic Resonance Images (MRI), Computed Tomography (CT), Fixed Threshold Method.

I. INTRODUCTION

Brain is the foremost organ of the central nervous system that coordinates and controls the activities of other organs in our body. Cysts in the brain are the group of cells, clustered collectively to form a sac that contains fluid or semi-solid material, such as cerebrospinal fluid, blood, tissue or tumor cells [1]. Cysts are generally benign, but are destructive when it is found in parts of the brain where it restricts the crucial performance of the brain. Various types of Cysts found in the brain are, the Arachnoid Cyst, the Colloid Cyst, the Dermoid Cyst, the Epidermoid Cyst, the Pineal Cyst and the Tumor-associated Cyst [2]. Symptoms of cyst diverge depending upon its location, size and type. In this paper we focus on the automatic detection of Colloid Cyst in Brain from MRI or CT scanned images. Colloid cysts are known to be formed during the embryonic formation of the Central Nervous System. It contains a thick, gelatinous substance called colloid which came from the Greek word *Kollodes* (Kolla meaning glue and eidos meaning appearance). Apart from the colloid filling, the cyst may contain blood, minerals or cholesterol crystals [3].

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Colloid Cysts are found in the center of the brain that holds spinal fluid, or, in the lining of the third ventricle. Cysts in this location block the foramina of Monro causing obstructive hydrocephalus that increases pressure in the brain. Familiar symptoms are severe headache, nausea, vomiting, seizures, vertigo, memory loss, insomnia, gait disorder, drop attack, and many more. The mortality rate due to Colloid cyst has been between 58% and 77% [4,5]. Its size may vary from 3 to 40 mm. Since, even small Colloid cyst can cause sudden death, it is vital to identify or detect the cyst at an early stage.

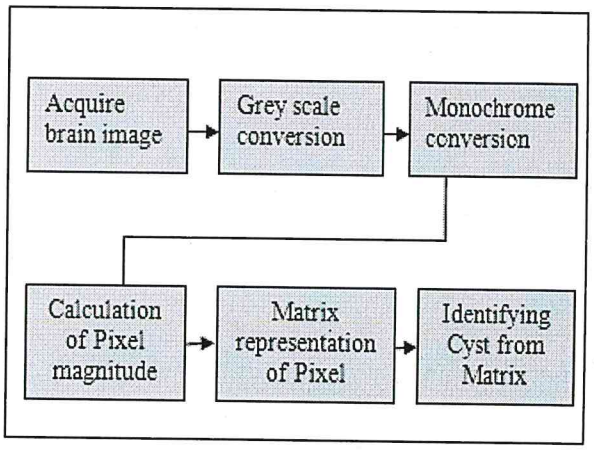

Fig. 1 Basic Steps Involved in Image Processing

Medical Image Processing has become an essential feature in the fields of Bio-Medical research. Imaging Technology like Magnetic Resonance Imaging, CT scanner, digital mammography provides a detailed or third dimension view of the body. The digital images acquired from these imaging technologies can be improved and analyzed through java programming and Image Processing Technique for easier diagnosis. Image Processing Techniques reduces the complicated manual tasks of the radiologists to identify any abnormalities in the brain, it saves time and is cost valuable. It involves preprocessing of the digital images by passing them through different types of filters to reduce noise and improve the quality of the image. It also includes emphasizing on the region of interest and automating the process of segmentation of Cysts to extract complex information. Morphological operations can be used to remove imperfections from these images depending on the relative ordering of the pixels. We have proposed here an algorithm that uses many advanced image processing techniques to automatically detect the Colloid cyst of all sizes from the digital images.

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Priority towards Subjectiveand Experimental Framework inTeaching-Learning Process inEngineering Education forMillennial Learners

E. Laxmi Lydia, B. Arundhati, MadhusudhanraoVallabhaneni

ABSRACT: From the time of 20thcentury, the world has undergonecomplete change in the field of Engineering Education. Learning environment in Educational systemofMillennial's, for very short concentratedpeople who prefer interactive, experiential and collaborative learning,usually they are informal and choose to have friendly relationships with teachers. Educational system in engineering classes for such Learners with dynamic and technology driven people do not prefer long lectures anymore. The design objective is to understand the cognitive and social developments in easier way that outcome in faster learning, and also to redesign classrooms and other learning environments. So that Learners can learn more passionatelywith completeness in the topic/ subject and to make them self Learners.This paper provides a meaningful teaching objective that relates with real-life experiences, Lectures mixed up with methods like video clips, concept charts, and PowerPoint presentations with key concepts based on the summary, also creating collaborative subjective experiences with social networking platforms.Finally, this paper concludes bydiscussing the experiments being applied in our institution (VIIT) to make engineering education practicalby means of experimental learning.

Keywords: Engineering education, Teaching-Learning Process, classroom environment, Cognitive development.

I. INTRODUCTION

Generally, Education is a single word but brings responsible life with good knowledge, enhancing skills, following rules and transforming them. engineering education to engineersistoprovide them reach their expected educational goals. Engineering minds are full of imaginations, they try to learn interactively by getting feedback which leads to valid outcomes Educating Engineering students is not making them learn only existing facts but to train their minds. Young minds are like swords, when they set their minds on anything they try to achieve. Engineers with young and energetic minds play a crucial role play in the accomplishment of a nation. Therefore, Effective As every individual has not the same capacity of extracting knowledge from teachers, teachers must be aware of simple and attractive attention of children from a low level to high level. One of the procedures for educating students is Teaching- Learning process.

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It is anefficientsystematicorderto obtain predetermined targets and objectives. Millennial Learners are graduates who also try to analyze problems, using knowledge to develop a system. These learners like to communicate with their faculty directly and they wish to have more guidance from the faculty. They want continuous feedback and are lifelong learners. They are committed to their private self-learning and enhancement.

Millennial Learners:

Millennial learners are enforced to prosper with enhancing skills which are significantly essential in the present professional world. Teamwork establishes spark inside the millennial learners. This leads to the gain of knowledge and best communication skills to the millennial learners. Interacting with each other and instant feedback will be provided.

1. Having this group work, millennial learners enjoy learning and thus as a result, their outcome performance shows an admirable improvement.
2. More members of the group work, hands-on exercises that connect with technology providesa friendly learning environment. Modern technology has adopted "flipped classrooms" for millennial learners.
3. Learners are requested to understand the topic before giving the lecture on the next day. By this, the fundamentalbasis related to the concept could be understood by the students.
4. Based on the improvement of thelearning process, time consumption will be reduced for the students to listen long hours and also given chance to clear their doubts and tries to learn in a practical manner. Then the students will have a broad mind to discuss the real-time applications and moves towards the bottom of the subject.

II. LITERATURE REVIEW

(Wilson and Gerber, 2008)[2]: explained that millennial Learners are a type of learners who are very much interested to communicate directly with the faculty and expect to have their guidance and encouragement. They try to have faculty focus on them and to gain special personal concentration. They find themselves in a different world with great Tolerance level. A Classroom is mixed with a combination of all various cultured people. The classroom environment for the millennial learners is quite activating by joining them and getting them with most combinations of knowledge because they are very weak in self-management.

(Elliot -year and Sherri, 2012)[3]: explained about the millennial learners that they are affectionate to their parents more than to the popular personalities in 33% of the situations.

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Real Time TEC Prediction during Storm Periods using AR Based Kalman Filter

B. Arundhati, V. GopiTilak, S. KoteswaraRao

Abstract: Ionosphere total electronic content (TEC) observations available from global navigation Satellite systems are random in nature and these can be described by a stochastic process. During geomagnetic storms, TEC values are further disturbed and the disturbance is also another stochastic process. In this paper, it is tried out to model the process using Kalman filter with autoregressive statistics. Realistic TEC data during quiet days and disturbed days with respect to the geomagnetic storm are modeled in terms of autoregressive coefficients and the original data is reconstructed to find out the accuracy of the process. In this paper, the model is applied for different storm periods (Geomagnetically Quiet to Greatly disturbed) in the span of 23rd and 24th solar cycles i.e., from 1996 to 2018 for a low latitude station Lucknow data and the observations are presented and analyzed graphically. The error values showed that the Kalman filter gives better prediction values.

Index Terms: Kalman Filter, Ionosphere, Total Electron Content.

I. INTRODUCTION

The ionosphere is one of the factors affecting the GPS position accuracy. The ionosphere is the most dispersive layer of earth's atmosphere due to the presence of highly concentrated electron content whose cause and variations depend on solar radiations [1,2]. This variation is noted using the total electron content (TEC) values derived from satellite signals. The perturbation of TEC dependent on latitude, longitude, altitude, local time, season, solar cycle and magnetic activity along with the characteristics of the ionosphere such as electron density, ion and electron temperature, and ionospheric composition. These perturbations affect all areas of applications offered by satellite systems [3]. Among all these cases, a magnetic storm causes high perturbations compared to the other sources of disturbances [4,5].

From the literature, based on ionosphere characteristics and signal model, first ever ionosphere models were proposed in [1,2] for the global purpose. But some corrections made in both the models on the basis of the region and latitudes proposed in [6,7]. Ionosphere peak layer critical frequency foF2 has its preference in modelling ionosphere in [8,9]. Statistical models like empirical orthogonal function analysis are applied to analyse ionosphere variability due to geomagnetic in [10-12]. Spherical harmonic function and adjusted spherical harmonic functions for a regional and global models based on shell structure of ionosphere in [13,14]. Wavelet analysis and neural networks are also introduced to model ionosphere in [15,16]. As TEC is a linear time series data, models based on auto regression moving average (ARMA), auto regression integrated moving average (ARIMA) incorporated with Wavelet analysis are proposed for ionosphere modelling in [17,18,22].

The dependency and sensitivity of Kalman filter on the state noise covariance and measurement noise covariance are well discussed in [20]. The failure of these models noted as the uncertainty in predictions during storm periods. A study on data point of view suggest that the prediction needs the updating the covariance. The dependency and sensitivity of Kalman filter on the state noise covariance and measurement noise covariance are well discussed in [20]. In present work, an auto regression based Kalman filter is utilized to predict the real-time TEC.

II. MATHEMATICAL MODEL

From a statistical point of view, many signals such as speech, TEC etc., exhibit a large amount of correlation. This correlation can be represented by an auto regressive (AR) process that is the output of an all-pole linear system driven by white noise sequence. The 5 state AR signal model can be represented as

$$y(k) = a_1 y(k-1) + a_2 y(k-2) + \ldots + a_p y(k-p) + w(k) \quad (1)$$

Where p is the order of the AR model and Y(k) is present measurement depending on the previous five measurements with respective coefficients from a_1 to a_p. The state space model is given by

$$Y_p(k) = X(k) Y_p(k-1) + W(k) \quad (2)$$

Where $W(k)$ is zero mean unit covariance white noise, X is the state transition matrix with first row as coefficients and the remaining as an unit matrix. Since, the observations are available online, so the initialization as follows, For $K=P+1$ to k.

$$M(k) = Y_p(k-1, k-2, \ldots k-p+1) \quad (3)$$

M(k) is measurement model matrix of length equal to length of coefficients.

Gain:

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A novel hidden Markov model–based adaptive dynamic time warping (HMDTW) gait analysis for identifying physically challenged persons

Article *in* Soft Computing · September 2019

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Use of Nakagami-*m* Fading Channel in SSK Modulation and Its Performance Analysis

Hemanta Kumar Sahu[1] · P. R. Sahu[1]

Abstract
In recent years, multiple-input-multiple-output communication has a great demand due to its flexibility and well technical implementation. Though it has been approached by many researchers, in this paper, authors taken an approach with Nakagami-*m* fading channel as it is a generalized fading channel for the performance of space shift keying (SSK) modulation. Simple closed form expression for the probability of bit error of SSK modulation is presented using probability density function based method for independent and identically distributed (IID) Nakagami-*m* fading channel. An upper bound expression for IID and correlated Nakagami-*m* fading channel is also presented. Obtained probability of error are in the form of Gauss hypergeometric function, confluent hypergeometric function and Gamma function which can be numerically evaluated and verified by Monte Carlo simulation.

Keywords Performance analysis · SSK modulation · Nakagami-*m* fading · Correlated fading · Independent and identically distributed fading

1 Introduction

Wireless communication is generally influenced by multipath fading which results the system performance degradation. The channel capacity and reliability of wireless transmission can be significantly improved by using multiple input multiple output (MIMO) system. Space Modulation is a special type of wireless transmission concept offering less-complex and high data rate implementation of MIMO wireless system [1]. The space modulation or space shift keying modulation can avoid some problems associated with MIMO system like inter channel interference (ICI), inter antenna synchronization (IAS) and the number of radio frequency chains [2]. SSK modulation is less complex and easy to demodulate as the transmission transmits the antenna index without any message signal. In this case at each time instant, only a single transmit antenna is activated among a set of transmitting antennas and the activated antenna index is used to convey information [3, 4]. In wireless transmission, fading is the digression of the attenuation affecting a signal over certain

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RESEARCH ARTICLE

WILEY

Quadrature space shift keying performance with dual-hop AF relay over mixed fading

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Summary

Quadrature space shift keying (QSSK) modulation combined with cooperative relaying improves the reliability in communication and enhances the overall spectral efficiency. Here, QSSK scheme is analyzed for multiple-input multiple-output (MIMO) wireless communication system with dual-hop amplify-and-forward (AF) relaying systems over asymmetric mixed Rayleigh/Rician and symmetric Nakagami-m/Nakagami-m fading channels. Analytical expressions for cumulative distribution function (CDF) of the end-to-end signal-to-noise ratio are derived and used to evaluate the average bit error probability (ABEP) of QSSK modulation in mixed asymmetric and symmetric fading channels. The obtained ABEP expression is in the form of Whittaker function, which can be numerically evaluated using its numerical or series representation. Numerical and simulation results are presented to illustrate the impact of fading parameters on the system performance.

KEYWORDS

mixed fading, Nakagami-m fading, performance analysis, QSSK, Rician fading, Rayleigh fading

1 | INTRODUCTION

Wireless communication is often affected by multipath fading causing system performance degradation. A multiple-input multiple-output (MIMO)–supported system offers better channel capacity and reliability. Space modulation, also named space shift keying (SSK) modulation, offers low-complexity implementation and high data rate of MIMO wireless systems.[1] The SSK modulation can avoid the problems associated with MIMO systems, like interchannel interference (ICI), the need for interantenna synchronization (IAS), and the number of radio frequency chains.[2] SSK is less complex and easy to demodulate as the antenna indices are only transmitted instead of information signals as in conventional communication.[2] It has been shown that quadrature SSK (QSSK) increases the spectral efficiency over conventional SSK system while retaining all inherent advantages.[3] In QSSK, to incorporate another spatial dimension, the conventional spatial constellation symbols of SSK are expanded. The first dimension transmits the real part of a signal constellation symbol and the other one transmits the imaginary part. Hence, an additional base-2 logarithm of the number of transmit antenna bit can be transmitted in QSSK as compared with conventional SSK.

Cooperative communication has received considerable attention to reduce the effect of multipath fading.[4] Dual-hop relaying communication has various benefits over direct-link transmission as far as connectivity, power saving, and channel capacity.[5] However, the use of QSSK in cooperative diversity has not been addressed in the literature. Dual-hop amplify-and-forward (AF) relaying using SSK was first introduced in Mesleh et al,[6] where a single AF relay is used for transmission between the source and the destination over Rayleigh fading channel with an optimum

SSK-Based SWIPT With AF Relay

Hemanta Kumar Sahu and P. R. Sahu, *Member, IEEE*

***Abstract*—The performance of space shift keying (SSK) modulation using energy harvesting amplify and forward (AF) relaying is analyzed over the Rayleigh fading channel. Simultaneous wireless information and power transfer technique eliminates the need of power supply at the relay in cooperative communication. However, energy tapped from an information signal for harvesting would degrade receiver performance. At the same time, the distance between the relay and the receiver can be increased due to the power splitting-based relay with the SSK modulation. New closed-form expressions for average bit error probability (ABEP) is derived with a single AF relay and an upper bound expression for multiple relays with a direct link. Furthermore, the ABEP is analyzed for a partial relay selection operation. The numerical and computer simulation results are presented with the discussion.**

***Index Terms*—SWIPT, SSK, ABEP, Rayleigh fading.**

I. Introduction

ENERGY harvesting can recharge wireless communication networks battery from an external energy source like wind, solar and radio frequency (RF) signals. Simultaneous wireless information and power transfer (SWIPT) technology conveys information and harvest energy in networks simultaneously [1]–[4]. Hence, SWIPT, if implemented at the energy constrained nodes having limited approach ability (e.g., chemical environment, military conditions, etc.) can serve the energy need of the relays. Space shift keying (SSK) modulation offers high data rate with low transmission complexity [6]. Therefore, SSK combined with SWIPT can enhance data rate and reliability of energy constraint networks.

SWIPT architecture with a linear model was initially proposed for multiple input multiple output (MIMO) communication [1] and subsequently for co-operative communication applications with amplify-and-forward (AF) [2], decode and forward (DF) [3], and two way relaying [4], networks. On the other hand a practical non-linear energy harvesting SWIPT model was proposed in [5]. For SSK modulation with AF relay and DF relay the bit error rate (BER) performance is analyzed over fading channels in [7]–[9]. In [10], spatial modulation accompanied by SWIPT is proposed with full duplex two way AF relaying network and SSK modulation with wireless power communication network is investigated in [11]. However, intuitively looking at the advantages of SSK modulation and SWIPT, a combination of these two can be used to benefit the cooperative communication networks which needs to be explored.

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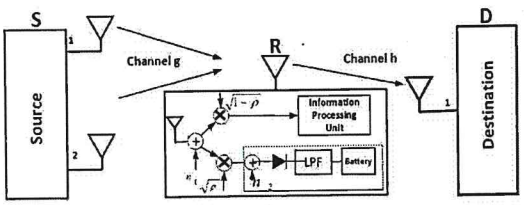

Fig. 1. SSK system model with energy harvesting AF relay.

In this letter, we investigate power splitting based SWIPT accompanied by SSK modulation in a cooperative communication system with AF relays. The average bit error probability (ABEP) performance of the receiver is investigated for single AF relay, multiple AF relays and partial selection of single AF relay from multiple AF relays over Rayleigh fading channels. The contributions in this letter are as follows: i) A closed-form ABEP expression is derived with energy harvesting AF relay with 2×1 multiple input single output antenna arrangement for SSK modulation. ii) An accurate and simple asymptotic expression is obtained for high signal power. iii) An expression for multiple relays with direct link between source to destination is derived. iv) To reduce the hardware complexity partial relay selection over multiple relays is proposed and ABEP has been derived.

II. System and Channel Model

Consider a two-hop communication system with source **S**, destination **D**, and an energy harvesting AF relay **R** as shown in Fig. 1. According to the principle of SSK modulation, during one symbol duration out of all the transmitting antennas only one antenna can transmit energy E_S [6]. Hence, an expression for the complex baseband signal received at the relay input can be given as [7]

$$x(t) = \sqrt{E_S} g_l + n_1(t), \tag{1}$$

where $|g_l|$, with $l = 1, 2$ is a Rayleigh distributed fading coefficient between the transmitting antenna l and **R**, E_S is energy transmitted from **S** and $n_1(t)$ is the Gaussian noise with $\mathcal{N}(0, N_0)$. **R** divides the received signal power, with a power splitting ratio of $\rho : 1-\rho$, that utilizes ρ portion of the received power for energy harvesting and the rest $1-\rho$ for processing the information. Thus, using a linear model the energy harvested at the AF relay node in the first time slot can be written as [1]

$$E_R = \eta E_S |g_l|^2 \rho, \tag{2}$$

where $0 < \eta < 1$ is the energy conversion efficiency that depends on the energy harvesting circuit rectification process.

Mobile Networks and Applications
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ABEP Performance of AF System Employing QSSK over IoT Network

Hemanta Kumar Sahu[1] · P. R. Sahu[1]

Abstract
Quadrature space shift keying (QSSK) modulation in cooperative communication, combined with cooperative relaying, improves the reliability in communication and enhances the overall spectral efficiency. Here, QSSK scheme is analyzed for complete uplink and downlink transmission system between a base station and a connected device for Internet-of-Things (IoT) application with dual-hop amplify-and-forward (AF) relaying systems using a single relay, multiple relays and relay selection techniques. Analytical expressions for cumulative distribution function (CDF) of the end-to-end signal-to-noise ratio are derived and used to evaluate the average bit error probability (ABEP) of QSSK modulation in mixed Rayleigh-Rician fading channel. The obtained ABEP expressions are in the form of Whittaker function which can be numerically evaluated using its numerical or series representation. Numerical and simulation results are presented to illustrate the impact of fading parameters on the system performance.

Keywords SSK modulation · Mixed fading · MIMO communication · Rayleigh fading · Rician fading

1 Introduction

Wireless communication is often affected by multipath fading causing system performance degradation. In emerging Internet-of-Things (IoT) applications, the so-called connected objects are expected to require modest data rates and low power consumption compared to other devices. Space shift keying (SSK) modulation offers high data rate with low-complexity implementation for MIMO wireless communication systems [1]. The advantages of implementing SSK modulation in IoT networks is that it can avoid some disadvantages associated with MIMO communication systems, like the need of inter-antenna synchronization, inter-channel interference, and the number of radio frequency chains [2–4]. As SSK modulation transmits only antenna indices instead of information signals, it is easy to demodulate and less complex compared to the conventional communications [2]. Therefore, SSK modulation is preferred in compared with MIMO communication for both downlink (from the base station to connected devices) and uplink (from device to base station) transmission and leading to a low complexity IoT device [5]. It has been shown that quadrature space shift keying (QSSK) increases the spectral efficiency over conventional SSK system while retaining all inherent advantages [6, 7]. In QSSK, to incorporate another spatial dimension the conventional spatial constellation symbols of SSK are expanded. This can be done by transmitting the sine and cosine part of the carrier from the same antenna or different antennas. Hence, the spectral efficiency of QSSK is $2\log_2(N_t)$, where N_t is the number of transmitting antennas. The first dimension transmits the real part of a signal constellation symbol, and the other one transmits the imaginary part. Hence, an additional base-2 logarithm of the number of transmit antenna bit can be transmitted in QSSK as compared to conventional SSK.

Cooperative communication has received considerable attention to reducing the effect of multipath fading [8]. Dual-hop relaying over IOT network between up-link and downlink has many advantages over direct transmission as far as connectivity, saving in power, and channel capacity [9]. However, the use of QSSK in cooperative diversity has not been addressed in the literature. SSK modulation was first introduced with amplify-and-forward (AF) relay with dual hop mode in [10], where a single relay is used for transmission between the source to the destination. Again, Mesleh et al. in [10] proposed a system for asymptotic bit error probabilities by introducing an upper bound condition with an optimum maximum-likelihood detector. To achieve

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Role of Aromatic Moiety in the Probe Property toward Picric Acid: Synthesis, Crystal Structure, Spectroscopy, Microscopy, and Computational Modeling of a Knoevenagel Condensation Product of D-Glucose

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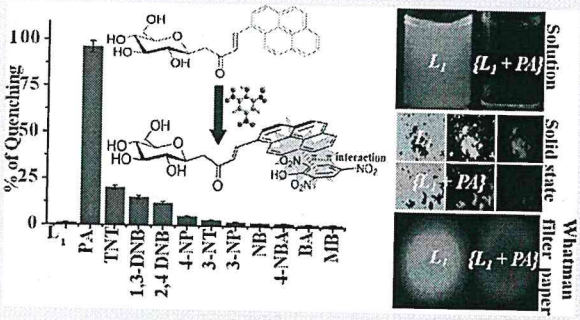
Supporting Information

ABSTRACT: Molecular probes for picric acid (PA) in both solution and solid states are important owing to their wide usage in industry. This paper deals with the design and development of a glucosyl conjugate of pyrene (L_1) along with control molecular systems, possessing anthracenyl (L_2), naphtyl (L_3), and phenyl (L_4) moieties, via Knoevenagel condensation of 2,4-pentanedione with D-glucose. The selectivity of L_1 toward PA has been demonstrated on the basis of fluorescence and absorption spectroscopy, and the species of recognition by electrospray ionization mass spectrometry. The role of the aromatic group in the selective receptor property has been addressed among L_1, L_2, L_3, and L_4. The structural features of the {L_1 + PA} complex were established by density functional theory computations. L_1 was demonstrated to detect PA in solid state selectively over other nitroaromatic compounds (NACs). To study the utility of L_1 in film, cellulose paper strips coated with L_1 were used and demonstrated the selective detection of PA. The observed microstructural features of L_1 and its complex {L_1 + PA} differ distinctly in both atomic force microscopy and scanning electron microscopy, all in the support of the complex formation. Thus, L_1 was demonstrated as a sensitive, selective, and inexpensive probe for PA over several NACs by visual, spectral, and microscopy methods.



INTRODUCTION

Excessive use of nitroaromatic compounds (NACs) in industries causes serious environmental concern, and hence is a sensitive global issue.[1−4] This imposes the necessity of rapid detection of hazardous compounds, while their explosive character brings in the security issue.[5−7] Among NACs, picric acid (PA) is a powerful explosive and a strong organic acid,[8] as well as a main ingredient that is being used in the industrial preparation of explosives, pharmaceuticals, and dyes.[9] Its contact causes skin and eye irritation and will also lead to chronic diseases and cyanosis.[10−12] Due to these concerns, researchers were involved in the design and development of small molecular probes suitable for the detection of PA in both solution and solid states.[13−16] Among these, low-molecular-weight fluorescent probes attracted the attention of scientists in the last decade owing to their higher sensitivity, selectivity, and real-time detectability.[17−21] In this regard, the literature deals with the use of small to supramolecules,[22−24] metal-organic frameworks,[25−28] and nanoparticles[29−32] as probes for the detection of PA. The topic of luminescence-based sensing of explosives has been reviewed recently.[33] Several of the literature-known molecular probes for PA suffer from disadvantages such as interference from other NACs, poor aqueous solubility, and a high detection range.[34−37] All of these aspects limit the practical utility of such probes for the detection of PA contamination in natural sources, including water and industrial effluents. All of this demands the development of a low-molecular-weight-based probe for PA with high water solubility and low detection range, which is still a challenging task.

Therefore, we have designed a molecule based on carbohydrate for its water solubility and tunable fluorescent aromatic moiety for imparting sensitivity and a linker to connect these two via a Knoevenagel condensation of 2,4-pentanedione with D-glucose.[38−41] To our knowledge, such glycoconjugate has never been reported in the literature as probe for PA. The present molecular system is an aromatic glycoconjugate that is being demonstrated for picric acid sensing effectively in solution, in the solid state, and on cellulose paper. All of this leads to the design of a glucosyl

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Metamaterial Based Dual Wideband Wearable Antenna for Wireless Applications

Sourav Roy[1] · **Ujjal Chakraborty**[1]

Abstract
A compact dual wideband metamaterial antenna designed for wearable application is presented in this communication. A metamaterial resonator structure that works as a radiator resonates in dual-band frequencies. The antenna is operated in the frequency spectra of IEEE 802.11 a and b/g/n WLAN, WiMAX 2.3 and 5.5 GHz and GSM 1800 MHz bands. The antenna has wide measured bandwidth from 1.6 to 2.56 GHz (46%) and 4.24 to 7 GHz (49.11%) with average measured gain of 1.6 dB in the lower band and 5 dB in the upper band. The structure of the antenna is examined analytically with different bending dimensions and human body effect. The antenna geometry is fabricated on a jeans material and also measured on different body locations to analyze its performance. The maximum patch dimension of the proposed design is 0.1 $\lambda \times 0.1\ \lambda\ mm^2$ with respect to the lower band. Excellent agreement is found between the simulated and measured results.

Keywords Conformal antenna · Metamaterial antenna · On-body effect · Wearable antenna · Wide-band

1 Introduction

Integration of telecommunication system with garments plays a great impact in modern day's necessity. It has great demand in different regular observation based applications; like military services, fire department and medical application etc. In medical application, wearable system has a significant part to prevent the health irregularities and unfrozen heart or brain disorders analysis. The antenna requirement in wearable technology is quite different as compared to the conventional counterpart. The bandwidth requirement of antenna is quite high with small dimension in wearable applications. The antenna is used in different human body parts like, leg, head cap, chest, arm, wrist etc. as per the application requirements. However, due to the electromagnetic coupling between the antenna and human body parts, the performance of the antenna gets affected.

Metamaterial is an artificial structure that provides some unusual electromagnetic properties like surface wave minimization, wave polarization, wave absorption and compact structure

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WILEY INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING

RESEARCH ARTICLE

Dielectric resonator array antenna for triple band WLAN applications with enhanced gain

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Abstract

An H-shaped dielectric resonator array antenna is presented for wideband applications. The proposed antenna is excited by slot feed mechanism and investigated experimentally. The antenna covers the frequency ranges from 1.41 to 2.59 GHz, and 4.73 to 6.06 GHz with the corresponding impedance bandwidth of 59% and 24.65%, respectively. The simulation results fulfill the bandwidth requirements of IEEE 802.11a/b/g (2.4-2.484 GHz/5.15-5.35 GHz/5.725-5.825 GHz) for Wireless local area network (WLAN) applications. The proposed antenna has simple structure, easy to fabricate and its measured radiation pattern shows a reliable performance in the desired operating bands.

KEYWORDS

dielectric resonator array antenna, slot feed, triple band antenna, wideband antenna

1 | INTRODUCTION

Dielectric resonator antennas (DRAs) became very popular in the field of defense, RADAR, and millimeter wave applications due to its various advantages, such as wide bandwidth, high radiation efficiency, and ease of excitation.[1,2] The restriction of the microstrip antennas is overcome by the DRAs for wideband wireless applications.[3] The conduction loss of DRA is about to zero. Thus, the major problem due to the conduction loss in metallic antennas can be easily avoided by dielectric resonator antennas.[4] In addition, DRA provides ease of coupling to almost all types of transmission lines and feed excitation.[5] Different shapes of DRAs are available, such as rectangular, triangular, spherical, conical, and cylindrical. The main advantages of the rectangular DRA as compared to other are maximum design flexibility and easier to fabricate.[6,7] Another advantage of rectangular DRA is the reduction of mode degeneracy problem, which provides optimized operating bandwidth.[8] Nowadays, many practical wireless communications required high bandwidth and multiband applications. Many techniques available for increasing the DRA bandwidth among which stacking and parasitic-element methods have been extensively explored in several literatures.[9,10] However, the aforementioned techniques need additional parasitic elements or more than one dielectric resonator. DRA bandwidth can be increased using special feed excitation mechanisms.[11–15] However, a simple structure ensures the industry to manufacture an antenna with high accuracy. The basic DRA structure is consisting of a dielectric resonator (DR) element of a specific shape that may be excited by a single feed such as a microstrip line, coplanar waveguide, aperture-coupled, or coaxial cable.[16–18] For this simple configuration, a wider bandwidth can be obtained by decreasing the permittivity of the DRAs and by optimizing the geometrical ratios of the DRAs. For achieving the multiband features, the combination of DRA with other types of resonators such as microstrip patches and slots have been explored.[19–22] However, it is very difficult to get an −10 dB bandwidth of more than 10% ($|S_{11}| < -10$ dB) over more than one bands of the IEEE802.11 WLAN for the DRA. To fulfill the bandwidth of several allocated bands by a single antenna is highly desirable. To cover the triple bands in WLAN application simultaneously, so far no double elements DRAA structure has been reported.

This article presents a compact simple array antenna with two H-shaped DR elements, which is resonating for dual band characteristics in the frequency ranges from 1.41 to 2.59 GHz (59%), and 4.73 to 6.06 GHz (24.65%) for

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From the journal:
Physical Chemistry Chemical Physics

Atmospheric oxidation mechanism and kinetics of 2-bromo-4,6-dinitroaniline by OH radicals – a theoretical study †

M. Gnanaprakasam,[a] G. Saranya,[b] S. Bandaru,[c] N. J. English [c] and K. Senthilkumar *[a]

Author affiliations

Abstract

2-Bromo-4,6-dinitroaniline (BNA) is identified as a domestic-dust pollutant in urban environments, with deleterious atmospheric effects. In the present work, we studied the reaction pathways and kinetics for BNA oxidation by the OH radical using quantum-chemical methods and canonical-variational transition-state theory with small-curvature tunneling correction (CVT/SCT). OH-radial-mediated BNA oxidation was studied by considering OH addition to carbon atoms (C1 to C6) of BNA and H-atom abstraction at the $-NH_2$ group and carbon atoms (C3 and C5) of BNA by OH radicals. It is

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Labours Managements -Janayogana Services using Centralized Web Application Portal

K. Akhil Manikanta, M.R.M Veeramanickam, M. Srinivasa Rao, R.Velumani

Abstract: ***In India daily labourers are not getting their job on daily basis due non-availability of job available information on particular time period. Massive workers groups are moving from big cities to the remote areas for sack searching on jobs for daily wages. They even do not have idea whether they will get work on that particular day or not. It's really typical risky things they have to come across daily basis for their job searching. When they did not get work, they have to wait another entire day. It's collectively waste of time, money for their travelling expenses, energy, and all their effort .etc. So in this work deployed model website to get rid of these unwanted travelling expenses without getting job availability and to cut their profit of third party mediation charges.***

Index Terms*: Web Application, Labour Services Management.*

I. INTRODUCTION

Main objective of this JANAYOJNA is to provide information availability of all available jobs to map with their search and needs for all daily labour. They probably can at most earn Rupees 300/- more or less amount per day as wages. Hence in this case here we try job available information data collection to map with their work and providing information to them on timely basis. And also help to cut third party profit by doing mediation charges for providing new jobs. So whenever third party gives jobs to them they will charge as mediator between job providers and the workers for their mediator contacts are utilized to gain charges without doing any hard work and efforts.

JANAYOJA website model will be acting connecting medium between workers needy people and labours that need of their new daily wages jobs. This connecting bridge between the job providers actually owners who do not have pool list of worker as per their demand and need on that particular day. This helps and benefits workers groups to get all details about job availability for that day.

As per the Human Development Index (HDI), this is focuses mainly on three major factors like life expectancy, per capita income of the individuals, their human resources educational background. As India is mostly constitutes of daily wages workers huge in numbers, and there is drop in HDI ranking India in global level due to fatal deaths of daily labour. No safety measures are followed in the most of the working environments like constructing building worksite; this leads fatal death high in numbers. Worker all well aware these problems but still working due to their poorness and for their daily needs as to be fulfilled without any troubles. Hence they are working such particular workplace even though it is dangerous for their health and leads risk of their life.

Very high human development

Rank		Country/Territory	HDI	
2018 rankings [1]	Change in rank from previous year[1]		2018 rankings [1]	Change from previous year [1]
1	—	Norway	0.953	▲ 0.002
2	—	Switzerland	0.944	▲ 0.001
3	—	Australia	0.939	▲ 0.001
4	—	Ireland	0.938	▲ 0.004
5	▼ (1)	Germany	0.936	▲ 0.002
6	—	Iceland	0.935	▲ 0.002
7	▲ (1)	Hong Kong	0.933	▲ 0.003
7	—	Sweden	0.933	▲ 0.001
9	▼ (1)	Singapore	0.932	▲ 0.002
10	—	Netherlands	0.931	▲ 0.003
11	▼ (1)	Denmark	0.929	▲ 0.001
12	—	Canada	0.926	▲ 0.004
13	▼ (1)	United States	0.924	▲ 0.002
14	—	United Kingdom	0.922	▲ 0.002
15	—	Finland	0.920	▲ 0.002
16	—	New Zealand	0.917	▲ 0.002
17	▼ (1)	Belgium	0.916	▲ 0.001
17	▼ (1)	Liechtenstein	0.916	▲ 0.001
19	—	Japan	0.909	▲ 0.002
20	—	Austria	0.908	▲ 0.002
21	—	Luxembourg	0.904	▲ 0.001
22	—	Israel	0.903	▲ 0.001
22	▲ (1)	South Korea	0.903	▲ 0.003
24	—	France	0.901	▲ 0.002
25	—	Slovenia	0.896	▲ 0.002
26	—	Spain	0.891	▲ 0.002
27	—	Czech Republic	0.888	▲ 0.003
28	—	Italy	0.880	▲ 0.002
29	—	Malta	0.878	▲ 0.003
30	—	Estonia	0.871	▲ 0.003

Figure: 1 HDI global ranking India placed at 130th position

Therefore we trying to focuses for better improvements of our website with medical emergency all details nearby to their work places which they can accesses it from JANAYOJANA.

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Need of Ontology Based Systems in HealthCare System

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Abstract

Recently on the Semantic Web the healthcare is consider as one of the finest topic. To match the concept to the indexed documents into s set of representative the textual query is transformed. For apt documents manually the end user still has to search. In this way it becomes a crucial task to detect the information of patients. The theory of object is its relationship is considered as Ontology. In information science and computer science the ontology encompasses a definition, representation and formal naming of the relations, categories and properties between entities, concepts and data that substantiate all, many or one domains of discourse.

Keywords- Semantic Web, healthcare, Ontology, theory of object.

SUR-SUR

Role of Intelligent Machines learning for the Successful Implementation of Business Model

Rol del aprendizaje de máquinas inteligentes para la implementación exitosa del modelo de negocio

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Abstract:
In the technical industry machine learning and intelligent machine learning are becoming a hot topic for research. Intelligent machine learning is also known as artificial intelligence (AI). Intelligent machine learning is affecting the business world more than our daily routine lives. It can seem that intelligent machine learning is everywhere like maintaining the complex information, gaming station, etc. for making the machines in the form so that can respond to real-time stations and can act like a human, the scientists and computer engineering are working extremely hard. The role of intelligent machine learning in the business world is studied in this paper. The corporate world is highly getting influenced by artificial intelligence or intelligent machine learning.

Keywords:
technical industry, inteligent machine learning, artificial intelligence, business world.

Resumen:
En la industria técnica, el aprendizaje de las máquinas y el aprendizaje de las máquinas inteligentes se están convirtiendo en un tema de investigación. El aprendizaje inteligente de la máquina también se conoce como inteligencia artificial (IA). El aprendizaje inteligente de la máquina está afectando al mundo de los negocios más que a nuestra vida cotidiana. Puede parecer que el aprendizaje inteligente de la máquina está en todas partes como el mantenimiento de la información compleja, la estación de juegos, etc. para hacer las máquinas en la forma para que pueda responder a las estaciones en tiempo real y puede actuar como un humano, los científicos y la ingeniería informática están trabajando muy duro. El papel del aprendizaje de la máquina inteligente en el mundo de los negocios se estudia en este documento. El mundo corporativo está siendo altamente influenciado por la inteligencia artificial o el aprendizaje inteligente de máquinas.

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Data Integration and Data Privacy through "Pay-As-You-Go" Approach

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ABSTRACT: Data Analytics has taken important and demanding problems in the research areas such as computer science, biology, medicine, finance, and homeland security. This research paper has resolved the problem of Entity resolution(ER) which recognizes the database records, which referred to the same real-world entity. The latest explosion of data made ER a impeach problem in a large range of applications. This paper proposed a scalable ER approach, used on-board datasets. Our latest approaches are simple because they consider either the entire ER process or the function, which are matching, and merging records as a black box procedure and used in a large range of ER applications. Pay-as-you-go approach for ER was a limit on the resources (e.g., work, runtime). This made the maximum progress as possible as required. This paper suggests scalable ER methods and new ER functionalities that have been not studied in the previous. Entity Resolution as a black-box operation provides general mechanisms which be used across applications. Further, the issue of managing information leakage, where one must try to avoid important bits of data from resolved by Entity Resolution, to sage against the loss of data privacy. As more of our sensitive data gets unprotected to various merchants, health care providers, employers, social sites and so on, there is a large chance that an adversary can "connect the dots" and piece together our data, which leads to even more damage of privacy. Thus to measure the quantifying data leakage, we use "disinformation" as a device which containing data leakage.

Keywords: Data Analytics, Data Integration, Data Privacy, Entity Resolution(ER), ER techniques.

I. INTRODUCTION

Since large amount of data is available for the analysis, scalable integration techniques playing an important role. At the same time, the latest privacy issues arise where sensitive data can be easily is inferred from a large amount of data. The two closely major related problems are identified with the analytics: data integration [21] and data privacy, "pay-as-you-go" approach for ER to maximize the progress of ER with a small amount of work. The problem of incremental ER, is not the one time process, but is continuously improved; as the data, schema, and applications better understand. The obstacles of joint ER with large datasets of various entity types are resolved together and the issue of ER with inconsistencies.

The objectives with prospective to data Integration keeps ER results updated when the ER logic is used go contrast records evolves time and again. A malleable, modular resolution framework where available ER algorithm developed for a given record type can be endeavour in and used in concert with another ER algorithm [8-9]. Suggested methods for efficiently generating hints and investigating of how ER algorithms cab is used hints to enlarge the number of records. Disallow inconsistencies in ER solution using Negatives rules of ER. The objectives with prospective to data privacy [18] provide effective algorithms for computing data leakage and emulate their achievement and scalability. Suggested mechanisms a disinformation technique [10-11] for entity resolution in order to manage data leakage is to develop a model which captures the privacy of loss relative to the target person, on a regular scale from 0 to 1.

II. LITERATURE SURVEY

Blocking strategies centre around improving the general runtime of ER where the records are isolated into potentially covering blocks, and the blocks are settled each one in turn [5-6].

Entity goals include contrasting records and deciding whether they allude to the same entity or not [2-3]. The vast majority of the work can be categorized as one of the ER models we consider, match based clustering and distance-based clustering [4]. While the ER writing centres on improving the precision or runtime execution of ER, they, for the most part, accept a fixed rationale

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Biosecurity and Emergency Preparedness

Azwana, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar and Robbi Rahim

Abstract

To reduce the infectious diseases transmission risk in livestock and crops, quarantined pests, living modified organisms and invasive alien species an originally conceptualized set of preventive measures designed is known as biosecurity. Some risks are growing rapidly, Because of limitation n available resources and time for calculating the likelihood and analyzing threats of the occurrence developing of an effective policy is a major challenge. The emergencies in biosecurity can occur through weeds, pests and diseases; these are giving a negative impact on community, economy and environment. Commonly occurring incident which are within the capacity of NSW Department of Primary Industries (DPI) are not included in biosecurity emergencies.

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Efforts to Overcome Mathematics Learning Difficultyfor Dislexicdiscalcular of Elementary School Students

Noviana Diswantika, Apri Wahyudi, Dedi Irawan, Phong Thanh Nguyen, E. Laxmi Lydia, K. Shankar

Abstract: ***For some people with dyslexia, success in the field of mathematics may be something that must be achieved with great struggle. There are various studies that report this problem that 10% of dyslexic children are geniuses in mathematics and show very good achievements in mathematics, but there are a majority of people with dyslexia experience dyscalculia or learning difficulties in mathematics. To overcome this requirement,an effort or strategy can make children absorb and understand learning mathematics well and can learn normally.***

Keywords : Difficulty in Learning Mathematics, Dyslexia-dyscalculilia

I. INTRODUCTION

Every child has a different character, as well as in terms of academic ability that is often called intellectual or intelligence. Some children have intelligence that is below average, even above average, and this affects children's performance in school. When a child is unable to perform well and satisfactorily based on his intelligence, the child is said to be a child with learning problems or learning difficulty.Learning difficulty can also be interpreted as the child's inability to complete the tasks given by the teacher. According to Masroza (2013).

This learning difficulty is a real disorder in children associated with general and special tasks, which are thought to be caused by neurological dysfunction, psychological processes and other causes so that children who have learning difficulties in a class show low ;earming achievement .

Children with learning disabilities have their own unique characteristics and different learning styles. Therefore, every child has the ability to succeed in their studies. Teachers are able to monitor their progress and implement various teaching strategies in the classroom. These students need special attention and are categorized as students with special needs[1]

Students with special needs naturally experience learning difficulties. The learning process of children with learning difficulties requires several strategies or approaches that are adapted to the child's condition.

Difficulty in reading, writing expressions, and process of arithmetic is part of the learning difficulties in the academic achievement problems. Hallahan and Kaufman, as quoted by Mangunsong, stated that some characteristics that are generally possessed by students with learning difficulties, are grouped into six types of problems, namely the problem of academic achievement; perceptual, perceptual-motor, and general coordination issues; attention problems and hyperactivity; memory, cognitive, and metacognitive problems; social-emotional problems; and motivational problems. [Frieda Mangunsong, Psychology and Education of Children with Special Needs Volume One (Depok: LPSP3 UI, 2014), 201] From this classification of academic achievement problems are divided into terms of dyslexia, dyscalculia and dysgraphia. But in this study, it only explains the learning difficulties or dyslexia, dyscalculia

Specific learning difficulties include difficulty in reading, spelling and writing that are found in children with normal levels of intelligence or even in intelligent children. Dyslexia can also manifest as communication disorders or difficulties in mathematics. Difficulties in learning mathematics are referred to as persons with dislection-dyscalculia.

There are various studies that report this problem. One researcher (Steeves, 1983) reported that many dyslexic children are geniuses in the field of mathematics. In contrast, Joffe (1990) reported that 10% of dyslexic children showed very good performance in mathematics, while the other 30% showed that there was no difficulty at all in the field of arithmetic counting. However, Miles and Miles (1992) report that most dyslexic people have dyscalculia.

Based on the explanation above, this paper will examine more about children who have difficulty in learning mathematics or dyscalculia and how the efforts or

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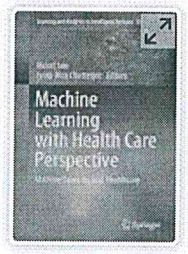

Machine Learning with Health Care Perspective pp 263–294

Machine Learning Methods for Managing Parkinson's Disease

Kunjan Vyas ✉, Shubhendu Vyas & Nikunj Rajyaguru

Chapter | First Online: 10 March 2020

Part of the Learning and Analytics in Intelligent Systems book series (LAIS,volume 13)

Abstract

A neurodegenerative disorder without permanent cure, Parkinson's Disease (PD) increasingly hinders motor and cognitive abilities. Timely intervention of neuroprotective therapies can help minimize the early impairments in PD. Early diagnosis would play major role in facilitating such proactive treatment plan. However, the conventional methods of PD diagnosis suffer from less accessibility, high costs, human bias and patient inconvenience. Moreover, there is a dearth of high-frequency monitoring systems to track the progression. Deficient monitoring and management of the progression diminishes both quality of life and life expectancy of the patient. The challenges and concerns in

View article

Dr. E. Laxmi Lydia

Measuring quality of management to predict success of portfolio: A review of factors effect project portfolio success

Authors	PT Nguyen, VNV Harling, L Lydia, K Shankar
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Scholar articles Measuring quality of management to predict success of portfolio: A review of factors effect project portfolio success
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Generating Cipher Text using BLOWFISH Algorithm for Secured Data Communications

Ch. Usha Kumari, T. Pavani, A. Sampath Dakshina Murthy, B. Lakshmi Prasanna, M. Pala Prasad Reddy

Abstract: Cryptography plays a major role in the network security. In order to secure the data one must do encryption of the original message. In this paper, the design and analysis of high speed and high performance BLOWFISH algorithm is implemented in VHDL coding and compared with AES (Advanced Encryption Standard) algorithm. The BLOWFISH algorithm involves the process of giving the data and key as input to the encryption block. BLOWFISH encryption algorithm is designed and programmed in VHDL coding. Then it is implemented in Xilinx 10.1. This research is carried in the following steps: designing of encryption algorithm, writing VHDL code, simulating the code on "ModelSim altera 6.5e", synthesizing and implementing the code using Xilinx's ISE 10.1.This research aims in developing flexible and technology independent architectures in the areas of VPN software, file compression, public domain software such as smart cards, etc. Also presents the comparison of BLOWFISH and AES algorithms. Experimental results show that BLOWFISH algorithm runs faster than AES algorithm while both of them consume almost the same Power.

Keywords: BLOWFISH algorithm, AES algorithm, Cryptography, Feistel Networks, Encryption.

I. INTRODUCTION

The secure data communication is directly attributed to the nature of the Cryptosystems. Cryptosystems use cryptographic algorithms, with keys and different protocols to work effectively. The security of encrypted data is entirely dependent on two things, one, the strength of the cryptographic algorithm and the other the secrecy of the key while under the transmission over a channel. Advancement in this direction is the newly approved and widely adopted secret-key algorithm known as Rijndael Algorithm, has been selected as a standard algorithm by the National Institute of Standards and Technology (NIST). Though there are several designs and implementations of this algorithm in Software and Hardware, many lack coordination, optimization and justification among the parameters of interest-Throughput, Speed, Power, Cost, etc.

Cryptology is the art of secret writing. Cryptography allows storing secret information and transmitting it across insecure networks so that it is not possible to read by any other person except the intended recipient. Data which is read and understandable without any special methods is said to be plaintext/clear text. The method of separating plaintext in such a way as to hide its contents is called encryption.

Encrypting plaintext in an unreadable text or understandable language called cipher text. Encryption helps in hiding the information from anyone for whom it is not intended, even those who can see the encrypted data. The procedure for reverting cipher text to its original plaintext is called decryption.

In this research, the design and analysis of high speed and high performance BLOWFISH algorithm is implemented in VHDL coding and compared with A-E-S algorithm. The BLOWFISH algorithm gives the data and key to the encryption block as input, later implementing many blocks as Fiestal network block shown in Figure.2. Initially, the BLOWFISH encryption algorithm is designed and programmed in VHDL coding. Then it is implemented in Xilinx 10.1.

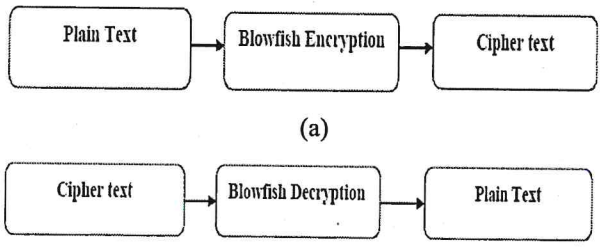

Fig.1. (a) Encryption (b) Decryption

Figure 1 is the block diagram of blowfish Encryption and Decryption. In this research Blowfish, is a block cipher secret-key method, designed and analyzed. It is a Feistel network, repeating encryption function for about 16 times. The size of block is 64 bits, and size of key is of 448 bits. Blowfish is a block cipher key of variable length.

It is very fast compared to AES when applied with 32-bit microprocessors. The comparison of two algorithms AES and Blowfish is carried out in this research.

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Extractive Text Summarization using Deep Natural Language Fuzzy Processing

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Abstract— Text summarization is most trending research areas in a modern context. The main aim of this project is to reduce text size while preserving the information underlying into it. In summary construction level, in general, given complex task which are basically will involve with deep natural language fuzzy processing methodologies. In general, an extractive based summary method is the very simple original text of subset of which will not guarantee as best narrative coherence output, because they are most conveniently representing an approximate summarized content from given text-based only on relevance judgment. In an automatic process of fuzzy summarization which is divided into the following steps: Pre-processing (sentence segmentation, tokenization, stop words removal), Feature Extraction, Sentence Scoring, Sentence Ranking and Summary Extraction.

Index Terms— Natural Language Fuzzy Processing, Text Summarization, Tokenization, Naive-Bayes.

I. INTRODUCTION

In today's world, we can get information everywhere. It has never been this much accessed in the past until now. With the growth of the internet, we entered the era of information technology. Information and data are produced every day at a massive rate. There are over 1.8 billion websites currently on the internet. We cannot imagine how much information these many websites contain. But this information doesn't guarantee the usefulness for the user. Some information contained in such massive websites might be of less use to the user, some information might be duplicated, and some might contain noise in it [1] [2]. Noise refers to the incompleteness of documents, missing characters or use of unwanted characters, and so on. The given input can retrieve the relevant and essential point's information from a document, its summarization phase playing a vital role. In the computing field teaching and learning using personalized learning is most required platform with social learning, internet of things and ANN [3][4]. This summarization model helps to deployed in e-learning platform.

The communication of human between each other will be done using the Natural language. By using the huge amount of data, the process of communication will be happening and from that useful information will be occur, by that information it allows the computer to make more communicate with the human. NLP (Natural Language Processing) refers to techniques and methods involved in automatic manipulation of natural language [5]. Human-computer interaction, machine learning, information summarization and some more are using the Natural language [6].

Summary refers to a text, or a paragraph or a document having less size than the original text, or a paragraph or a document and containing the most important meaning from that text, or a paragraph or document. It is impractical to construct a summary of each and every document found in today's world manually. Instead, we can automate the process of constructing a summary of documents so that only selected documents can be summarized. We can construct a summary of two kinds of documents, i.e. single document and multiple documents. The given single input document can do summarization which refers to the generating process for summary output from a one document, but in case of multi-document summarization level the process generate single output summary with help on using multiple given input documents. There are different ways of summarization for a document [7]. E-learning used for notes sharing to help of personalized model using internet of things and summarization [8] [9].

Extractive summarization: The basic approach is to extract document parts as per deemed interest for summarization on certain metric like example: inverse-document frequency mentioned as the tf - IDF: this so called often as a weighting factor, this factor value is increased proportional to the number of times a word appears in the document. The weight of terms diminishes based on Inverse document frequency factors which occurred frequently allow to increase the weight terms occurs rare manner, for example, the word "the", "and", "a" appear most frequently but they aren't helpful in giving the required information about the document) [11] [12].

Original Text: Alice and Bob went by the train for visiting the zoo and saw animals like a baby giraffe, a lion, and a group of birds in the colorful tropical area.

Extractive Summary: Alice and Bob visited the zoo. Saw a flock of birds in a group.Many of the times we can notice about the extractive summarization constraint which makes the output summary as an awkward sentence or grammatically strange one.

Abstractive summarization: Second approach for simplifying summarize as similar to humans doing, which is different from imposing extractive constraint and then allow for re-phrasings the content.

Abstractive summary: Alice, Bob visited the zoo and saw birds and animals. For another example, if the case summary

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RECENT CYBER SECURITY BREACHES AND PREVENTIVE MEASURES

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***Abstract*— A data breach event can be treated as a confirmed action or event happened such that some confidential or secret or protective data has been utilized or accessed by an unauthorized persons. The data that can be considered breaching of data like the credit card information, personal information for a person identification, health care data, patients data for a severe diseases, manufacturing devices which have huge demand in market and other software products related data. In the current article an attempt has been made to provide the reasons for breach of a data and the recent issues that were happened to be noted and also the preventive measures to be followed to protect the valuable data from these data breaches is also presented.**

***Keywords*— Cyber security, data breach, personal information, medical information, credit and debit card information etc**

1. INTRODUCTION

The growth of technology had increased a lot in recent years in various technological areas. Some of those areas like the software industry, manufacturing industry, banking sector and social marketing and social networking etc, [1, 2, 3]. As the growth of these areas is being increasing, in the similar fashion the other areas which were directly or indirectly related to such areas are also growing in a good manner. The technologies related to these areas are also growing in a rapid manner and the utilization of such networks and such websites for utilizing such features is also increasing a lot [13, 14, 15]. The number of people being utilizing such social networking websites and social marketing websites and other applications related to internet based working also have a scope of cheating and access the data that can be kept as secret in their personal accounts [4]. The data that can be posted in their personal websites or in personal accounts also can be prone of accessing such data and can be used for various other anti social events or for blackmailing such users for money is also a common issue becoming on daily basis [16, 17].

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MALICIOUS ITEMS DETECTION AT PUBLIC PLACES USING DEEP LEARNING METHODS

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***Abstract*— To provide effective security in crowded or public areas in today's world is a big challenge for us. One of the major challenges is to detect or monitor potential threats such as explosive items or bombs (Abandoned luggage items).In this paper we propose an approach for automatic detection of abandoned luggage and alerting the security alliances ,We use deep learning to train the system with a set of images, these images were given to the trained system which is going to visualize the objects in the image and calculate the distance between objects if the object is person and baggage or only baggage. If the distance is greater than a threshold distance limit then the system is going to raise an alarm for the security alliances.**

***Keywords*— Explosive items, malicious items, Deep Learning, Security alliances**

1. INTRODUCTION

Now a day's providing security in the crowded or public areas and usage of video cameras to capture the objects continuously is a huge task, video cameras are not having the intelligence to classify the objects as well as humans [1, 2]. To enable security to be very effective the security people should be increased and continuous monitoring is required which is very impossible. To make people more secured with more powerful security alliances and reducing the human efforts, in this paper we propose a machine which adds intelligence to the video data captured from the security cameras. We train the system with a set of images and then the input data which is video into the one image per one second. These images were given to the trained system which is going to visualize the objects in the image and calculate the distance between objects in case if the object is person and baggage in the specified time frame. If the object is baggage alone or distance between person and baggage keeps on increasing than the specified threshold distance and for a specified time gap the system will raise an alarm for the security alliances [3, 4, 5, 6].

1.1. DEEP LEARNING

- Deep Learning is a subfield of machine learning worried about calculations Inspired by the structure and function of the mind called simulated neural systems.
- Deep learning is utilized to recognize objects from satellites and distinguish sheltered or risky zones for troops [7].
- Automotive scientists are utilizing profound figuring out how to naturally recognize protests, for example, stop signs and activity lights.

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STUDIES ON THE PERFORMANCE EVALUATION OF PROTOCOLS IN MANETs USING SIMULATION

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Abstract— **Mobile ad hoc networks are having no particular or fixed infrastructure for the network. It works on the IP and also works on wireless devices like machines, laptops and cell phones etc. In the process of working these networks, they don't have any mechanism for administering. These networks are very famous and will work on the basis of temporary basis. Several protocols are available for working on these sorts of networks and in the current work, we had considered the implementation of two famous protocols like DSR and RIP. In the current problem of the implementation and performance analysis, an attempt has been made to analyze the implementation and performance of the above two said both reactive and proactive routing protocols. A simulation model was developed and analyzed the performance of the current model with two above said protocols such that the use of MAC layer and also physical models. The analysis model was implemented in the network simulator ns-2 and the results and the comparison were developed in the current article.**

Keywords— **Reactive protocols, proactive protocols, NS-2, routing protocols, performance analysis of the network, network comparison metrics**

1. INTRODUCTION

The versatile impromptu system is a somewhat mobile network model which is exceptionally independent and every hub has a remote handset gadget [2]. It can quickly fabricate a system in discretionary system topology structure, accomplishing continuous information transmission between hubs with no foundation [3]. It is broadly utilized in military tasks, emergency crisis correspondences, brief real occasions, conferences and different events. This announcement can be formalized by characterizing an impromptu system as a self-sufficient arrangement of versatile hosts which were interfaces by remote connections. The association of nodes frames a self-assertive correspondence chart [1, 4].

In these cell systems, correspondence between two portable hubs totally depends on each other. In a MANET, no such framework exists and the system topology may progressively change in an unusual way since hubs are allowed to move [7, 8]. MANET is a self-arranging system of versatile switches associated with remote connections with no entrance point. Each cell phone in a system is independent. The cell phones are allowed to move erratically and arrange themselves subjectively. In MANET, breaking of

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REVIEW ON SPACE AND SECURITY ISSUES IN CLOUD COMPUTING

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***Abstract*— Cloud computing is the most advanced and mostly used technology for the never-ending IT and software technologies. Various number of large servers was used in cloud models for storing the vast amount of data. To store massive databases, various setoff servers with high-end hardware and with fast internet facilities were required and with set of servers for providing services to the end users.In these servers, users store massive amount of data and also retrieve from time to time, providing security to the data in these cloud computing models was very much essential and important. Hence, as the data storing in the various locations of the servers, the provision of adjusting the various amount of considerable data in the servers at various locations from time to time was essential and also the provision of security to these massive set of databases and also retrieving and storing the data is more critical. Hence, we need to provide more security to the data being stored in the huge number of the server. As we need to provide security to these servers, several factors are important to note. The detail description about these points was presented in the current article in detail.**

***Keywords*— Security techniques, space issues for security, architecture, cloud computing, firewalls**

1. INTRODUCTION

Cloud computing is the software platform for providingand delivery of various computer services like storage, server spaces, software and analytics over the internet to offer faster and innovative facilities to the end users [1]. For using these services, users need to pay very less or nominal fees such that they can enjoy various advanced benefits in terms of technology and the gadgets you can use help from these networks. Traditional applications before to the introduction of cloud models, the applications cost was very high and the operating costs were high and also the utility of the public in misuse mode was very high. Hence, the introduction of cloud models has given the users with good quality of services with good technologies at lower costs [2, 3, 4].

By using the cloud related services, several advantages are being provided to the end users. Some of them are the cost of the equipment [5]. By the usage of cloud computing technology, the customers no need to purchase more cost effective hardware and its related units. With the service from the cloud managed the service provider will provide such high end, very fast hardware requirements will be met by the customers [6]. The purchasing cost of such huge servers and maintenance costs were reduced a lot to customers. Not only these benefits, but also other benefits like the power benefits,

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AN AUTOMATED TRAFFIC SIGNAL CONTROLLING SYSTEM

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Abstract:

The movement of certain number of vehicles in a route can be treated as the traffic. This traffic is heavy in some routes or less in some other routes. Whether the traffic is less or high can be judged based on the number of vehicles being moving in a particular road for a period of time. As number of vehicles is moving in a common road, the more traffic problems may arise and such situations are considered as congestion on roads. As congestion occurs or roads, the time takes to travel on such roads will take more time and as a result the travellers may reach to their destinations very late or they may take more time than the expected time. In order to reduce such congestions problems or congestion situations on roads several authors or researchers had proposed several methods. Some researchers had proposed for avoiding the congestion by fixing warning lights and some others used through the diversion of the traffic. As the number of vehicles is being increasing on roads in number, the traffic problems are also increasing day to day. In the current article, an attempt has been made to identify the traffic on each lanes on a highway by using the camera pictures captured n the poles besides the roads and analyzing such pictures and trying to identify the density of the traffic on such roads. After analyzing the traffic density on such roads, the traffic signals will be managed and cleared the traffic on roads and some cases, it is used to avoid the congestion situations. The current application was implemented on two situations and results are analyzed and presented in the results section.

Keywords:

Traffic, Signals, congestion, vehicles, roads, lanes, smart controllers

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SMART ELECTRONIC STICK FOR BLIND PEOPLE: AN IOT APPLICATION

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Abstract— **The vision of the people gives an opportunity to see the surrounding of a human being and the surrounded world around the human being. Till today, the people who lost their vision due to several reasons are struggling to get a useful device or an article such that to help them in their day to day life. If we get success in preparing such a device can help them a lot in their lives. In the current article, we developed a cheap, friendly and operation simple tool that can benefit both the users like visually challenged and the impaired people such that they can use in their life. This device helps such people to use this device by having a wearable device like the wearable head cap and hand stick such that the impaired people can walk on the roads without the help of any other persons or other persons support. The blind people can walk of their own, and the device will guide the person to maintain some distance from the objects that were present on the way of the blind people on which they are going. The principal part of this framework is the ultrasonic sensor which is utilized to examine a foreordained territory around daze by transmitting reflecting waves. The reflected signs got from the boundary objects are being used as contributions to Arduino Uno microcontroller. The microcontrollers carry out the issued commands and then convey the obstacle message to the user through headphones. So, by listening to the authorities by microcontroller, the blind can walk safely on roads.**

Keywords— **Arduino Microcontroller, Ultrasonic sensor, IoT**

1. INTRODUCTION

Visual impairment is a condition with which the person cannot see anything with his /her eyes which occurs because of physiological or neurological elements. Envision strolling into a new place. One needs to request direction with a specific end goal to reach to the target. Individual needs to rely upon other individuals to achieve the goal [1]. By and large, we watch that white stick is the closest companion of the outwardly hindered individual. But in reality, numerous times this stick isn't helpful. In a new encompassing blocked individual may get confounded. So, this limits their portability. This makes them subject to others for help. Despite the instrument utilized, the factor that most decides a man's portability is the utilization of fundamental individual abilities. Total visual weakness is the complete absence of frame and visible light wisdom and is clinically recorded as NLP, a shortening as "no light acknowledgement". Visual inadequacy is as frequently as conceivable used to portray extraordinary visual shortcoming with excellent vision [2].

Various people encounter the problems of honest to goodness visual impedances shielding them from voyaging independently. They need to use a broad assortment of gadgets and strategies to help them in their adaptability [3]. One of these systems is presentation and adaptability ace, which helps the ostensibly weakened and stupor people and prepares them to continue ahead their own independently and safely depending upon

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EARLY ASSORTMENT OF ROUTES FOR TRANSFER OF PACKETS IN COMMUNICATION NETWORKS

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Abstract— **Information concentrated e-science synchronised efforts frequently requires the exchange of huge records with unsurprising execution. To address this issue, the authors tried to outline booking calculations for mass information move in examine systems for e-science. Because of their little sizes, the exploration systems can bear the cost of an incorporated asset administration stage. In our analysis, each mass exchange work asked can be made ahead of time to the focal system controller that indicates a begin time and an end time. If concede that the system assurances to finish the exchange before the end time. In any case, there is adaptability in how the whole exchange is completed, in the data transmission task on each permitted way of the activity on each time interim. Moreover, it is up to the booking calculation to choose this. To enhance the system asset use or lower the activity dismissal proportion, the system controller takes care of advancement issues in settling on AC and booking choices. Current plan joins the accompanying components into a permanent improvement based system like progress ahead of time, multipath steering and transmission capacity reassignment through occasional re-optimisation. The assessment of the calculation was done by considering both system effectiveness and the execution level of individual exchange.**

Keywords— **Communication networks, bulk arrivals, bulk transfers, reservations**

1. INTRODUCTION

The progress of communication and networking advancements together with the registering and capacity advances is drastically changing the ways how relevant research is directed [1]. Another term e-science has developed to portray the extensive scale science helped out through dispersed worldwide joint efforts empowered by systems. The expecting was reached by access to substantial scale information accumulations, registering assets, and superior perception". All around cited e-science (and the related framework registering) cases incorporate high-vitality, high-energy nuclear physics (HEP), radio stargazing, geosciences and atmosphere ponders [2]. The requirement for transporting an expansive volume of information in e-science has very much contended.

To address the issue of e-science, the current article contemplates admission control and booking calculations for high transmission capacity information moves in to look into systems[3]. The outcomes will not just propel the learning and procedures here yet also compliment the convention, engineering and framework extend. As of now, the progress in the help of e-science and matrix processing by giving more productive system asset reservation and administration calculations to the outcomes. The currently considered AC

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Characterization of Functionally Graded Timoshenko Beams with Variable Rotational Speed

S.N.Padhi, K. S. Raghu Ram, Jasti Kasi Babu, T.Rout

Abstract: This paper investigates the free vibration characteristics and stability of a functionally graded Timoshenko beam spinning with variable angular speed. Material properties of the beam are assumed to be varied continuously along the thickness of the beam according to a power law and exponential law. The results show that increasing beam rotational speed increases fundamental mode frequency and the beam becomes more and more stable at higher speeds. This paper reports the dynamic behaviour of a rotating FGM beam subjected to axial periodic forces using the finite element method. The numerical results show good agreement with the reported beams models. Effects of static and time dependent components of axial loads on the stability of the FGM beam have been studied.

Index Terms: Exponential distribution, Timoshenko beam, load factor, Power law, Rotational speed, Stability.

I. INTRODUCTION

The modern engineering application demands the design and analysis of rotating shafts, beams, and gears. The whirling of beams has also been increasingly used in the exploration of space. The vibration analysis and hence the stability of a rotating cantilever beam is performed in this paper because it may represent many of these structures.

Composite materials have been used for several years for their advantage of achieving desired properties. The Metal Matrix Composite includes two metals which includes aluminum, and chromium. Aluminum is chosen because of its superior strength to weight ratio. Chromium is chosen because of its strength-weight ratio. The fabrication of composite material is done through stir casting method. Deformation of composite done using manual rolling after the casting of composite. Further analysis of composite includes microstructural study, hardness values and machinability results. The specimens are collected for every work to analyses the composite[1,2]. The determination of designing MMC is to enhance the required characteristic of metals and porcelains to the base metals. Aluminium Metal Matrix Composites (AMMCs) are significantly important in the structural, aerospace, medicine, marine and automobile applications. [3]. The fiber orientation in composites has a significant effect on the properties of natural fiber-reinforced polymer composites.Longitudinally aligned fiber composites show maximum strength along the direction of the fiber reinforcement and they are orthotropic in nature. In the transverse direction, composite properties are lower than those in unidirectional, which may also be less than that of a neat polymer matrix sample[4]. Friction Stir Processing (FSP) is a new method by which the surface modification can be done for alloys and composites. Friction Stir Processing can enhance the mechanical properties of the composite[5]. Vibrating structures under rotation such as compressors, motors, pumps and micro-electro-mechanical systems is a naturally occurring phenomenon and results severe vibration in a structural resonant mode with an excitation by harmonic loading because of imbalanced rotor or variable fluid dynamic force, which causes heavy mechanical damage. Thus, the understanding of stability and dynamic response of rotating structures inservice is highly important to avoid the risk of such resonance problems. In real life, the above mentioned rotating structures are normally pretwisted and the cross-section is asymmetric in nature. However, Prismatic beams under rotation may be used as a sample model and compared at par with the actual rotating structures for investigation of stability and dynamic response. The research on functionally graded materials (FGMs) is rapidly growing because of its ability to meet desired material properties in contrast to the conventional homogeneous and layered composite materials which suffer from debonding, huge residual stress, locally large plastic deformations etc. An FGM can be a good replacement for the material of rotating beams. Timoshenko beam theory and classical Ritz method is employed to derive the governing equations. In order to solve the nonlinear governing equations, direct substitution iterative technique is used. Effects of various parameters such as rotating speeds, radius of hub, depth of crack, location of crack, and different functionally graded material properties on linear and nonlinear vibration characteristics are studied [6-8]. From a mechanics viewpoint, the main advantages of material property grading appear to be improving bonding strength, toughness, wear and corrosion resistance, and reduced residual and thermal stresses. Therefore, now-a-days, an FGM has been a promising candidate for many engineering applications where a high temperature gradient field is the main concern [9-11]. Effects of rotary inertia and shear deformation are not negligible for thick beams or even thin beams that are vibrating at high frequencies. Due to their dimensions, resonance frequencies of micro- and nano-scale resonators are extremely high, namely in the range of kHz to GHz [12].

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Factors Affecting the Stability of Functionally Graded Sandwiched Beams

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Abstract: In this paper few of the factors affecting the dynamic stability of a steel-alumina functionally graded sandwiched (FGSW) beam have been discussed. The equation of motion was derived using both Hamilton's principle and finite element method. Floquet's theory was used to separate the stable zone from the unstable. The effect of hub radius parameter and rotational speed on first mode and second mode instability region of FGSW beam have been studied following the power law and exponential law. The results indicated that increasing hub radius and rotational speed keeps the instability region away from load factor axis and hence remote the chances instability of the beam.

Index Terms: Exponential distribution, FGSW, load factor, Power law, Rotational speed, Hub radius, Stability.

I. INTRODUCTION

Composite materials have been playing an important role in the life of human beings since decades because of their ability to offer the desired properties.. Initially, bronze was frequently used which is actually an alloy of tin and copper. Bronze was first invented in 3700 BC, the era known as the Bronze Age [1]. Later on, a number of different alloys of metals and nonmetals were engineered for multiple purposes. The Metal Matrix Composites (MMCs) have been limited due to their higher cost and low fracture toughness as compared to metal alloys. Though MMCs are costly, they emerge as an important class of materials due to high specific strength and stiffness. Researchers found the utility of aluminium to be the second largest after steel. Aluminium and its metal matrix composite possess wide applications in various applications in aerospace industry, automobile industry, Constructions and even in kitchen utensils. Hybrid Al-MMC consist of two different materials, and one will be from organic origin along with the base material[2,9].The aluminium matrix is getting strengthened when it is reinforced with the hard ceramic particles like SiC, Al_2O_3 and B_4C etc. Aluminium alloys are still the subjects of intense studies, as their low density gives additional advantages in several applications.These alloys have started to replace cast iron and Bronze to manufacture wear resistance parts. MMCs reinforced with particles tend to offer enhancement of properties possessed by conventional routes[3,4]. As Glass fiber reinforced plastic (GFRP) composites possess high specific strength/stiffness, superior corrosion resistance, light weight, the GFRPs are widely used in engineering applications in the fields of aero industry, automobile applications and marine applications[5,7]. Epoxy resin can be produced with alkaline-treated fiber by hand-laying method. It also has been discovered that alkaline-treated composites with fiber load show outstanding tensile strength[6]. Coir fiber reinforced polymer resin composites with saturated ash particles is a new kind of promising composite material whose applications include Industrial Helmet, Dashboards of automobiles, Door panels, Light boards etc. Apart from these industrial applications some of the domestic applications are Decorative articles, Designer walls in hotels & malls , Welcome boards, etc [8].

The major disadvantage of composite materials is delamination at the interface. To overcome the drawback of conventional composite materials, a new breed of composite materials where the properties of the constituent materials required to be graded in space and further named as functionally graded materials (FGMs) which was first invented in 1984.

The research on functionally graded materials (FGMs) is rapidly growing because it can be a good replacement for the material of rotating beams. Timoshenko beam theory and classical Ritz method is employed to derive the governing equations. The equation of motion is derived using both Hamilton's principle and finite element method. Effects of various parameters such as rotating speeds, radius of hub and different functionally graded material properties on linear and nonlinear vibration characteristics are studied [10,13,15].

Recent investigations show that sandwich structures have much more advantages than the monolithic solid structure of the same materials and equal mass [11]. From a mechanics viewpoint, the main advantages of material property grading appear to be improving bonding strength, toughness, wear and corrosion resistance, and reduced residual and thermal stresses. The thermal stability of laminated functionally graded (FGM) circular plates of variable thickness subjected to uniform temperature rise is significantly influenced by the thickness variation profile, aspect ratio, the volume fraction index,

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Upper Limb Movements Identification through EMG Signal using Artificial Neural Network

M. Karuna, A. Sampath Dakshina Murthy, G. Thiagarajan, Sitaramanjaneya Reddy Guntur

Abstract: Nowadays, analysis of electromyography (EMG) signal is one of the powerful areas of interest in medical, rehabilitation, robotic and industrial fields. The measurement refers to the recording of electric signals that appear during muscle contraction. As these signals are related to human process of action, because of uncertainty of EMG signals proper prediction of a specific motion is difficult. An Identification of a specific wrist motion by means of the EMG signal pattern will help in controlling prosthetic hand. A movement recognition technique is required to segregate different wrist movements for instance extension, flexion, pronation, supination. In this direction the EMG signal pattern recognition includes feature extraction and classification of proper EMG signals obtained from human forearm muscles using Artificial Neural Network to establish control over the prosthetic hand. Training of ANN was performed using four input neurons, four output layers, and with 10 hidden layers achieved 90% overall accuracy.

Index Terms: Electromyography signal, EMG, Feature Extraction, Artificial Neural Network.

I. INTRODUCTION

The chance of a person losing wrist is quite high in the present days where accidents, military action on natural calamities live earthquakes occur so often. Myoelectric arm can help such person to do necessary action by sEMG signal recording from the residual forearm muscles of upper limb. Such techniques of non invasive nature have been proposed for controlling myoelectric prosthetic devices to ensure that amputated people to have fundamental movements. Other rehabilitation robots are also available [1-4]. Signals of sEMG are time series variety emanating from neuromuscular system as recorded from skin surface having nonlinear dynamical characteristics. These are sensitive to the nature of muscular dynamics. Analysis of sEMGhas focussed on time and frequency domains so far [5].Time-domain features are extracted from the detected signals of EMG and are used for identifying limb movements [6].These features can be fed to ANN for classifying of action potentials of set of muscles [7]. A simple ANN is used in this research work, and it can be trained with extracted optimum features from single channel EMG signal. Huge computational work and complexity can be avoided by using ANN [8]. Scaled conjugate gradient (trainscg) algorithm [9] is used for classification. Four statistical features: Mean, Root Mean Square, Variance, and Mean Absolute Value [10-12] are used as the inputs of ANN as shown in fig.1.

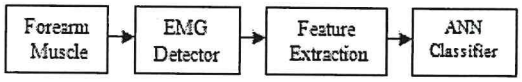

Fig.1 Block Diagram of Method of approach

For robust and efficient classification is important to preserve important discriminatory information resulting in improved accuracy for classification. Different types of ANN models consist of various interconnected network elements to develop internal classification strategies based on training data. ANN models can work in parallelism and providing higher performance where as traditional classifiers function sequentially.

II. METHOD OF APPROACH

A. Data Collection

The experiment was conducted on 5 healthy male subjects without loss of hand (aged 21 years). Surface electrodes are placed at specified forearm muscle activity with a distance of 2c.m which are made up of ag-agcl. After placing the electrodes, subject was instructed to perform wrist actions twice such as Extension, Flexion, Pronation, Supination and then muscle signal is detected and acquired using EMG detecting circuit and Digital CRO setup. Finally we receive 40 (5×4×2) samples in this experiment.

B. Feature Extraction

Time domain features have been extensively used in both medical and engineering researches and practices. The one set of extracted features from one subject forearm muscle signals are shown in table.1

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Assessment of Wavelets Transform based Processing of Features of Forearm Muscle Signals for Prosthesis

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Abstract- *People who have lost forearm are suffer from hand mobility limitations due to trauma, disease or defect, Prosthesis arm help those people to do their daily actions. Researchers have been focused on developing artificial hand. In this regard, better processing of features of electromyographic (EMG) signal has a significant role from residual forearm muscle. To achieve this, Wavelet Transform (WT) technique has been applied because it is acceptable with the characteristics of EMG as a nonstationary signal. Results have shown that db5 wavelet decomposition performs best denoising at fifth level in other wavelets comparison. Furthermore, the ratio of Signal to Noise (S/N) and the error of percentage (PE) are calculated to evaluate the eminence and the usefulness features of EMG.*

Key Words: *EMG, WT, Decomposition, Denoising, feature extraction, feature selection.*

I. INTRODUCTION

EMG signal detected at the surface of the skin which determines the electrical current produced in fibres of muscle [1]. The main application of this research is to identify the various patterns of sEMG signal for controlling the prosthesis [2-3].

Noises are created in the EMG signal due to various sources such as the hardware for amplification, digital processing for analog to digital conversion and cables used for acquiring data as well as activity of motors at distance from detection area. Preprocessing of signal from muscle fibres acts an important role in realm of clinical and rehabilitation applications. Some methods to remove noise from the detected EMG signal have been emphasized by Cram et al. [4]. The major drawback of identifying the intentional movement is the inadequate consequences under the environment of presented noises, particularly when the random noise frequency characteristics. According to the literary sources, many researchers have suggested noise removal techniques from EMG signals by using digital filters [5].

Even though above filters can decrease the considerable noise, and also traces distortion in the EMG signal [6]. In recent research, the denoising WT theory is found very efficient in processing of denoise [7-10].

Therefore, signal decomposition, noise reduction from sEMG signal [11] using wavelets presented as shown in Fig.1. Moreover, an important requirement is to differentiate various EMG signals accurately for controlling prosthesis is effective extraction of features.

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The techniques based on the extraction of feature have been effectively used for recognising different forearm muscle movements [12].

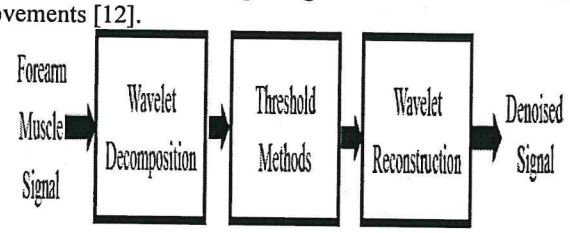

Fig.1 Block diagram of wavelet denoising process

In the present work were examined the effectiveness of denoising forearm muscle signals, with Stationary wavelet transform (SWT) and db5 at fifth level of decomposition of EMG signal by calculating the S/N values of the noise eliminated signals and Percentage Error (PE). In addition to that, a relative study was realized to picturize the efficiency of EMG features. The robustness of this approach depends on the better feature extraction.

II. METHODOLOGY

The four healthy male subjects were instructed to perform the wrist actions such as extension, flexion, pronation and supination. EMG detector used to collect EMG signals of forearm muscles, in which outputs for the signals, gain was adjusted to 60dB and bandwidth is limited to 20 Hz-500Hz with the help of main amplifier and filter.The sEMG signal was recorded by placing surface electrodes (Ag-AgCl) on the right forearm muscles such as flexor carpi radialis and extensor carpi radialis longus of a subject [13]. The equal distance of 2 cm is maintained between electrodes. One electrode is placed on the center of the muscle structure and other one is at the end. The third electrode was positioned on parts having no muscles on being bony. For each motion four datasets were collected. Recognitions of intentional movement through EMG signals have traced out markable results, since the last half a century period as a solution for dexterous prosthetic control to perform multifunctions.

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Machine Learning Framework To Analyze Against Spear Phishing

J. Vijaya Chandra, Narasimham Challa, Sai Kiran Pasupuletti

Abstract: The objective of this paper is to design and implement machine learning based ensemble algorithm on dataset to fit into the models that can be understood and executed by machines. In this paper we discussed different algorithms and machine learning concepts that can be implemented on the datasets, we taken email spam filter dataset for experiment and analysis, as the Advanced persistent threat the latest threat is intruded using the emails and major intrusion is done through spam emails. Machine learning uses different datamining techniques and mechanisms and accepts the input-data and gives the output as the statistical analysis. We implemented different email classification algorithms on the datasets based on spam and ham emails where spear phishing methods are identified and implemented different classification and regression methods to get the accurate results. In this paper for the better results in spite of existing algorithms we introduced the ensemble methods such as boosting, bagging, stacking and voting for much accuracy and higher level of classification and combining different algorithm. This paper will measure different machine learning algorithms performance on spam email filtering on the huge datasets. The framework provides implementation of learning algorithms that you can apply to larger datasets. An obvious approach to making decisions more reliable is to combine the output of different models. We even compared the existing algorithms and proposed algorithm; comparison tables are drawn along with the statistical analysis, data and graphical analysis is given.

Keywords: Advanced Persistent Threat, Spear phishing, Email classification, Machine Learning, Data mining.

I. INTRODUCTION

The Email spam can be filtered based on the previous experiences and the list created for identification, the good senders list is known as the white list, bad senders list is known as the blacklist, a spam message list is known as the fingerprint lists. These lists are established and maintained commonly all over the world, the grey listing is apart from other methods it capturers some behaviour of the sender and assumes that a message is spam, based on the directions such as delay in delivery, network traffic, risk of message loss in the real time environment [1].

The attacks on email based on the content filtering are differentiated as tokenisation, obfuscation, weak statistical and strong statistical. The tokenisation is usually targets at feature selection step of spam classification where it modifies or splits a word for example such attack is "free" can be split as "f r e e", the next method of attack is obfuscation which uses to hide features from the classifier by adding codes like HTML that is concealed from a user. For example: word "free" could be changed to "fr <! . .><..>ee or fr$#101xe or FR3E". The attack that is next to the weak statistical attack is usuallyS known as passive attack because it is done without any direct feedback from the filter. It modifies the statistics of an email file for mismatching the statistics of a spam file. It is done by adding arbitrary words or whole chunk of text in the message. Finally, the Strong Statistical attack instead of just adding the words or random text in the message, it alters the information within the spam portion of the message. This attack accesses the direct feedback from the spam filter and known as an active attack. Statistical based attacks constitute dictionary attacks, frequent word attacks, and the frequency ratio attacks [2].

Machine learning research for email spam classifier is classified into binary classification, multi-class classification and multi-labelled classification. Where the binary classification is the problem of classifying observations into two possible classes that are spam and ham, one generally given example is email spam filtering, which identifies email messages. The most efficient algorithm to filter spam uses machine learning techniques, most spam filtering methods uses text techniques, therefore most of the problems are related to classification, the present study classifies rules to extract features from an email [3].

The aim is to identify, design and develop reliable classifier to get maximum accuracy in spam classification of electronic mail system. A brief review is done on existing email classification algorithms on datasets, the accuracy of the email classification is verified by using different parameters such as True Positive, False Positive, False Negative and True Negative. The accuracy is calculated by the total number of correct classifications either as the class of interest that is true positive and reverse of it that is true negative, where accuracy is measured based on formula the sum of True Positive and True Negative by sum of True Positive, True Negative, False Positive and False Negative. The different parameters based on evaluation metrices are time taken to build the model using the specified algorithm, correctly classified instances and in correctly classified instances, also their percentages also calculated [4].

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Authentication and Authorization Mechanism for Cloud Security

J. Vijaya Chandra, Narasimham Challa, Sai Kiran Pasupuletti

Abstract: Cloud Computing is a most widespread and popular form of computing, promising high reliability for customers and providers both at the same point of time for many fields, where cloud storage security is based on Authentication and Authorization in cloud computing. Data is uploaded into a cloud and stored in a datacenter, Authentication and authorization are the major concerns to access the data stored in cloud by users from the data center. Security is a major issue; these are mainly deal with identity and access management, prevention of data loss and malware attack control management. In this paper we majorly concentrated on Authentication and Authorization to cloud access, we focused on identity management mechanism as cloud security solution that provides directory services for application access management. We discussed the protocols that support authorization and allows the communication across applications with the help of tokens instead of credentials. We even concentrated on the different mechanisms which plays a major role in designing a secured cloud computing architecture from malicious intrusions and attacks, it is a step to verify the presence and functioning of the cloud customers and cloud providers through security mechanisms to protect from different risks, threats and attacks. In this paper we discussed different security Algorithms and Authentication architecture along with the proposed algorithm, where analysis is done along with the computational evaluation with output.

Index Terms: Authorization, Authentication, Auditing, Confidentiality, Integrity, Accounting, Cloud Security.

I. INTRODUCTION

Authentication is a primary security service; the most commonly used procedure is verification of username and password; it is the processes of verifying who you are? and Authorization is the processes of giving boundaries that is how much you can be accessed. Auditing consists of examination based on previous history to determine whether security violations took place. Audit data is recorded in audit log files, continuous monitoring system and auditing procedures should be followed by an intelligence system for securing the cloud. A secure method for the initial distribution of passwords is for the user should be authenticating by the cloud administrator. Several Important concepts that are used in Cloud Security and storage maintenance are Identification, Confidentiality, Authorization, Accounting, Authentication, Auditing and Privacy. Once user identification and Authentications are established, then authorizations levels will be determined.

Cloud computing environment is reliable, based on authentication, authorization, accountability and auditing where accountability is the major character which can check performance, actions and behavior of a system, where audit trail or logs supports accountability. By Audit we mean the review of data for its integrity, it is no doubt that the procedure is used to check all the functions, namely; standard, methods or practices are being followed by the organization or not. The cloud security majorly focuses on CIA triad and AAA model which is the process of affirming the correctness of information stored in the cloud [1]. An open protocol for authorization OAuth is used for conventional web environment that enables the client applications on HTTP Services, which allows communication across applications with the help of tokens instead of credentials. It permits sharing of resources from one site to another site without using their identifications, authorizations and authenticated credentials. It practically bridges the authentication between the service providers and end-user with higher entropy towards the security [2]. It is a secured protocol that relies on secure sockets layer that ensures data between web server and end-user, and for the valid clients after verifying the clients authorization credentials the client access with the authorization server and requests to access token and then uses tokens, which is used to ensure cryptography protocols to provide stronger authentication and data security, it allows limited access based on time, when authentication token expires, its logout the session [3].

Open ID connect provides an identity layer, that will be top of the authorization server layer stack, it verifies the client's identity, it transports data about the user as token which contains basic profile and authenticates the identity of the user. OpenID connect is suggested if a web-based application is hosted on a server and accessed via a web browser. based on the clients credentials, the authentication server sends the access token, where authorization code will be activated which allows accessing the authorization request and grant access to the client application to fetch the owner resources, if the token access request, which is issued by the authorization server is invalid or unauthorized, then the authorization server returns an error response. The refresh token can be used by the client to acquire a new access token [4].

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EARLY STAGE DETECTION OF CARDIOMEGALY: AN EXTENSIVE REVIEW

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Abstract **- Problems related to heart is one of the fundamentally developing issue throughout the globe, prompting a large portion of deaths because of heart issues. The weight of cardiovascular sickness can be enhanced via hazard disease and accordingly essential counteractive action is an imperative need for all engineers of well-being arrangement. For every heart based diseases we need to undergo different medical examinations which kills lot of time to detect the exact root cause, rather than going for several diagnosis mechanisms. In this paper we propose that with limited parameters from the diagnosis results we can identify the issue of Cardiomegaly at early stages.**

Keywords--**Heart disease, Prediction, Cardiomegaly, Healthcare, Classification, and Recurrent Fuzzy Neural Network (RFNN)**

1. INTRODUCTION

An enlarged heart can be caused by various things, including disease, stretch or other heart conditions. Regularly, there is no known reason, and this condition is called idiopathic enlarged cardiomyopathy. Manifestations of an expanded heart can enhance, however regularly, treatment to address the reason for the augmentation is required. The following graph shows the percentage of age groups effected with Enlarged Heart Problem.

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Optimal response of half car vehicle model with sky-hook damper based on LQR control

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Abstract
This paper addresses the problem of determining the optimal parameters of a sky-hook damper type suspension in the control of the stationary response of half car vehicle models traversing a rough road. The optimal values of the sky-hook damper suspension parameters are obtained by equating the active suspension control force using linear quadratic regulator (LQR) with that of the sky-hook damper suspension force. Results show that the performance of half car model with optimal sky-hook damper suspension is almost close to the performance of half car model with LQR control.

Keywords Half car model · LQR · Sky-hook damper · Optimal parameters · Optimization method · Random road profile

List of symbols

a	Distance of front axle from the centre of gravity (CG)
b	Distance of rear axle from the centre of gravity (CG)
c	Damping coefficient
d_1	Font wheel excitation distribution vector
d_2	Rear wheel excitation distribution vector
h_1	Front random road input
h_2	Rear random road input
J_1	Mean square value of sprung mass acceleration,
J_2	Mean square value of pitch acceleration
J_3	Mean square value of front suspension stroke
J_4	Mean square value of rear suspension stroke
J_5	Mean square value of front suspension road holding
J_6	Mean square value of rear suspension road holding
J_7	Mean square value of front suspension control effort
J_8	Mean square value of rear suspension control effort
k_1	Front suspension spring stiffness
k_2	Rear suspension spring stiffness
k_{t1}	Front suspension tyre stiffness
k_{t2}	Rear suspension tyre stiffness
c_s	Sky-hook damper damping coefficient
m_1	Mass of front wheel
m_2	Mass of rear wheel
$t_w = L/V$	Time lag between the front wheel and rear wheel
$w(t)$	White noise process
$x(t)$	State vector
y_1	Absolute displacement of m_1
y_2	Absolute displacement of m_2
y_a	Front wheel absolute displacement
y_b	Rear wheel absolute displacement
θ	Angle of rotation of the sprung mass about a centroidal axis
α_r	Cut-off wave number of the road profile spectrum
α_s	Sky-hook damper parameter
ρ_i, i = 1, … 8	Weighting constants
A	Symmetric positive semi-definite matrix
B	Symmetric positive definite matrix
$D(t)$	Excitation distribution matrix
E[.]	Expectation operator
$F(t)$	System matrix,

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An Integrated Way for Teaching Hadoop & BigData Analytics Course

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Abstract: Hadoop &BigData Analytics course has occupied a ubiquitous role in present software technologies. Educational institutes are fond of this course as it's been trending course most of the placements in software companies are based on. As per the traditional teaching mechanisms, the educational systems are not much up- to- mark where the students are not assisted with the course resulting in atrocious placements. Therefore to enhance this placements, institutions has to adopt a new integrated teaching- learning proceedings which help in drastic change of academic results discussed in this paper. Here the result analysis of course attainments are compared to show the eye-catching improvements as occurred in VIIT College.

Keywords:Hadoop, Big Data,Analytics,technologies, academic,attainments

I. INTRODUCTION

In most of the educational institutes, traditional teaching practices are been carried that impacts the result analysis along with practical knowledge of students. Although the institutes appoint well knowledge teachers, they can't concentrate on each of the students in the class whole day. They can maximum concentrate on 10 to 15 students in the class. We know that the learning capabilities of students vary in class irrespective of same teaching practice followed by the teachers. This shows that teacher as to spend time on slow seekers when compared to fast learners which leads to disturbances in syllabus completion or makes class boring to others. Therefore leading to instinct downfall. To avoid these fluctuations, we have approached you with four innovative teaching learning mechanisms.

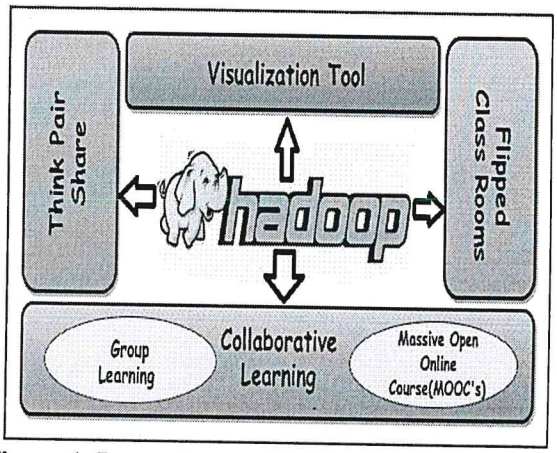

Figure. 1: Innovative Teaching-Learning Mechanisms

Figure 1 shows the different innovative teaching-learning mechanisms that are discussed in this paper. They are: Think Pair Share, Flipped Classrooms, Visualization Tool and Collaborative Learning. These mechanisms are been well fledged used in college VIIT for Hadoop &Big DataAnalytics course. The outcomes of these mechanisms are shown in figure7 with course attainments outcomes achieved in the last two years. Table1 demonstrating the teaching-learning modes with the detailed role of teacher, student and outcome of the learning activity.

Mechanism 1: Think Pair Share

Think Pair Share mechanism helps students to elevate themselves with new approaches when compared with traditional teaching techniques. This makes student to understand critical topics easily with discussions held in the classroom. According to this mechanism, a troubleshooting question is been given by the teacher to the students. He asks them to resolve the question and find out the solution individually. After solving the question, he asks each student to compare their results with neighboring student (making a pair) and discuss their approaches to find the appropriate solution. Lastly, one of the pairs in class come-up with a solution and explains it to whole class.

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E-Government Design for Sub-District in Public Service Improvements

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Abstract: E-Government was an activity carried out by the government using Information Technology (IT) to provide services to the community. Given the public's demands on the information presented in a well integrated. E-Government was currently the right solution for the local government to convey information to the community quickly, precisely and efficiently with the presence of website technology that will greatly assisted in making e-government information systems. Web technology was a modular application that was able to stand on its own and can be explained itself, so it can be called up through the Internet or through other electronic devices. The use of website technology in making e-government was very important, because it can be used for various purposes, one of which can be used to share information that is Internet. In this e-government of Sukoharjo Sub-district, its use was directed to the application to find out overall regional data through population data to local infrastructure data.

Keywords: *E-Government, Website, Sukoharjo Sub-district, Information System.*

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Information Systems of New Student Admission

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Abstract: SMP N 1 Pugung, one of junior high school institutions used a manual system for the academic process. However, this method had not met the government's standard, thereby reducing the school performance in accreditation. This information system aimed to facilitate the administration of new student admission so it would ease the admissionadministrator at school. The benefits of this system are easiness in collecting data and accuracy in producing valid reports. The researcher used the SDLC (System Development Life Cycle) method. The researcher also used tools to design the system regarding Flowchart Data, Context Diagrams, and DFD (Data Flow Diagrams). The researcher suggests the institution should consider this system to facilitate them in collecting data of their new students.

Keywords: *Information Systems of New Student Admission.*

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OnlineOpticalShop Application

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Abstract: The ordering and purchasing system of eyeglasses at Mandarin Optical Pringsewu is still done manually, so the customers must come directly to the optic to make transactions. It makes the Mandarin Optical Pringsewu difficult to get many customers who come from outside the city. Therefore, the web application is considered suitable to be implemented, in addition to facilitate the purchase process, it can also be used as a promotional tool. This system has the main characteristics of implementing the SDLC (System Development Life Cycle) methodology.This website is divided into two parts, namely administratorand customer.Administrator is used to control the system that has been created, while the customer is made so that the customers can do the online order and purchase. From the results of the questionnaire that has been collected, it can be concluded that the information system website application on Mandarin Optical Pringsewu has been able to meet the needs properly, and has quite complete features.

Keywords: *E-commerce, Mandarin OpticalPringsewu.*

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Text Mining with Hadoop:Enforcement of Document Clustering using Non-Negative Matrix Factorization KNMF

E. Laxmi Lydia, K.Vijaya Kumar, K. Shankar

Abstract–Big data is recognized as information coming from many sources with an innovative analysis of information.The data in documents are mostly unstructured data such as text processing documents, audio, webpage, log results, etc. Problem Statement: To Order these files manually in folders, it is essential to know the entire contents of the files and the name of the files in order to process files,so that certain files are aligned as a lot. Another characteristic of this information is that it is prone to continuous change, hence clustering is required. Existing approach: uses Latent SemanticIndexing(LSI),Single value decomposition for unstructured document which was quickly filtered and viewed, but it is much harder tocomprehend for computer machines. Proposed approach: A prototype is prepared by deducting redundancy structures to organize the data by similarity, NMF's updated rules along with k-means are proposed in this paper which is used to find the top terms in a respective cluster. For the purposes of exploration, anew data set called Newsgroup20 is considered. To accomplish this,preprocessing steps like Documents indexing, removal of stop words,Stemming.In specific, the words of the text document must be identified for the extraction of key features. The actual work was distributed in parallel with all documents in this project here, Apache Hadoop Map reduce was used for parallel programming.

Keywords – Big Data, Hadoop, LSI, Newsgroup20, NMF, , SVD.

I. INTRODUCTION

. Big data[1] is a termthat portrays an expansive volume of structured, semi-structured and unstructured data that can be extracted forinformation purposes and utilized in Artificial intelligence projects and other progressed analytics.

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Big data contains a massive variety of data types, including structured data such as SQL databases and data warehouses, whereas unstructured [2] data, for example, text and archive document in Hadoop clusters,orNotOnly SQL (NoSQL) systems. The data types are shown in the below diagram.

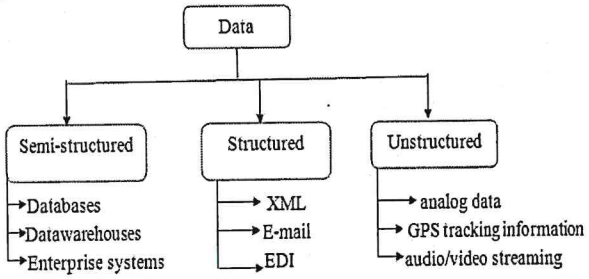

Figure 1Different types of data

Almost all information on the planet is stored in the form of unstructured textual format [21]. In spite of the fact that procedures, for example, Natural Language Processing (NLP) can achieve constrained content investigation, there are as of now no PC programs accessible to investigate and translate content for assorted data extraction needs.
Now a day's technology is growing day by day. The information which we want is being gathered into very large datasets. For example, the internet contains a huge amount of online text documents which are quickly increasing day by day.It is impossible to manually get useful or relevant information from that large datasets. Hence,to extract valuable and appropriate information from such large data sets has guide significant need to develop computationally well-organized text mining algorithms [3].

A. Text Mining

Text and data mining (TDM) is the gadget-read material recovery technique. It works by duplicating an immense amount of material, trying to extract data, and rejoiningpatterns to detect. The process of text mining is shown in below figure.

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The Doll Store Online Shop Application

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Abstract: In the current era, a system in a business is really needed. For example in a store, an application system or website will be very helpful in the process of promotion and dissemination of information to the public. Managing and processing data manually is vulnerable to weaknesses, such as errors and delays in sales, recording customer data, recording ordering data and storing data manually will be difficult when the data is needed. This condition is also experienced by Nufus Doll Store, therefore E-commerce is a new system in the world of business that uses online services. Many items can be offered through e-commerce such as selling dolls online using the web. By this system, customers do not have to bother coming to the store and can order it at any time without a time limit. Some applications that are joined together into a package are sometimes referred to as a package or application suite (application suite). E-Commerce Application at Nufus Doll Store is designed using macromedia dreamweaver, php, mysql, xampp and photoshop. The design of this website online is expected to attract customer interest and can be an effective sales medium.

Keywords: e-commerce, application, website.

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Web-Based E-Commerce Ticket and Tour Package

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Abstract: The development of technology is now increasing rapidly, one of the technological developments is the internet. Then what is obtained by using the internet is also utilized by the field of sales, namely the existence of Web-Based E-commerce Information System. The purpose of this study was to determine the effect of Web-based E-commerce on customer loyalty sale. In making this thesis, researcher built a web-based E-commerce information system by using Adobe Dreamweaver and MySQL as a database. The method used in writing this report was the waterfall method, by conducting a survey of the ongoing system, conducting interviews and observations and collecting data to obtain the information needed. Users are represented by use case diagram and use case glossary. Process design method by describing Context Diagram, DFD, ERD. The results of the design and manufacture of this application are expected to be useful and help to solve company problems and be implemented to help PO. Puspa Jaya in term of the sale process.

Keywords: E-Commerce Ticket, Web Based, PO Puspa Jaya

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Article

Green data science in cyber security: Network security threat detection and prevention techniques

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Citations (2)

Abstract

Nowadays a business models, supported the merchandise sales, to new product-service systems is chance for industrial corporations to realize and new advantage. Because it needs elementary changes within the structure, culture and competencies of the corporate and ne'er the less makers overtime fight with this innovation. Rarely, however industrial perceive they ought to reconfigure the weather of the business model (BM). Additionally, Product-Service System is a business models extensively and tiny support to the still offers and decision-making method relating to the service transformation. An application of the framework during a capital product manufacturer and supply analysis insights. The tools to work out the business model for any organization for the innovation of the business. The business model innovation for achieving profitable, growth of business model. Business models the method of the methodology to sensible, toolkit has been developed by the used of techniques. A business model produce, describe, creates, delivers and captures worth. The business model method is modification, operating and construction is named the business model innovation of the business strategy.

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CHARACTERIZATION AND ELECTRICAL CONDUCTIVITY OF LONIC OXIDE NANO FILMS BY DC AND AC METHODS

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ABSTRACT

We report here the ionic conductivity characteristics of single crystal of Yttria Stabilized Zirconia (YSZ)<100>. The targets of YSZ of one-inch diameter and about 2-3 mm thickness were palletized and sintered in the range of 1000-15000 C for 2-4 hours in air. These targets were polished up to 1000 emery paper cleaned in an ultrasonic bath containing methanol. The ionic conductivity was measured using both AC impedance spectroscopy and DC four probe technique. An idealized plot for the spectrum of a ceramic oxide specimen with particularly blocking electrodes has been studied. The ionic conductivity of ceramic oxide was compared with YSZ <100>.The investigation showed that the advantage of AC method is to separate the bulk, grain boundary and electrode resistance which is not possible by DC method. A single crystal of YSZ<100> was experimented for ionic conductivity. The ionic conductivity and activation energy of YSZ<100> at 973 K were found to be almost same in both DC and AC method which seems to be because of absence of grain boundary.

Keywords: ionic conductivity, grain boundary, activation energic method, impedance spectroscopy, D.C method.

INTRODUCTION

Ionic conductors have provided a fascinating interdisciplinary field of study ever since their discovery by Faraday at the Royal Institution in London over 200 years ago [1]. More recently, and particularly in the past decade, the place of research has been rapid, driven by the requirements for new clean energy sources, sensors, and high energy density batteries. A very interesting subgroup of this class of materials is the oxides that display oxygen ionic conductivity. There has been a continued drive for their development because of the promising impact of the technological devices such as the solid oxide fuel cell (SOFC), oxygen separation membranes, opto -electronic devices and many more. These devices offer the potential of enormous commercial and ecological benefits provided suitable high -performance materials can be developed. The search for novel materials with enhanced ionic conductivity for application in energy devices has uncovered an exciting new facet of oxide interfaces.

With judicious choice of the constituent materials, oxide heterostructures can exhibit enhanced ion mobility compared to the bulk counterparts [12]. Oxide - based ionic conductors have attracted tremendous research interests due to their wide applications in energy storage and conversion devices, such as photo voltaics, fuel cells, batteries, and super capacitors. Extensive efforts have been undertaken to improve the ionic conductivity of existing materials along with the development of novel conductors [13].

Super ionic materials are necessarily the oxides, which have high ionic conductivity at intermediate operating temperatures. High ionic conductivity results due to defect formation by doping a lio valent guest cations to the host compounds which replace partly the host cations and create vacancies in the oxygen sites for charge neutrality. These vacancies provide a conduction path for the oxygen ions to carry the charge thereby increasing the ionic conductivity. YSZ as the electrolyte of choice has dominated the progressive development of solid oxide fuel cell (SOFC) technologies for many years. To enable SOFCs operating at intermediate temperatures of 600 °C or below, major technical advances were built on a foundation of a thin-film YSZ electrolyte [14].

Experimental techniques

The targets of YSZ of 1inch diameter and about 2-3 mm thickness were palletized and sintered in the range 1000 -1500 °C for 2-4 hours in air. These targets were polished up to 1000 emery paper, cleaned in an ultrasonic bath-containing methanol. The ionic conductivity was measured using both AC impedance spectroscopy and DC Four Probe technique. The electrical conductivity in ionic conductors is generally dominated by ions although both ions as well as electrons conduct current. Under the applied electric field, the total resistance offered by the material and the electrodes is

$$R_{tot} = \frac{R_b}{[R_{gb} + R_{el}]}$$

Where Rtot, Rb, Rgb and Rel are the resistances of total, bulk, grain boundary and electrodes respectively. DC-four probe method: When a sample is mounted between two inert electrodes, DC measurements cannot be performed directly owing to polarization of the electrodes. This polarization phenomenon can be avoided by making use of a method with four electrodes (Figure-1). A constant current is applied by a DC current calibrator between two outer electrodes and by measuring the voltage drop by microvoltmeter between the two inner electrodes, the electrical conductivity is calculated. Since no current flows in the inner two electrodes, neither

Citations (2) References (39)

... In further historical development, it has been recognised that the conditions of resource utilisation to achieve a competitive advantage can be met by intangible assets that are sourced by people and their capabilities, which, at the same time, must be crucial to achieving strategic goals [31]. Each person is an original and unrepeatable individual and thus becomes a rare and valuable resource, which, moreover, is able to achieve originality in problem solving by its creativity and, thus, is the main source for achieving a competitive advantage [32]. Therefore, one's ability to become competitive is the decisive factor in achieving competitive advantage and increasing the performance of organisations [33]. ...

... As in the case of strategic management, it is essential that knowledge-related processes are managed [32] and aim to increase productivity and creativity, thus creating a higher output potential of the organisation [33]. Knowledge management should focus primarily on three basic aspects: knowledge creation, acquisition and transfer [37]. ...

... Another element is connected to employment exit and the retention of employees in an organisation. Authors [32] mentioned the strategic importance of this element in connection with the age of employees. Specifically, life development opportunities, work environment, work-life balance, and employee engagement were rewarded for retention of impacted developers. ...

Impact of Age Management on Sustainability in Czech Organisations

Article Full-text available

Feb 2020

Hana Urbancova · Lucie Depoo · Zdenek Linhart · Zita Prostejovska

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Jun 2022

Zubair Hassan

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EFFECTIVE TEACHING AND LEARNING PROCESS THROUGH OUTCOME-BASED EDUCATION

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Abstract: OBE is generally understood from two approaches which are called a) transitional one which focuses on the mastery of subject-related academic outcomes b) sublime transformational approach linked to student's future such as being productive in a profession with social concerns (Killen, 2000).Due to growing technological advancements education system has made lots of innovativeness in Teaching-Learning system and prepares the present day engineers to compete globally with new challenges. In the traditional system of education, teachers put full attention on their teaching but unable to concentrate on students requirements. But OBE emphasizes attainment of the students with the support of course objectives and program outcomes after completion of the course. This paper describes the impact of Outcome Based Education (OBE) compared to conventional teaching-learning approaches.So we can say that outcome-based education keeps learner at the centre of the education system and exchanges skill and knowledge to the learner. The transition from 3'R's (Reading,Writing,Arithmetic) to 4'C' (Creativity, Critical thinking, Communication & Collaboration) makes significant change in the course attainment of the students.

IndexTerms - OBE, Attainment, Assessment,SAR,Bloom's Taxonomy

1.INTRODUCTION

Benjamin Bloom [1], Fink [2] and many others have mainly provided blue print for aligned courses where outcomes, teaching and assessment are linked to each other resulting in competent learning. This has become foundation for international accreditations using outcome based education (OBE). The Indian accreditation agency, National Board of Accreditation (NBA) has implemented OBE for colleges trying to accomplish accreditation.Outcome Based Education (OBE) has an intuitive appeal to attract students for better learning.Outcomes are fixed and students are expected to achieve, teaching and motivating in as many different ways and for as long as it takes until every student meets them. The OBE process virtually guarantees every student an education. Educational institutes move towards Outcome Based Education (OBE) system by learning analytics for better outcomes. Educational Institutes will be motivated to refurbish and define their Educational Standards, redesign their curriculum, mapping and assessment of learning outcomes at all levels, gather evidence of learning and analyze outcomes via variety of assessment tools and to accomplish continuous quality improvement process.

2.OUTCOME BASED EDUCATION SYSTEM :

Vision is a revolutionary statement that an Institution would like to achieve over a long period of time. Mission statements are essentially the means to achieve the vision .The mission should clearly state the purpose of the program. It should indicate the primary functions or activities of the program. It should support the Institute and the Institute missions. A learning outcome is a statement of what a learner is expected to know, understand or be able to do as a result of a learning process. It defines the type and depth of learning students are expected to achieve and guide the instructor to adopt appropriate teaching methodology.
Learning outcomes are classified into Programmed Educational Objectives (PEOs),Programme Outcomes (POs) & Course Outcomes(COs).The Programme Educational Objectives are the statements that describe the expected achievements of graduates in their career and achievement during the first few years after graduation.

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Studying the Applications of Linear Programming in Basic Science and Engineering Curriculum

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Abstract – *Linear Programing deals with the statistical data to maximize or minimize the given function of variables. It provides the complete structure of Linear Programming. Considering the assumptions we can determine the different test statistics in Linear programming models like transportation, Variation transportation, unbalance business supply and demand problems, Degeneracy and its resolution problems etc., LPP provides different methods of finding initial feasible solutions with given data. Graphical Method representations can be utilized for representation of test statistics for easy understanding. Simplex applications, Penalty methods, Least Cost Approximation Methods, Degeneracy methods are the major applications in Linear Programming Solutions. Properties of LPP and graphical method of solving a LPP with distinct variable cases Dual form, are also discussed in this Study of Research paper. Solving the Analytical problems using Matrix form of LP, Two Phase method approaches, Computational procedure of Simplex methods, Artificial Variable Techniques are also discussed in this Study of Linear Programming Problem.*

Key Words: Artificial variable, Degeneracy, Dual form, Graphical method, Penalty method, Simplex method, Two phase method,

1. INTRODUCTION

Linear programming provides the optimisation of a function of variables known as objective functions. It consists set of linear equalities or inequalities. In evaluation methods we consider the approach as mathematical technique which involves the allocation of limited resources in a optimal manner. Properties of Linear Programming Problems with distinct approaches are discussed in this Research method. In majority of cases we use simplex method using the Linear Programming Problem. In case of more than two variables Graphical solution is not possible in such stages for further evaluation we use Simplex method. In general simplex method provides a systematic mathematical algorithm which consists of moving from one basic feasible solution to another basic feasible solution in a systematic manner so that the values of the objective functions is improved at each level.

One of the most important discoveries in the early development of linear programming was the concept of duality and its division into important stages. The optimal solution of given problem reveals information related to the optimal solution of the other. If we know the optimal solution result then the optimal solution of the other is readily available. Formulation of LPP in standard form, Graphical solution of two variables, Geometric properties of LPP, Standard form of LPP, Introduction of surplus and slack variables, matrix form of LPP, Applications of LPP and their Advantages, Artificial variable approach methods, Penalty methods are introduced in Linear Programming Optimization in Business Statistics and Science and Engineering Organizations.

2. FORMULATION OF LPP

In any given statistical Analysis if we consider products x_1, x_2 elements respectively in A, B Objective functions such that then the objective function can be represented in terms of Objective function $Z = x_1 + x_2$

Example-1 : If a company produces two types of chairs. Each chair of the first type requires twice as much labor time as the second type. If all chairs are of the second type only, the company can produce a total of 300 chairs a day. The market limits daily sales of the first and second type to 100 and 200 chairs. Assuming that the profits per chairs are Rs.10 for type A and Rs.6 for type B, formulate the problem as a linear programming model in order to determine the number of chairs to be produced of each type so as to maximize he profit.

Example-1: From the given statistics Objective function for profit :

$\text{Max}(z) = 10x_1 + 6x_2$

Stc:- $2x_1 + x_2 \leq 300$; where $x_1 \leq 100$ and $x_2 \leq 200$

Considering there will not any negative quantities such that $x_1, x_2 \geq 0$

2.1 Decision Variables

The given variables which are required to be determined sung distinct approach methods are said to be decision variables.

Example-2 : If $8x_1 + 10x_2 \leq 24$ is an equation then a Slack variable(s_1) must be added on LHS of inequality.

Article

Analyzing the performance of DSR protocol on MANET's network models with various scenarios using ViSim

Jan 2018
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N Thirupathi Rao · V. Madhusudhan Rao · Debnath Bhattacharyya · T.-H. Kim

Abstract

The examination of the effect of MANETs in various applications with the usage of various protocols was important to study the performance of these networks. The DSR protocol was one of the most important protocols in MANETs protocols. Hence, this protocol implementation in these sorts of networks with various numbers of nodes was important. A study has been conducted to study the performance of these networks with various numbers of nodes in the network. The behavior of the network was analyzed with various set of nodes. The analyzing of these networks was done with the help of the ViSim simulator. The number of nodes considered for analyzing the performance of the network was three, ten and twenty nodes. An investigation of the conventions has finished the considered parameters that measure the QoS measurement like end-to-end delay, throughput, jitter, outturn and elective system execution measurements. The considered cases were implemented on three different cases and results were discussed in detail. The results show that the performance of the current considered protocol was excellent in the above considered three scenarios.

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Design and Performance Analysis of Pentagon Shaped Microstrip Patch Antenna

P A Nageswara Rao, YSukanya, P. Mallikarjuna Rao

Abstract: Integration of RF circuit components is required to make the antennas more compact and robust and is a trend in wireless application now-a-days. The micro strip antenna of patch variety is able to satisfy the requirement but the disadvantage is reduced gain and reduced band width. The gain has a range of 1-2 dB. So in order to increase the gain as well as band width, the substrate with low dielectric characteristics and higher thickness can be used. However, thickness increases surface waves. So, proper thickness of the substrate is required. This paper proposes a micro strip patch antenna based on a special design (pentagon) suitable for resonant frequencies in the range of 7.6 GHz to 7.9 GHz. So the analysis has been done by means ofAnsoft HFSS software V 17.0 by taking Rogers RT/Duroid 5880 (tm) as substrate material into consideration.Subsequently the gain, band width, radiation pattern and return loss has been evaluated with equivalent designs.

Index Terms: Microstrip patch antenna, Pentagon Shape, Gain, Bandwidth, Return loss, Radiation pattern.

I. OVERVIEW

The micro strip patch antenna was first suggested by Deschampsin 1953.Munson and Howell commercialized such antennas in two or three dimensions around 1970's. Basically the patch antenna comprises a ground plane and a radiating patch separated by a substrate. The feed lines and radiating elements are etched on the substrate with photolithographic process [1]. An illustration of the micro strip patch antenna is revealed in fig. 1.

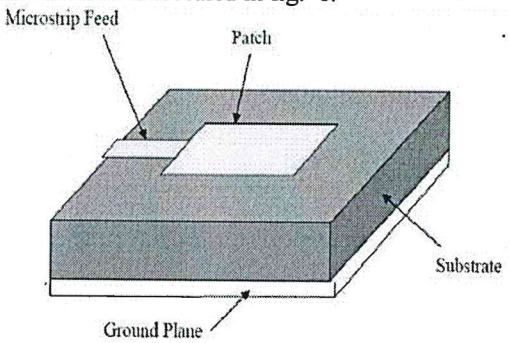

Fig.1: Microstrip patch antenna

Radiating patch can have different shapes like circular, square, elliptical, rectangular, pentagon, hexagonal and thin strip(dipole) as well as triangular. So the feeding can be done by using any one of the methods such as co-axial feed, line feed, CPW feed, inset feed, proximity coupling or aperture coupling[4, 7-9]. Two techniques of analysis are being used are cavity model and Transmission Line Model (TLM). Micro strip arrays cannot be used at high power levels as they are poor sources of radiation over a limited band of frequencies in wave guide and co-axial line. Santanu Kumar Behera & Y. Choukiker recommended a novel design based on Particle Swarm Optimization (PSO) along with MOM to obtain geometric parameters. A.Deshmukh & G.Kumar have proposed a flattened L-shaped patch antenna to get wide band. Further the band width of the above proposed antenna improved by 23.7% -24.43% by Z. M. Chen [2]. A satisfactory performance of the patch antenna is obtained by K. F. Lee [2] with a reduced size using U – slot. S. C. Gao [2] used photonic band gap to enhance gain and band width.

II. PRINCIPLE OF WORKING

The working theory of micro strip patch antenna is explained as follows. The two sides of the substrate have maximum and minimum electric fields with the middle portion having zero value. With respect to the instantaneous phase of the functional signal, the field signs on the sides of the patch change continuously. Finally, there is a spread of Electric field towards the boundary so that TM_{10} mode is radiated for rectangular patch.

Fr of patch antenna depends on the parameters like 1. Size of the GND plane 2. Patch width (impedance) 3. Thickness and ε_r of substrate. Applications of patch antenna include global positioning systems (GPS), vehicle based satellite link etc.

M. Abbaspour and H. R. Hassani suggested star shaped patch antenna to enhance impedance bandwidth. Different shapes of patch antenna in support of X band applications are made with FR4 (Flame Retardant) Epoxy substrate proposed by Sumanpreet Kaur Sidhu, Jagtar Singh Sivia [3]. By using pentagon shape it can be proved that the band width is better in comparison with other shapes. More over return loss also gives advantage for pentagon shape.

III. DESIGN OF ANTENNA

The pentagon shaped Microstrip antennas using Microstrip line feed technique are designed with HFSS V 17.0 software. The substrate used for the projected antennas is Rogers RT/duroid 5880 (tm) having $\varepsilon_r = 2.2$.

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Generalized Detection of Colloid Cyst in Brain using MRI Scan/CT Scan

D. Lavanya, N.Thirupathi Rao, Debnath Bhattacharyya, Tai-Hoon Kim

Abstract: *Brain is one of the most important organs in the human body. The working of this organ decides the human being work and his life to success. In order to lead the good life, one should have the brain and its related parts under good condition, i.e., not affected with any diseases or any serious problems. The presence of cyst in the brain is one of the important issues to be considered and identification of such cyst in good time is very important for the health of a human being. If the cyst is not identified in appropriate times, the brain will be suffered with serious issues and it may lead to the loss of the human being. Hence, in this article a new approach is taken to consideration for identification of the cyst in the brain through MRI/CT scan images. In the current work, a new approach of matrix method with the combination of monochrome images was considered for identification of the cyst presence with MRI/CT scan images. A new algorithm was also proposed to find the presence of cyst in the brain with more accurate performance. The performance of the current model was verified with two sets of scan images and the results are displayed in the result section.*

Index Terms: *Neuroepithelial Cyst, Magnetic Resonance Images (MRI), Computed Tomography (CT), Fixed Threshold Method.*

I. INTRODUCTION

Brain is the foremost organ of the central nervous system that coordinates and controls the activities of other organs in our body. Cysts in the brain are the group of cells, clustered collectively to form a sac that contains fluid or semi-solid material, such as cerebrospinal fluid, blood, tissue or tumor cells [1]. Cysts are generally benign, but are destructive when it is found in parts of the brain where it restricts the crucial performance of the brain. Various types of Cysts found in the brain are, the Arachnoid Cyst, the Colloid Cyst, the Dermoid Cyst, the Epidermoid Cyst, the Pineal Cyst and the Tumor-associated Cyst [2]. Symptoms of cyst diverge depending upon its location, size and type. In this paper we focus on the automatic detection of Colloid Cyst in Brain from MRI or CT scanned images. Colloid cysts are known to be formed during the embryonic formation of the Central Nervous System. It contains a thick, gelatinous substance called colloid which came from the Greek word *Kollodes* (Kolla meaning glue and eidos meaning appearance). Apart from the colloid filling, the cyst may contain blood, minerals or cholesterol crystals [3].

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Colloid Cysts are found in the center of the brain that holds spinal fluid, or, in the lining of the third ventricle. Cysts in this location block the foramina of Monro causing obstructive hydrocephalus that increases pressure in the brain. Familiar symptoms are severe headache, nausea, vomiting, seizures, vertigo, memory loss, insomnia, gait disorder, drop attack, and many more. The mortality rate due to Colloid cyst has been between 58% and 77% [4,5]. Its size may vary from 3 to 40 mm. Since, even small Colloid cyst can cause sudden death, it is vital to identify or detect the cyst at an early stage.

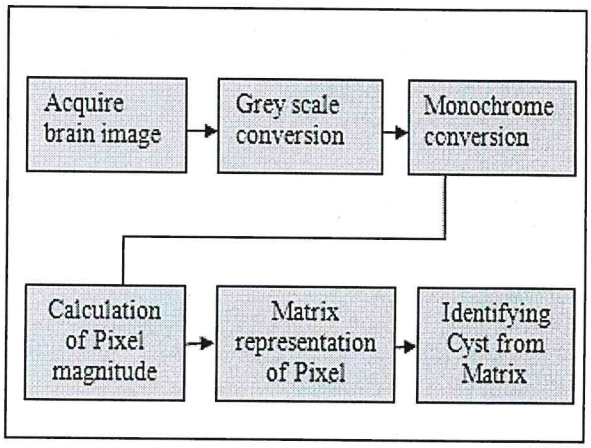

Fig. 1 Basic Steps Involved in Image Processing

Medical Image Processing has become an essential feature in the fields of Bio-Medical research. Imaging Technology like Magnetic Resonance Imaging, CT scanner, digital mammography provides a detailed or third dimension view of the body. The digital images acquired from these imaging technologies can be improved and analyzed through java programming and Image Processing Technique for easier diagnosis. Image Processing Techniques reduces the complicated manual tasks of the radiologists to identify any abnormalities in the brain, it saves time and is cost valuable. It involves preprocessing of the digital images by passing them through different types of filters to reduce noise and improve the quality of the image. It also includes emphasizing on the region of interest and automating the process of segmentation of Cysts to extract complex information. Morphological operations can be used to remove imperfections from these images depending on the relative ordering of the pixels. We have proposed here an algorithm that uses many advanced image processing techniques to automatically detect the Colloid cyst of all sizes from the digital images.

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Computational Modeling of Signal Transduction Pathways in Breast Cancerous Cell and Target Therapy

Prasanna Priya Golagani, Shaik Khasim Beebi, Tummala Sita Mahalakshmi

Abstract: In this paper we identify the mutated signal transduction pathways in a breast cancerous cell. A simulated model is developed for these pathways. To reduce cancer some drugs are suggested that are helpful in correcting the pathways. Some of the pathways like PKB (Protein Kinase B), MAPK (Mitogen Activated Protein Kinase), MTOR (Mammalian Target Of Rapamycin), Fas Ligand (Type-II Tran membrane Protein), Notch (Single Pass Transmembrane Receptor), SHH (Sonic Hedgehog), Tnf (Tumor Necrosis Factor), Wnt (Wingless/Integrated) Pathways are simulated. Converting these biological pathways into a computable model helps in analyzing it rapidly. For Computational modeling of signal transduction pathways, SBML (Systems Biology Markup Language) is used. Programming is done in SBML and executed in Cell Designer. In this paper simulated models of PKB, MAPK, MTOR, FasL, Notch, SHH, Tnf, Wnt pathways are developed and shown in the results. Target Therapy can be implemented to these pathways. Drugs like Wortmannin, Perifosine and Rapamycin are suggested. These drugs help in modifying the pathways in such a way that, their metabolism is converted into the metabolism of a normal breast cell. This helps in reducing breast cancer.

Index Terms: Cancer, Benign Cancer, Malignant Cancer, Breast Cancer, PKB, MTOR, MAPK, SBML, Cell Designer.

I. INTRODUCTION

Cancer causes severe metabolic changes in the cell [1].In cancer, the cells do not die when they have to die and new cells are born when they are not required. Cancer cell divides uncontrollably and produce numerous new cells. Cancer is of two types benign and malignant. Malignant tumors are cancerous and can invade to the surrounding tissues, benign tumors do not spread to other tissues they are local to their site and sometimes they can be quite large.

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Cancer Statistics: Cancer stands second worldwide to cause death. In 2015 8.8 million people died out of cancer [2]. In 2017 the estimated no. of new cancer cases are 16, 88,780.Nearly 6, 00,920 people are estimated to die with cancer in 2017[3].For every 8 minutes one woman dies with cervical cancer. In India an estimated number of 2.5million people are suffering from cancer. Every year an estimated number of 7 lakh cases are registered in India. Nearly 5, 56,400 people are dying with cancer every year in India [4].Based on the primary site of origin cancer can be divided into different types like 1) Breast Cancer2)Lung Cancer3) Prostrate Cancer4) Liver Cancer5)Renal Cell Carcinoma6)Oral Cancer and 7)Brain Cancer.

Breast Cancer: A malignant growth in the breast is known as Breast Cancer [5].Breast Cancer can be classified based on Histopathology, Stage (TNM), Grade, Receptor status and the presence or absence of genes in the DNA [6].

Breast Cancer Statistics: There is an estimation that in 2017, 2, 52,710 new cases of invasive Breast Cancer will be detected in females and 2,470 in males. Along with it 63,410 new cases of in situ breast carcinoma will be detected in females. Nearly 40,610 female and 460 male deaths from breast cancer are estimated in 2017.More than 3.5 million women were alive with a history of breast cancer on January 01 2017. [7]

1.1 Signal Transduction Pathways: In the Breast Cancerous cell, the cell signaling is affected. Apoptosis in inhibited and new cells are produced continuously this is due to the changes in some of the signal transduction pathways. In this paper we studied some of these signal transduction pathways like PKB, MAPK, MTOR, FasL, Notch, SHH, Tnf and Wnt.

1.2Computational Modeling of the Pathways Using SBML and Cell Designer: Converting the biological pathway into a computable model helps in analyzing it rapidly using simulation and other mathematical methods. We used SBML for computational modeling of signal transduction pathways. The programs written in SBML for each Pathway are executed in Cell Designer.

1.3 Drug therapy and Target therapy: In this paper we studied 3 pathways in depth that is PBK, MAPK and MTOR pathways we suggested 3 drugs that are for these pathways (Wortmannin, Perifosine and Rapamycin) and specified the exact targets in the pathway where these drugs can be used to make the pathway function as it is functioning in a normal breast cell and reduce cancer.

Investigations on the void coalescence and corrosion behaviour of titanium grade 4 sheets during single point incremental forming process

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Abstract

Purpose – The purpose of this paper is to investigate the void coalescence and corrosion behaviour of titanium Grade 4 sheets during single point incremental forming (SPIF) process with various spindle rotational speeds. The development of corrosion pits in 3.5 (%) NaCl solution has also been studied during SPIF process.

Design/methodology/approach – In this current research work, the void coalescence analysis and corrosion behaviour of titanium Grade 4 specimens were studied. A potentio-dynamic polarization (PDP) study was conducted to investigate the corrosion behaviour of titanium Grade 4 processed samples with various spindle speeds in 3.5 (%) NaCl solution. The scanning electron microscope and transmission electron microscope analysis was carried out to study the fracture behaviour and corrosion morphology of processed samples.

Findings – The titanium Grade 4 sheets obtained better formability and corrosion resistance by increasing the CNC spindle rotational speeds. In fact that, the significant plastic deformation affects the corrosion rate with various spindle speeds were recorded.

Originality/value – The spindle rotational speeds and vertical step depths increases then the titanium Grade 4 sheets showed better formability, void coalescence and corrosion behaviour as the same is evidenced in forming limit diagram and PDP curves.

Keywords SEM, Corrosion behaviour, FLD, TEM, Titanium Grade 4 sheets, Void coalescence analysis

Paper type Research paper

1. Introduction

Titanium alloys are the most widely used materials in the aircraft, marine, orthopedic and dental implant applications because of their high strength and good resistance compared to the other alloys of like aluminum, copper and steel (Ambrogio *et al.*, 2012). Many research works have been carried out on incremental forming (IF) of titanium and its alloy sheets as presented below: an overview of the potential applications and presented technologies of incremental sheet metal forming process (Echrif and Hrairi, 2011). Palumbo and Brandizzi (2012) proposed a cost-effective technique for formability of titanium alloy by varying the working temperature of both high tool spindle speed rotations and electric static heating. In continuation that to improve the rate of single point incremental forming (SPIF) process (Ambrogio *et al.*, 2013) introduced the high speed incremental forming for Ti-6Al-4V alloy sheets. The maximum limiting major true strain near necking fracture in ISF was found above the Nakajima's forming limit curve at fracture (FLCF) when lesser diameter of tool diameter is used (Centeno *et al.*, 2014). Gatea *et al.* (2018) studied the formability and fractures are compared using shear modified GTN model, Gurson–Tvergaard–Needleman (GTN) model and the Nielsen-T vergaard model with the stress triaxiality. In conventional die and punch forming the formability is affected by void nucleation, void growth and void coalescence as explained by Narayanasamy and Narayanan (2006) (Narayanasamy *et al.*, 2007) who experimentally investigated the microstructure, void nucleation, their growth, and coalescence during conventional forming of three different HSLA steel sheets of different thicknesses and Interstitial Free (IF) steel sheets. Forming limit diagrams (FLDs) are mostly based on strain measured at safe necking and fracture area.

Yin *et al.* (2008) electro impedance spectroscope (EIS) and potentio-dynamic polarization (PDP) were used to examine the corrosion rate at higher temperature the area ratio and effect in temperature on nickel and steel, was very high. Generally metal

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Superparamagnetism in $Bi_{0.95}Mn_{0.05}FeO_3$ - $Ni_{0.5}Zn_{0.5}Fe_2O_4$ multiferroic nanocomposites

Dhanalakshmi, B.; **Vivekananda, K. V.**; **Rao, B. Parvatheeswara**; **Rao, P. S. V. Subba**

Multiferroic nanocomposites of $x.Bi_{0.95}Mn_{0.05}FeO_3 + (1-x).Ni_{0.5}Zn_{0.5}Fe_2O_4$, for x values of 0, 0.2, 0.4, 0.5, 0.6, 0.8 and 1, have been fabricated using sol-gel autocombustion and solid state methods. Structural and microstructural studies reveal the formation of parent phases of perovskite and spinel, while ensuring proper mixing of two phases by showing clear grain growth in the composites, respectively. Magnetic (M-H loop) measurements show that there is an enhanced magnetic order in the nanocomposites. Besides, the investigated nanocomposite materials exhibit superparamagnetic behaviour with small coercivities in the order of 3-29 Oe in all the samples. This may be due to strong influence of both the phases on one another to modify the anti-ferro magnetic (AFM) order in manganese doped bismuth ferrite. The observed magnetic behaviour was attributed to nanoparticle nature of the composites. In order to ensure the same, crystallite sizes were estimated using Langevin distribution function as well as X-ray diffractometry (XRD), which lie in the range between 28.51 and 55.43 nm, and the obtained results show a good agreement between them. The interpretations of these results are obviously evolved from the structural contributions for ferroelectricity, antiferromagnetic spin spiral cycloid structure around the FeO_6 octahedra, weak ferrimagnetic exchange interactions between the cations located at A- and B-sites and the possible interplay between different ferroic orders.

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Keywords: Multiferroics; Nanocomposites; Magnetic moment; Langevin distribution; Crystallite size; Superparamagnetism

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TECHNICAL ARTICLE—PEER-REVIEWED

A Comparison of Fracture Limit Analysis on Titanium Grade 2 and Titanium Grade 4 Sheets During Single Point Incremental Forming

G. Yoganjaneyulu · C. Sathiya Narayanan

Submitted: 21 May 2019 / Accepted: 13 August 2019

Abstract The influence of tensile properties, void coalescence parameters, strain triaxiality $\left(\frac{\varepsilon_m}{\varepsilon_{eff}}\right)$ and its fracture limits for various spindle rotational speeds in single point incremental forming were compared for titanium grade 2 and grade 4 sheets. The microstructure reveals the presence of α and β phase particles, as was confirmed using x-ray diffraction analysis. Forming limit diagrams and fracture limit curves were plotted for the sheets and the results were compared for both titanium grade sheets. The void coalescence in fractured samples showed an improved fracture resistance for the titanium grade 2 sheets compared with the titanium grade 4 sheets. The void size, ligament thickness, void (*L*/*W*) ratio, d-factor, strain triaxiality and further void coalescence parameters were also compared. In all cases, because of their better ductility, the titanium grade 2 sheets exhibited better forming and fracture limits (void coalescence) than that of grade 4 sheets.

Keywords Titanium grade sheets · Forming limit diagrams · Fracture limit curves · Stress-based fracture limit curve · Fracture limit analysis · Strain triaxiality

Introduction

Incremental sheet forming (ISF) is an emerging forming process for small batch production and rapid prototype development. An ISF process progressively forms sheet metal into a pre-designed, three-dimensional shape using computer numerical control (CNC). This process is highly flexible and, with careful tool path programming, can achieve very complex shapes. Therefore, ISF has been widely accepted as a more promising forming process compared with the conventional processes such as deep drawing and stamping [1]. Titanium and its alloys are the most frequently used materials in the aircraft, orthopedic, marine and dental implant industries because these materials have a high strength-to-weight ratio and good corrosion resistance compared to those of steel and aluminum alloys. Ambrogio et al. [2] Proposed a novel variant of ISF technology in which a continuous current is supplied in order to generate local heating, allowing easier formability and lowering the forces required for the manufacturing of light weight alloys. Liu [3] has developed heat-assisted incremental sheet forming methods for deforming hard materials at elevated temperatures and also showed a clear improvement in the geometrical accuracy and formability during the heat-assisted incremental forming process. Belhassen et al. [4, 5] experimentally and numerically analyzed the damage and spring-back occurring during the flexible forming process. An elasto-plastic constitutive material model incorporating a nonlinear isokinematic, a von Mises' yield function, Lemaitre's ductile damage law and the hardening law was applied in numerical simulations. Greater rubber hardness was shown to result in sheet thinning that increased the damage and reduced the formability. The applicability of the ductile fracture criteria (DFC) was examined in relation to practical forming practices and incremental forming of aluminum alloys [6]. Jawale et al. [7] carried out a microstructural investigation of a polycrystalline copper sheet that had been incrementally formed to a truncated

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The Effectiveness of Human Resource Management Practices on Employee Retention– An Empirical Study of Commercial Bank of Ethiopia, Hawassa City.

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Abstract

Our strategic importance related to age and retention of employees is an organization this is important because not only the most talented and the best competitors, but also to protect the long-term benefits for themselves and for the people. Human Resources are a very valuable resource for any organization, and for any organization around the world. Therefore, it is not necessary to take the stairs for the wise of heart, to maintain the norm that gives life. HR organizations can effectively help stop important customers. The church branch of the Commercial Bank of Ethiopia, Hawassa, and intensely lives in a particular way, is headed down by competition, effort and billing risk. This study examined the effectiveness of sensitive HRM practical knowledge of TV retention in the branches of the Commercial Bank of Ethiopia in Hawassa. Specifically, life development opportunities, work environment, work-life balance, and employee engagement were rewarded for retention of impacted developers. Section of the plan with another follow-up study becomes Hawassa his cross. The study was conducted in 10 branches in the city of Hawassa. General sample, all employees. Stratified random sampling was used to select a selective sample of 156 employees out of 260; only 150 interviewers received six (6) poorly completed answers or less in the analysis. The total of 150 questionnaires used is 96.16%. Movement, keep an employee. When the balance between work and private life, and the participation of young people, human resource management workers to seek more accessions of new things, things that have been discussed before, then this competition can only not be maintained long. Improve the retention of employees on the banks of the river is recommended as a developer, to acquire them, please pay attention to the human momentum. If banks offer a certain degree of flexibility to reconcile life and compensation of employees, you employ them. It is also recommended that banks join forces and unite with academic research universities and other institutions to address issues that derive

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Priority towards Subjectiveand Experimental Framework inTeaching-Learning Process inEngineering Education forMillennial Learners

E. Laxmi Lydia, B. Arundhati, MadhusudhanraoVallabhaneni

ABSRACT: From the time of 20thcentury, the world has undergonecomplete change in the field of Engineering Education. Learning environment in Educational systemofMillennial's, for very short concentratedpeople who prefer interactive, experiential and collaborative learning,usually they are informal and choose to have friendly relationships with teachers. Educational system in engineering classes for such Learners with dynamic and technology driven people do not prefer long lectures anymore. The design objective is to understand the cognitive and social developments in easier way that outcome in faster learning, and also to redesign classrooms and other learning environments. So that Learners can learn more passionatelywith completeness in the topic/ subject and to make them self Learners.This paper provides a meaningful teaching objective that relates with real-life experiences, Lectures mixed up with methods like video clips, concept charts, and PowerPoint presentations with key concepts based on the summary, also creating collaborative subjective experiences with social networking platforms.Finally, this paper concludes bydiscussing the experiments being applied in our institution (VIIT) to make engineering education practicalby means of experimental learning.

Keywords: Engineering education, Teaching-Learning Process, classroom environment, Cognitive development.

I. INTRODUCTION

Generally, Education is a single word but brings responsible life with good knowledge, enhancing skills, following rules and transforming them. engineering education to engineersistoprovide them reach their expected educational goals. Engineering minds are full of imaginations, they try to learn interactively by getting feedback which leads to valid outcomes Educating Engineering students is not making them learn only existing facts but to train their minds. Young minds are like swords, when they set their minds on anything they try to achieve. Engineers with young and energetic minds play a crucial role play in the accomplishment of a nation. Therefore, Effective As every individual has not the same capacity of extracting knowledge from teachers, teachers must be aware of simple and attractive attention of children from a low level to high level. One of the procedures for educating students is Teaching- Learning process.

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It is anefficientsystematicorderto obtain predetermined targets and objectives. Millennial Learners are graduates who also try to analyze problems, using knowledge to develop a system. These learners like to communicate with their faculty directly and they wish to have more guidance from the faculty. They want continuous feedback and are lifelong learners. They are committed to their private self-learning and enhancement.

Millennial Learners:

Millennial learners are enforced to prosper with enhancing skills which are significantly essential in the present professional world. Teamwork establishes spark inside the millennial learners. This leads to the gain of knowledge and best communication skills to the millennial learners. Interacting with each other and instant feedback will be provided.

1. Having this group work, millennial learners enjoy learning and thus as a result, their outcome performance shows an admirable improvement.
2. More members of the group work, hands-on exercises that connect with technology providesa friendly learning environment. Modern technology has adopted "flipped classrooms" for millennial learners.
3. Learners are requested to understand the topic before giving the lecture on the next day. By this, the fundamentalbasis related to the concept could be understood by the students.
4. Based on the improvement of thelearning process, time consumption will be reduced for the students to listen long hours and also given chance to clear their doubts and tries to learn in a practical manner. Then the students will have a broad mind to discuss the real-time applications and moves towards the bottom of the subject.

II. LITERATURE REVIEW

(Wilson and Gerber, 2008)[2]: explained that millennial Learners are a type of learners who are very much interested to communicate directly with the faculty and expect to have their guidance and encouragement. They try to have faculty focus on them and to gain special personal concentration. They find themselves in a different world with great Tolerance level. A Classroom is mixed with a combination of all various cultured people. The classroom environment for the millennial learners is quite activating by joining them and getting them with most combinations of knowledge because they are very weak in self-management.
(Elliot -year and Sherri, 2012)[3]: explained about the millennial learners that they are affectionate to their parents more than to the popular personalities in 33% of the situations.

Personal Account

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Our Contributions in Synthesis of Diverse Heterocyclic Scaffolds by Using Mixed Oxides as Heterogeneous Catalysts

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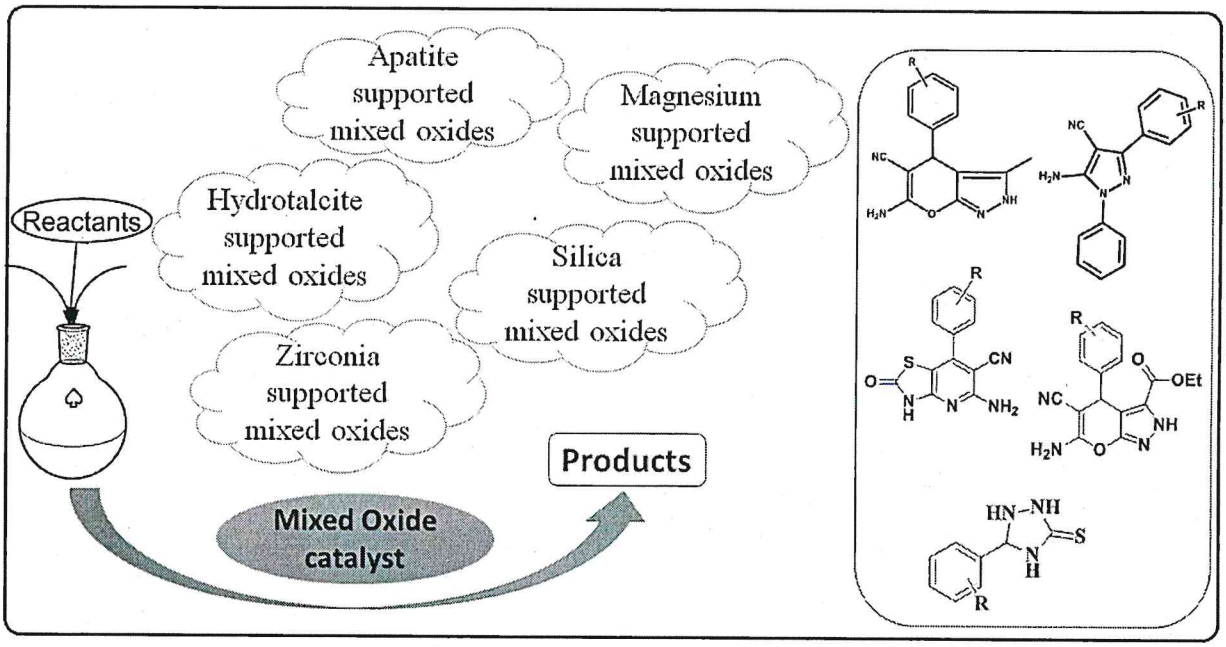

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Review

Characteristics of MOF, MWCNT and graphene containing materials for hydrogen storage: A review

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Hydrogen economy

ABSTRACT

Hydrogen is a generally abundant, safe, clean and environmentally apt alternative fuel, which replenishes the void generated by depleting fossil fuel reserves. The adoption of hydrogen as an energy source has been restricted to low levels due to the complications associated with its viable storage and usage. Existing technologies, such as storage of hydrogen in compressed and liquefied forms are not adequate to meet the broad on-board applications. The gravimetric energy density (120 MJ/kg) of hydrogen is three times higher than that of gasoline products, so solid-state hydrogen storage is advantageous. Metal-organic frameworks (MOFs), multi-walled carbon nanotubes (MWCNTs) and graphene are solid adsorbents majorly employed for efficient H_2 storage. The prominent features of MOFs such as permanent porosity, structural rigidity, and surface area are attractive and ideal for hydrogen storage. In addition, nanostructured carbon materials (MWCNTs and graphene) and their composites have demonstrated significant hydrogen storage capacities. Some important parameters for the success of the hydrogen economy include high storage density, adsorption/desorption temperature and cycling time. Cryo-hydrogen storage was achieved in MOFs and their composites with carbon structures, but storage at ambient temperature and acceptable pressures is a major hurdle. This review discusses various strategies and mechanisms in the design of adsorbents explored to improve H_2 storage capacities and afford opportunities to develop new sustainable hydrogen technologies to meet energy targets.

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Dr. Suresh Maddila received his Ph.D. from the Department of Chemistry, Sri Venkateswara University, Tirupati, India in 2010 and joined the School of Chemistry and Physics, University of KwaZulu-Natal, Westville campus, Durban, South Africa as an NRF-DST Innovation postdoctoral researcher. At present he is working as an assistant professor in GITAM University, Visakhapatnam, India. His present research interest contains green synthesis via multicomponent reactions, ozonation and metal-catalyzed synthesis. He received Carl Storm International Diversity (CSID) award, USA in 2015, Newton Fund and the Royal Society of Chemistry Fellowship (CSIR) award, UK & SA in 2015 and NRF-DST Innovation Research Fellowship award, South Africa in 2013.

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Review

A review on novel composites of MWCNTs mediated semiconducting materials as photocatalysts in water treatment

Kranthi Kumar Gangu, Suresh Maddila, Sreekantha B. Jonnalagadda *

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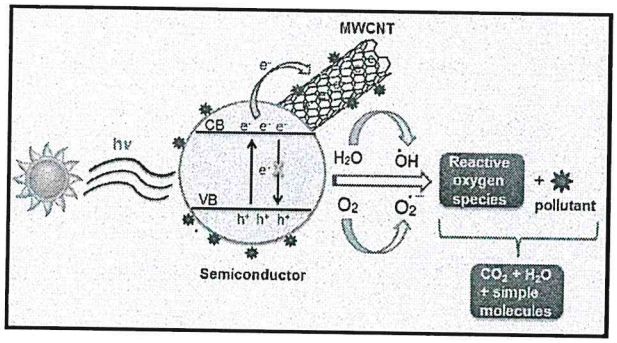
HIGHLIGHTS

- Review on MWCNTs/semiconductor composites as superior photocatalysts
- MWCNTs acted as good electron reservoirs and substrate adsorbents in the composites.
- MWCNTs retard recombination of photogenerated electron-hole pairs in composites.
- Higher MWCNTs composition impacts the photocatalytic activity of composites.
- Photocatalytic mechanisms in the generation of reactive oxygen species

GRAPHICAL ABSTRACT



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ABSTRACT

Many technologies were explored to eliminate the harmful pollutants entering water systems and to minimize their impact on environment. In general, photo-catalysis is one of the sustainable techniques with wider applications and semiconductors in particular were efficiently utilized in the photocatalytic degradation of pollutants. Semiconducting materials, such as TiO_2, ZnO, BiO, CdS, and Ag_3PO_4 are frequently used as photo-catalysts due to their suggestible band gap and structural properties. The generation of reactive oxygen species such as hydroxyl and superoxide radicals is the crucial factor in degradation of pollutant molecules. The rapid recombination of photo-generated electron-hole pairs impacts on the efficacy of semiconductors as photo-catalysts. The integration of properties of multi-walled carbon nanotubes (MWCNTs) with semiconductors is considered as imperative alternative strategy to boast the photocatalytic efficiency. The combinative merits of composites of MWCNTs and various semiconductor materials give new vista for water treatment and environmental protection. This review describes the scope of different types of MWCNT and semiconductor composites as photocatalysts and their structure-property relationships in oxidative degradation and mineralization of organic pollutants, in particular.

Contents

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Enhancing Security Features for IoT Devices by Integration with Block Chain Technology

B.Venkatesh, Ch. Srinivasa Reddy, Ch.V.Bhargavi

Abstract— System of bodily hubs or "matters" joined with hardware, programming, sensors, and linked to enact articles to move information from servers, included frameworks, or doubtlessly distinctive associated devices depending on a numerous correspondence foundations may be actualized with net of factors (IoT) version. IoT facts gathered from various sensors, hubs and government are moved to the cover over the net. The principle target of IoT protection is to ensure thriller of the statistics, and make certain the assurance of the consumer's statistics, frameworks, software program's facts substance, and smart machine's of the IoT, via manner of ensures the administrations accessibility of IoT organic gadget. The number one purpose of this exam article is to enhance protection highlights to IoT device becoming a member of with rectangular chain. The significance of Bit-coin the usage of rectangular chain innovation, which changed into at that factor set up for a few, financial nicely well worth exchanges because it have been. Anyhow, because of its Non-delivered collectively engineering, agile corruption and cryptographic defend benefits, for instance, pseudonymous personalities, statistics trustworthiness and take a look at, scientists and safety professionals round the sector are concentrating on the rectangular chain to decide coverage and protection issues of IoT. In this article, we have positioned a few right down to earth problems which can be associated with the becoming a member of of IoT devices with the square chain. At closing, we endorse a course ahead to determine a part of the large difficulties to the rectangular chain's utilization in IoT based totally software program.

Index Terms— IoT, Sensors, Block Chain, Integration

I. INTRODUCTION

There was intense interest and advancement within the internet of factors (IoT) based totally administrations round the arena, specially in wellness division, administrations and application introduction and in especially thick areas for the usage of IoT. It's far required to enroll in billions of gadgets by 2020 [1]. Global's financial system and individuals' existence may be improved by way of the usage of IoT. Preference is to make approximately USD 7.1 trillion commitments to the worldwide financial system through 2020 [2]. Be that as it may, within the meantime, IoT devices are unprotected because of great security highlights slips by simply as clients' protection worried, that are known to the designers but security in IoT devices is both disregarded or dealt with as an addendum [3].

It's far run of the mill for the eventual destiny of IoT that its sensible model is restored from steeply-priced, common and over-curved integrated layout to an automated and self-guided decentralized model, this type of transformation will give wide scope of usage, low foundation price, independence for devices, at ease sports in a trustless state of affairs, customer driven safety, get to manipulate and extra towards gadget assaults.

Square chain is being considered as one of the realistic technique to renowned required decentralization and offers structures that are disgraceful in such way [4].

Notwithstanding the fact that rectangular chain changed into before everything considered as a economic trade conference as Bit coin, however due to its cryptographic protection advantages, as an example, pseudonymous personalities (IDs), decentralization, adaptation to non-important failure, change honesty and affirmation, professionals and protection investigators around the world are concentrating at the square chain to decide protection and safety problems of identified with IoT.

In spite of the reality that an average Bit coin square chain confinements are, as larger diploma of usage, delay occurred within the change take a look at and large sparing capacity, spillage construe for protection and basic degree count and the best desires, that square chain innovation must be investigated profoundly earlier than it has a tendency to be performed properly and ably in an IoT associated software's.

II. PREFERRED CONCEPT OF IOT

We centered on giving a brief depiction of the IoT innovation on this level,

A. IoT Devices

In earlier trade it became stated, the IoT will cover severa facts association systems wherein the hubs are conveying utilizing net with every other. "

It's alluded as both Node or .substances within the workplaces are typically called as utility devices, they displayed severe traits. [5].

a. Identity: every IoT system need to display an inexpensive strong point, just like an internet Protocol rendition 6 (IPv6) cope with for you to talk amongst all objects [6].
b. Sensing: The detecting strategies are actualized to secure statistics from the modern-day actuators around the hubs correspondence [26].
c. Communication: communique implies the between connection strategies which can be applied for you to companion with all hubs using items with each different [6].
d. Computation: The calculation structures are gotten to take a shot on the records that is procured from the hubs [7].

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Microstructure and mechanical properties of Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy

G. Yoganjaneyulu [a], K. Anand Babu [b], G. Venkata Siva [b], S. Vigneshwaran [a], C. Sathiya Narayanan [a]

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Highlights

- Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy was developed by liquid metallurgy route.
- Aged alloy grain size shows fine precipitates as compared to cast alloy and solutionized condition.
- Al – 6 Zn – 3 Mg – 2 Cu alloy microstructure shows pseudo-partial grain boundary (GB) wetting phenomena.
- Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy hardening behaviour were studied at different conditions.
- Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy enhanced the mechanical properties at aged condition.

Abstract

In this current research work, Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy was developed by liquid metallurgy route. Microstructure and mechanical properties of Al – 6 Zn – 3 Mg – 2 Cu – 0.5 Sc alloy were noted at different conditions. Solutionized alloy shows lower hardness than that

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Enhancement of structural and mechanical behavior of Al-Mg alloy processed by ECAE

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ABSTRACT

The prismatic bars of Al-4.5%Mg alloy shielded with and without copper sheets are processed by equal channel angular extrusion (ECAE) and investigated the effect of casing on its structure and mechanical behaviour. The ductile nature of Cu shielding reduces the required amount of pressing force significantly and develops the defect free homogeneous ultrafine grain (HUFG) structure in the covered billets. The uniform distribution of strain imposed on the billets strongly influenced the structure and mechanical properties. The micro-hardness and tensile strength of the alloy shielded with Cu increased by 152% and 46% respectively with less reduction in % elongation.

Selection and peer-review under responsibility of the scientific committee of the 2nd International Conference on Applied Sciences and Technology (ICAST-2019): Materials Science.

1. Introduction

The requirement of metals and alloys with high strength to weight ratio is increasing in various engineering fields. The superior formability and low density of aluminum and its alloys promotes their consideration to many engineering applications while the low strength and hardness of these materials restrict the usage to a limited number of applications. In recent years severe plastic deformation (SPD) techniques are used as the strengthening mechanisms of the material through which ultrafine grain (UFG) structure can be easily produced by imposing a severe strain in it. The formation of UFGs improves the mechanical behaviour of the work material as per Hall-Petch relation [1]. ECAE is a well known SPD method used to develop UFG structure with no cross-sectional changes in the work material. A specially designed die with two similar channels of square or circular or rectangular cross-sections having channel intersection angle (Φ) ranging from 90° to 135° is employed to conduct ECAE experimentation. A well lubricated billets are pressed by a similarly cross-sectioned punch through the entrance channel and the billets will deforms severely at the intersection of channels. Even it experienced the high amount of strain the cross-section of the material collected from the exit channel is similar to the cross-section of the billets inserted in the entrance channel. The distribution of the strain imposed on work material is significantly affected by the type of processing route (A, B_A, B_C and C), back pressure and the dead metal zone (DMZ) formation at the outer corner of the die.

The angular rotation of the billet about its axis between two successive passes describes the type of ECAE processing route as: A – no rotation, B_A – 90° revolution in same sense, B_C – 90° revolution in alternate directions, C – 180° revolution. Rifai et al. [2] investigated the route effect on structure, electrochemical and mechanical behavior of CNFeCr alloy. They reported that the overall grain fragmentation is mostly observed in the alloy processed using the route B_C as compared to the route A and route Djavanroodi et al. [3] introduced a novel technique in ECAP to produce UFGs in tubular copper specimens. They found the route effect on improvement of hardness and its homogeneity. For that they inserted rubber pads in the pure copper tubes and pressed through 90° bent channels at laboratory conditions up to three passes in the above mentioned four routes. They observed the uniform distribution and maximum improvement of hardness along the transverse planes. Panigrahi et al. [4] conducted the ECEP of square cross-sectioned pure Al (AA 1050) billets using a square die with channel angle 90° using back pressure in the range of 0–60 MPa for the single pass at room temperature. They noticed that by increasing the

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A Dynamic Business Model for IT Industries

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Abstract

The business models is summarized into two distinct approach by the static and also the transformational. This aim of proposes a 3rd approach for business, particularly a dynamic approach to business models and the versatile and adaptive of business models is developed more supported the commercial network and structure approach. The business model is embedded system in business contents and business networks model, and relies on changes within the business setting. Because of these mutual dependent between business network peoples, and within of the recent capabilities and the business models of resources, the business model might also depend upon production and co-production, collect and share, and be utilized by the numerous actors embedded system in worth networks business of IT industries. This differs from the normal read, during which corporations produce worth severally of every different. A network model, flexible, and co-produced business model works a unique tool for business model environments.

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A Study On Tools And Techniques For Business Models

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Abstract

In this new time of digitalization, cyber-attack are constrained by inventive, wise and profoundly expert people. Continuous synchronization enables an attacker to bit by bit get familiar with the objective system, adjust to any protective measures, and advance the attack after some time. On the off chance that we have not actualized any system security risk recognition benefits from our association, it will uncover the closure of our forthcoming overwhelming voyage. System security threat identification centers around individual stages, frameworks, systems, endpoints or practically some other IT asset. System security threats recognition is juvenile (and remarkable) in real digital security tasks. By and by digital protectors by and large rebate these methodologies for mark location and instinct. The progression for this is most likely special, including getting designs, chance hunger and choice focuses. We require a total comprehension of all parts of the information age process. Information science will deliver specialized information that takes into consideration "strategic"

From a Business Point of View Study the Importance of Event Management Services of Specific Company

Phong Thanh Nguyen

Quyen Le Hoang Thuy To Nguyen

Vy Dang Bich Huynh

E. Laxmi Lydia

K. Shankar

Palabras clave: Organizing, event management, execution, advertisement

Resumen

Organizing, planning and execution of live events are including in event management. In current days a number of event management services are available, it include a conference, a product or brand launch, a concert, an exhibition, a wedding planning and many more. It can consider that event management is the extended type of advertisement so it will become more attractive. With a survey it is projected that as separate industry it grows 30% per annum. This paper studies the different factors of event manage- ment and importance of with business point of view.

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Green Cloud Computing Ideas with Security Threats and Solutions

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Abstract

Cloud Computing gives the capacity to utilize computing and capacity assets on a metered premise and lessen the interests in an associations processing foundation. Cloud computing has been on the ascent for a long time yet the threats to this innovation are currently more unambiguous than any time in recent memory. On the off chance that the business is to be legitimized by the concerned native it should initially defeat a genuine of potential threats, past just cyber-crime. Peoples are not very much aware about the security issues and the dangers worried about cloud computing. It is by all accounts a tremendous boundary to the selection of cloud administrations. The data in regards to how to oversee information security inside a cloud, information protection in the cloud, cloud security principles, the administrative and consistence ramifications of relocating to a cloud model, and so on ought to be surely known before receiving the cloud administration and arrangements. This paper introduces a comprehension of this intricate situation and explains every one of these issues by distinguishing and ordering the fundamental security concerns and arrangements

The Role of Risk Management and Business Control for a Small Business

Syaifuddin Syaifuddin

Elena A. Fedchenko

Phong Thanh Nguyen

E. Laxmi Lydia

K. Shankar

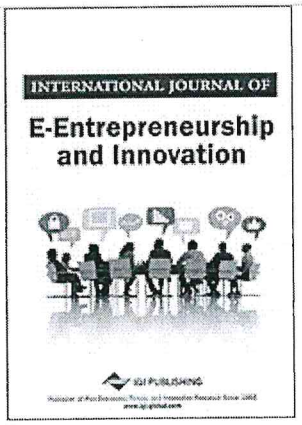
Palabras clave: Risk Management, Risk, Small Companies, Enterprise Risk Management

Resumen

Now a days, economic environment is growing widely, so the risk man- agement become popular as compare to earlier year. The growth of any economy is always related to these small and medium size enterprises. Business management is most important factor in any type of business, as it relates to growth of business. Any business always comes with mul- tiple risk factors in market place. So risk management is important for maintaining balance of our business and there growth. Business risk can destroy small business, so the risk management is important to prevent business. In the paper, the risk management process is studied and business controls are introduced to prevent small and medium size company. It has given effective solution for business control in market- place. This paper proposed the role of risk management in corporation, internal and external risk management, and project risk and business control management process.

Biografía del autor/a

Syaifuddin Syaifuddin



Paraphernalias of Entrepreneurship – A Contemplating Outlook

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Abstract

Entrepreneurship is the impetus for development of any nation. Entrepreneurship has been the modern way of the industrialisation process which revolutionised the present day of living. In today's world, entrepreneurship has become an act of inspiration which eventually has had a compounding effect on society, and nations as a whole, benefiting mankind. The world is going through a new phase where people no longer just depend on industries to thrive, but come up with an idea reinventing themselves, eventually establishing a start-up. The act of reinventing oneself is nothing but an act of entrepreneurship which is believed to all businesses. The present article deals with ubiquitous issues ranging from entrepreneurial outlook in India and globally, factors influencing entrepreneurship, Global scenario of ease of doing business and many more issues which needs to be prioritised to set the pace for entrepreneurship to flourish.

Article Preview

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Introduction

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Probabilistic Linear Programming in Project Management

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Abstract

The aim of this paper is to develop a probabilistic linear programming that can help the Project Manager (PM) with solving the project network problems. In this paper, we first revisit the related papers and focus on how to develop a probabilistic linear programming model to find critical activities, critical path and total duration of a project. This model is applied on four different types of project networks with eight different activity times for each activity in the project network of each type. The mean estimate of each activity is calculated using existed time estimates which are obtained from various continuous distribution methods with continuous random variable as activity times and calculated critical path with total duration for 32 project networks. The proposed model is an alternative to traditional Program Evaluation Review Technique (PERT) method to find critical activities, critical path and total duration of a project.

Mathematics Subject Classification: 90C05, 60E05

Keywords: PERT, Critical path, activity times, project network

INTRODUCTION

A project is classically defined as a set of activities which must be performed according to some precedence constraints requiring that some activities cannot start before the completion of some others. When duration of the activities are well known, critical path method (CPM) [1] (Kelly and Walker, 1959), provide the minimal project duration and identify the critical paths. Since the late 1950s, Critical Path Method (CPM) techniques have become widely recognized as valuable tools for the planning and scheduling large scale projects. In many situations, projects can be complicated and challenging to manage. When the activity times in the project are deterministic and known, CPM has been demonstrated to be a useful tool in managing projects in an efficient manner to meet this challenge. However, there are many cases where the activity times may not be presented in a precise manner. In real world, the durations of particular project activities cannot be precisely defined. This is the way the original Program Evaluation Review Technique (PERT) has been developed [2,3](Malcolm et al.,1959, Clark,1962). PERT is the most widely used management technique for planning and coordinating large scale projects. Since estimation of operation times of activities in a project network is difficult, therefore it is important to compute the variance of the project completion time in a network

The creators of PERT considered beta distribution

$$f_Y(y)=\frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)}\frac{(y-a)^{\alpha-1}(b-y)^{\beta-1}}{(b-a)^{\alpha+\beta-1}}, a<y<b,\ \alpha,\beta>0.$$

as an adequate distribution of the activity duration y where α and β are parameters of the beta distribution and the interval (a ,b) is the domain of y.

They suggested the estimates of the mean and variance values

$$\mu=\frac{1}{6}(a+4m+b),$$

$$\sigma^2=\frac{1}{36}(b-a)^2,$$

where a ,m and b are the optimistic, most likely and pessimistic activity duration estimates respectively. In PERT, when a little sample information is available to 'fit' the distribution a , m and b are subjectively determined. PERT approximations are developed using some probability continuous random variable distributions.

In Section 2 , we briefly present PERT approximations using beta, normal, lognormal,and biparabolic distributions [2-8]. In Section 3, we develop a new linear programming model using PERT approximations to find critical activities, critical path and total duration of a project network.. In Section 4,the proposed probabilistic linear programming model is applied on thirty two project networks of four different types (i) Network –I,(ii) Network –II, (iii) Wheatstone Bridge,and (iv) Double Wheatstone Bridge as represented in Fig. 1 to obtain critical activities, critical path and total duration of a project network.

2. PERT APPROXIMATIONS USING BETA, NORMAL, LOGNORMAL, AND BIPARABOLIC DISTRIBUTIONS

In this section, some PERT approximations (mean and variance) using beta, normal, lognormal, and biparabolic distributions are reviewed and presented in Table I. Here, the activity times for the project network are considered to be continuous random variables with three parameters a , m and b .

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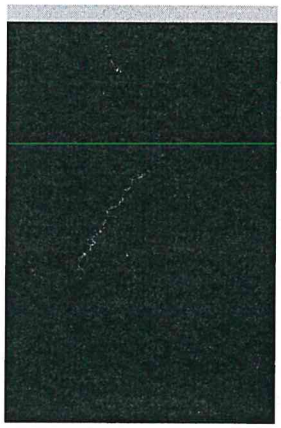

ON A CLASS OF SP-KENMOTSU MANIFOLDS ADMITTING THE QUARTER-SYMMETRIC METRIC CONNECTION

S. Sunitha Devi, I. V. Venkateswara Rao and K. L. Sai Prasad

Abstract:

We consider semisymmetric and pseudosymmetric SP-Kenmotsu manifolds admitting the quarter-symmetric metric connection and prove the non-existence of pseudosymmetric SP-Kenmotsu manifolds with respect to the quarter-symmetric metric connection. At the end, we construct an example of 3-dimensional SP-Kenmotsu manifold admitting the quarter-symmetric metric connection and show that it is semisymmetric and its scalar curvature is constant with respect to the quarter-symmetric metric connection.

Keywords and phrases:

Ricci tensor, semisymmetric, pseudosymmetric, quarter-symmetric metric connection, η-Einstein manifold.