ICATCSIT –18

INTERNATIONAL CONFERENCE ON ADVANCED TRENDS IN COMPUTER SCIENCE & INFORMATION TECHNOLOGY

Dept. of Computer Science and Technology

Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh

24th – 25th August 2018

Organized by

Labtech Innovations™

Guduvancherry, Chennai, Tamil Nadu

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Preface

The *"International Conference on Advanced Trends in Computer Science & Information Technology (ICATCSIT-18)"* is being organized by *Department of Computer Science and Technology, Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh* during 24th - 25th August 2018 in association with **Labtech Innovations**TM.

Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh has excellent & ambient infrastructure with well-equipped laboratories. Well-qualified, motivated, and dedicated faculty members are serving in the Institute. Students are encouraged to actively participate in National and State level co-curricular and extracurricular activities. **GIST Carving Careers** strongly believes that only skilled individuals have the foot presence in the current global market and such resources are the assets to any organization.

The *"International Conference on Advanced Trends in Computer Science & Information Technology (ICATCSIT-18)"* was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of *"Advanced Trends in Computer Science & Information Technology"* which were given international values by *Labtech Innovations TM.*

The International Conference attracted over 136 submissions. Through rigorous peer reviews 82 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our local organizing Committee, National and International Advisory Committees.

Shri. N. Sudhakar Reddy
Secretary & Correspondent,
Geethanjali Institute of Science and Technology,
Kovur, Nellore, Andhra Pradesh

I express my profound happiness and great sense of pride in this memorable occasion of releasing a souvenir in connection with the "**International Conference on Advanced Trends in Computer Science & Information Technology" ICATCSIT -2018**.

I am very much delighted to acknowledge the enthusiastic response of GIST to the emerging trends and developments in the modern Computer Science and Information Technology through the conduct of such academic activities of great technological significance, which serve as a useful platform for sharing and exchange of knowledge and creative ideas that have a bearing on modern technology.In this context, I express my earnest optimism that this mighty technological event will turn out to be a very enriching, enlightening academic experience that will ignite the creative spark of the young minds while sharpening their technical competencies.

Extending my best wishes to the organizers of the event.

Shri. N. Sudhakar Reddy,
Secretary & Correspondent

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Geethanjali Institute of Science and Technology, Kovur, Nellore, AndHra Pradesh
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Prof. Dr. G. Subba Rao
Principal,
Geethanjali Institute of Science and Technology,
Kovur, Nellore,
Andhra Pradesh

Dear Participants,

It is an act of great joy and gratification for me that the International conference is being organized at GIST on the theme "**International Conference on Advanced Trends in Computer Science & Information Technology" ICATCSIT -18**" with the objective expanding the scope of technical vision of the young techno savvy internet generation through a productive beneficial interaction with technical experts, scientists, eminent personalities drawn from different parts for the country.

Conferences, symposia, workshops, technical discourses and seminars constitute an integral part of qualitative Engineering Education. True to its mission of being a vital part in the technological advancement of the nation, GIST is opening new vistas for engineering aspirants by organizing a national level conference, which I am extremely hopeful will be a felicitous blend of vibrant minds and youthful thoughts marked by creative zeal and innovative spirit in the stream of computer science and engineering. On this momentous occasion I extend my warm appreciation and best compliments to the driving forces who have embarked upon this enlightening initiative

Prof. Dr. G. Subba Rao
Principal,
GIST, Nellore

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Dr. Y. Jahnavi
HOD, Dept. of CSE
Geethanjali Institute of Science and Technology,
Kovur, Nellore,
Andhra Pradesh

The ubiquitous presence and ever evolving multi-dimensional computer applications in every walk of our lives compel a more focused approach to the teaching/ learning / research strategies to be implemented in the Technology Institutions. In an attempt to bring together diverse thought processes and create an interactive platform for articulating new concepts, thoughts and ideas, GIST envisaged this International Conference to explore several "**International Conference on Advanced Trends in Computer Science & Information Technology" ICATCSIT -18**

The conference aims to bring together researchers, scientists, engineers, industry experts and academicians on to a common platform for fruitful exchange of ideas and expose the young aspiring and budding engineers to the current and future trends in the area.

We fondly hope that the time furnished for the intellectual interactions be properly utilized by the participants for furthering their domain knowledge and trending approaches in the field of computers.

Wish you all the Best !!!.

Dr. Y. Jahnavi
HOD, Dept. of CSE

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General Chair Message

Dr. Subhransu Sekhar Dash
Professor and Head
Department of Electrical Engineering
Government College of Engineering
Keonjhar- 758002, Odisha

Message

The aim of conference is to provide an opportunity for exchanging technological advancement and scientific research in the Engineering & Technology and bring Engineers, Researchers, Academician, Scientist, Practicing Engineers and Industrialist on a single platform for the brainstorming of the fruitful experiences and ideas.

I would like to thank all the participants for their contribution to the conference proceedings. Behind the success of the whole work, I cannot forget the unconditional support of all the HOD, faculty members, organizing and advisory committee members of Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh.

My special thanks to Chairman, Correspondent and Principal, who has given me a chance to work and become a part of this conference. It is our pleasant duty to acknowledge the support and cooperation from the office bearers of Labtech Innovations and the Management of Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh for organizing this conference.

Dr. Subhransu Sekhar Dash

ICATCSIT-18
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Er. Sunil Kumar Thakur
Founder President & CEO,
Labtech Innovations ™

LABTECH INNOVATIONS

On behalf of Labtech Innovations ™ in association with Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh. I am delighted to welcome all the delegates and participants around the globe to Geethanjali Institute of Science and Technology, Kovur, Nellore for the "**International Conference on Advanced Trends in Computer Science & Information Technology (ICATCSIT-18**)" Which will take place from 24th - 25th August 2018.

The various topics being dealt with at this conference encompass the spectacular development in the above related fields. It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

Organizing such an event at this point of time reinforces our objectives of creating an atmosphere for the exchange of ideas for development.

I wish this conference a grand success.

Sincerely,

S. K. Thakur

Er. Sunil Kumar Thakur

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ICATCSIT - 2018

International Conference on Advanced Trends in Computer Science & Information Technology

Keynote Speakers

Dr. Subhransu Sekhar Dash
Professor and Head
Department of Electrical Engineering
Government College of Engineering
Keonjhar- 758002
Odisha.

BIOGRAPHY

Dr.Subhransu Sekhar Dash received his Engineering Degree from Institution of Engineers (India) and M.Tech from U.C.E, Burla, Odisha in 1994, and 1996 respectively. He received the Ph.D. degree in Power Systems Engineering from the Electrical and Electronics Engineering Department, Anna University, TN, India 2006. Since 2006, he is working as a Professor in the Department of Electrical and Electronics Engineering, SRM University, Tamil Nadu, India. Presently working Professor and Head, Department of Electrical Engineering, Government College of Engineering, Keonjhar- 758002, Odisha

He was a Research Fellow at the University of Wisconsin, USA during 2013. He was also a visiting professor at Francois Rabelais University, POLYTECH, Tours, France .He has over 20 years of research and teaching experience in electrical power engineering, particularly in renewable energy sources Integration, distributed generation, control of power electronic systems, DC/DC converters, smart grid. Dr S S Dash has published over 175 technical papers in refereed journals, 3 book, and 16 book chapters.

Dr. S. S Dash has supervised 19 PhD students, 45 post graduate and 55 graduate students .He is having three patents in the field of renewable energy. He is reviewer and editor of many reputed international journals. He has organized more than 10 international Conferences in association with IEEE and Springer and delivered as lectures more than 100 colleges.

I am sure that the interaction of Engineers from the Industry and Academic Institution will go a long way in knowledge sharing to help engineering students to grow and compete globally. The conference will provide a plat form for exchanging ideas and create networks to developed R&D.

I convey my warm greetings & best wishes to all the participants and a great success.

Dr. Subhransu Sekhar Dash

ICATCSIT-18
Department of Computer Science and Technology,
Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh
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PROF. BILAL SALIH ABED ALHAYANI, Ph.D.
Dept. of Electronics Ttelecommunication Engineering
Yıldız Technical University
University in Istanbul, Turkey

BIOGRAPHY

Prof. BILAL AL-HAYANI   received the B.Sc. degree in Laser Engineering from university of Technology –Baghdad, Iraq , and the M.Sc. degree in electronics and telecommunication engineering from University of Pune ,India from 2011 to 2013 he was joined in Ph.D . research student in 2014 in electronics and communication Department in Yildiz Technical University ,Istanbul, Turkey . His general research interests lie in signal processing and communication theory and signal coding on wireless communication and image processing specific research area include cooperative communication techniques.

I am very happy that through this conference, our teachers and students will get an opportunity to interact with experienced scientists, research scholars, renowned people in the field of engineering of national and international repute. I congratulate the Principal, Vice-Principal, Convener, Associate Professor of Computer Department and all the HODs/Dean, faculty, staff and student volunteers of Department of Computer Science and Technology, Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh for organizing this conference.

PROF. BILAL SALIH ABED ALHAYANI

ICATCSIT-18
Department of Computer Science and Technology,
Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh
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Keynote Speaker Profile

Dr. K.Saravanan
Associate Professor
Department of Electrical and Electronics Engineering
SRM IST,Kattankulathur – 603 203,
Tamilnadu, INDIA

BIOGRAPHY

Areas of Research Interest :
Power Electronics and Drives, Renewable energy Resources

Awards and Honors
- Fellow, Institution of Engineers (India) Kolkatta
- Life Member in ISTE
- Member in ISCA

Prof. Saravanan K received his B.E. degree in Electrical and Electronics Engineering from AlagappaChettiar College of Engineering and Technology, Madurai Kamaraj University, Karaikudi, Tamilnadu, India in 1998. He received his M.E. degree in Power Electronics and Drives Engineering from Anna University ,Guidy Campus, Chennai, Tamilnadu, India in 2001.He has Completed his research in Electrical Engineering from JNTUK Kakinada- AP-India in 2018 .At present, he holds the post of Associate Professor in EEE at SRM IST. He has published several technical papers in national and international proceedings and journals. He is having five patents. He is reviewer of reputed international journals. His current research interests include the Renewable Energy Resources.

Dr. K.Saravanan

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Department of Computer Science and Technology,
Geethanjali Institute of Science and Technology, Kovur, Nellore, Andhra Pradesh
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International Conference on Trends in Computer Science & Information Technology

(ICATCSIT - 2018)

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- ❖ Anandita Goswami

DIFFERENT ENCODING AND DECODING TECHNIQUES OF ECG SIGNAL FOR EFFICIENT TRANSMISSION - A SURVEY

Ms.Gayathri.R
Assistant Professor, Department of Electronics and Communication Engineering,
Sri Ramakrishna Institute of Technology, Coimbatore-641010, Tamilnadu, India

Dr.K.Sheela Sobana Rani
Associate professor, Department of Electronics and Communication Engineering, Sri Ramakrishna Institute of Technology, Coimbatore-641010, Tamilnadu, India

Abstract:
In the present scenario hearts abnormal condition shows a threat to human beings. This signal contains information about the heart. The disease that affects the heart is identified by the P-QRS-T wave shape, size and their time intervals between its various peaks. ECG signal is degraded by dissimilar noises of high and low frequencies which causes wrong interpretations. This paper presents a survey of how signal is aimed to its transmission using different coding and decoding techniques. ECG signal is considered as a major issue and loss of data transmission occurs frequently. However, their inadequate computational power carry out the use of several encoding techniques grounded on a lesser number of digital computations. Therefore this paper focuses on certain encoding and decoding techniques of ECG signal for resourceful transmission.

Keywords— Types of ECG, ECG diagnoses, noises in ECG Signal, QRS detection, denoising techniques, wavelettransform, encoding and decoding techniques, IIR-FIR-adaptive filters.

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1 | P a g e

COMPARATIVE ANALYSIS OF MECHANICAL PROPERTIES ON NATURAL FIBER (CARYOTA URENS, GIGANTOCHLOA HASSKARLIANA) REINFORCED POLYMER COMPOSITE

Anbazhagan.V.N
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Edwin Raj. R
Professor, Mechanical Engineering, St.Xavier's Catholic College of Engg, Tamilnadu, India.

Abstract: The composite materials are replacing the traditional material, because of its superior properties such as high tensile strength, low thermal expansion, high strength to weight ratio. The developments of new materials are on the anvil and are growing day by day. Natural fiber composites became more attractive due to their high specific strength, lightweight and biodegradability. In this project, natural fiber reinforced polymer composites is developed in two ways that is treated and non-treated by using two different natural fibers and their mechanical properties such as tensile strength, flexural strength, impact strength and hardness test are evaluated. At the end properties of the both strength of treated and untreated natural fiber reinforced polymer composite are compared and evaluate which one is the best and strengthen natural fiber reinforced polymer composite.

Keywords: Natural fiber, Caryotaurens, Gigantochloa Hasskarliana, Polyester

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2 | P a g e

A STEGANOGRAPHY ALGORITHM FOR HIDING DATA IN AN IMAGE BY ENHANCED LSB SUBSTITUTION METHOD

M.N.Jayaram 1,
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M.Abhishek 2,
Prabhava 2,
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2Final year B.E students, and Dept. of E&C, S.J.C.E, Mysore -570006

Abstract The art of information hiding has been around nearly as long as the need for covert communication. Steganography is art and science of invisible communication
which arose early on as an extremely useful method for covert information transmission. One of the most important factors of information technology and communication has been the security of the information. For security purpose the concept of Steganography is being used. Our paper deals with image steganography. This paper explains about how a secret message can be hidden into an image using the improved least significant bit substitution method that makes use of randomization
for hiding data and minimizes the chances of detection. Several problems arise among the existing LSB-based image steganographic schemes due to distortion in a stego image and limited payload capacity. Thus, a scheme has been proposed and developed with the aim to improve the robustness of the embedded information, increase payload of the secret data, by ensuring data integrity and also retaining the quality of the stego-image produced within an acceptance threshold.

Keywords: Security, Steganography, Least Significant Bit, Decryption, Encryption, Stego-key.

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REAL TIME ARRHYTHMIA ANALYSIS

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ABSTRACT
According to latest medical survey cardiac issues are increasing continuously. It becomes extremely important to detect the possible cardiac related issues at the early stages. In medical terms irregular, abnormal and asynchronous heart rhythm are called as arrhythmia. Real time Arrhythmia can be made possible by analyzing the shape of the Electrocardiography (ECG) signals and also involves computational complexity because of various dependent factors. It becomes important to extract clean and unaltered ECG signal to analyze the arrhythmia. This analysis is at real time is most challenging part which involves development of some accurate and complex algorithm. This analysis in real time requires accurate combination of few existing algorithm and customized algorithm which makes path to a new algorithm proposal. This paper demonstrates the Real time multiplexed and moving window baseline wandering removal and arrhythmia analysis algorithm. This algorithm involves usage of traditional Pan Tompkins algorithm to obtain the positions of QRS complex, algorithm is expanded to remove the motion artifacts such as baseline wandering. Baseline wandering of the signal is nullified by implementing moving array memory technique along with estimation of midpoint of moving ECG signals. Baseline wandering removed signals are analyzed for irregularity in real time using time multiplexed signal processing technique. If the signal is not a Normal sinus rhythm (NSR) then the different kinds of arrhythmia are estimated. Obtained signal is NSR then there will be no signal processing. If the signal is found to be non NSR, signal is taken for the further processing to detect the kind of arrhythmia. Different of arrhythmia detected based on its morphology, energy, power of the signal, also the signal is analysed in frequency domain and checked for periodicity and randomness.

Keywords—: Arrhythmia, Electrocardiography, baseline wandering, Pan Tompkins algorithm, Normal sinus rhythm, QRS complex, power spectral density.

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TEXT EXTRACTION FROM NATURAL SCENE IMAGES USING ADAPTIVE METHODS

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Abstract— Text extraction refers to the process of separating text region from a given image. Scene text extraction is more challenging than document test extraction because of degradationssuch as shadows, reflections from background surface, and uneven lightening conditions. In this paper, we propose an adaptive method for detecting and extracting text from natural scene images. This method is robust against the shadows and uneven lighting conditions. The proposed methoduses adaptive thresholding technique to binarize image and smoothen degradation factors mentioned. Canny edge detection is used to obtain edge image and Block operation of localization is used to remove non-text area from image. Connected component analysis is used forextracting text from image. The work is applied onimages without and with shadows and uneven lighting conditions. Experimental results showthat the performance of the proposed approach is robust for both.It was observed that approx. 94% of images were correctly detected in images without degradations and93% of images were correctly detected in images with degradations.

Keywords—Adaptive thresholding; edge detection; connected component analysis.

IMPROVING SMART HOME SECURITY

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ABSTRACT

Smart Home gives you access to control your home by automating the lights and other electrical appliances inside your home. In this work we proposed logic based security method to improve the smart home security. Two access points are identified. One is primary access point and the other is secondary access point. The main door act as a primary access point to the home as it will be always used by the occupants to enter/exit the home. The other doors such as balcony or windows are the secondary access points. We use sensors and microcontrollers to identify the user movement near the access points and identify different states by which logic based security method is implemented. Also we develop an application for android Smart phone to perform Identification, Verification and Authentication of the inhabitant. The status of the home is monitored using the application such as state of the door, number of person inside the home and state of the home. Whenever intruder is identified alert messages are sent to the authorized users.

Keywords - Smart home, Home Automation, Smart home security, Internet of Things.

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DESIGN AND ANALYSIS OF ENERGY EFFICIENT MAC PROTOCOL FOR WIRELESS SENSOR NETWORKS

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Abstract
For wireless sensor networks reducing the consumption of energy source has turn primary motivation for researcher. Energy efficient measures are essential at node level as well as process level in order to achieve fast transmission, minimum delay and least energy digestion. In wireless networks, radio operation is responsible for maximum energy breakdown. The MAC layer primarily handles channel and radio communications. The work carried in this paper, mainly proposes a novel scheme MD-SMAC (Modified Sensor MAC) at MAC layer that results in minimization of energy consumption in the wireless sensor networks. Our proposed scheme basically emphasize on sleep and listen schedules of the sensor nodes specially the periodic synchronization phase. Moreover, unlike SMAC, the nodes set aside in communication need to wake up less frequently allowing energy conservation in remaining sensor nodes. It results in preserving not only energy constraints but also packet delivery, throughput and delay. For simulation we have used NS2.35 tool and the experimentation results reveals the MD-SMAC scheme as effectively enhancing energy efficiency over S-MAC and demonstrate the enhancements by representing significant performance.
Keywords- MD-SMAC protocol, energy efficiency, SYNC period, Wireless Sensor Network

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IMINE INDEX A GENERAL AND COMPACT STRUCTURE PROVIDING TIGHT INTEGRATION OF ITEM SET EXTRACTION

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Abstract

The IMine index provides a complete and compact representation of transactional data. It is a general structure that efficiently supports different algorithmic approaches to item set extraction. Selective access of the physical index blocks significantly reduces the I/O costs and efficiently exploits DBMS buffer management strategies.

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MANAGING DATA CENTER USING RSSA IN SDN CONNECTIONS

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Abstract—Create data center federations allows harmonizing workloads accommodating spikes in cloud demand while reducing the extensive energy consumption of data centers. This allows data center operators to reduce cost and increase their revenue from using underutilized property. To implement those elastic operations, datacenters need to be connected to a network provided that huge capability and guarantee adequate resource availability when it is required. Those features can be covered by the flex grid optical technology provided with an intelligent control plane. For the latter, in this paper, we rely on the application based network operation (ABNO) structural design currently under standardization in the IETF. To enlarge the availability of the desired capacity, a carrier software-defined network (SDN) is placed on top of ABNO. On this structural design, cloud resource manager request data transferences using an application-oriented semantic, which include data volume and necessary completion time. Those requests are transformed into connection requests by the hauler SDN. To raise resource ease of use for incoming requests, the carrier SDN can perform an elastic operation on already established associations supporting transferences provided that the committed completion time is ensured. Desires are routed and reserve allocation is scheduled, which becomes the routing and scheduled spectrum allocation (RSSA) difficulty. A figure linear programming model is proposed, and an algorithm for solving the RSSA problem in realistic scenarios is designed. Consequences showing remarkable gains in the amount of data related motivate its use for inter-data center traffic.

Index Terms— Data center interconnection; Flex gridoptical networks; Transfer-based connections.

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UTILITY OF NETWORKING IN TEACHING AND LEARNING PROCESSES

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Abstract
To educate means to develop and cultivate mentally. Its connotation suggests that it makes people think and it equips them to solve problems because they understand concepts and basic principles. With the wide spread use of technology there is a shift in education goals. Internet boom and emergence of smart – phones as the largest used devices to consume data have disrupted several industries like newspapers, book publishing, music and films, among others. Now, education joins that list thanks to emergence of massive open online courses, MOOCs. In order to introduce e – based learning such as MOOCs in an educational institute, the concerned college or school need to be equipped with state – of – the art networking facilities. Networking is nothing but a mechanism by which stand – alone computers can be connected through cables or wireless links so that these computers can communicate with each other and can share common resources like software, data, and peripheral devices. As a matter of fact, Internet in reality is also a large network spread all over the world. Internet and multimedia can provide students with active learning experiences and help them understand abstract concepts better. In view of the visible paradigm shift in the field of an education system, the work herein focuses on the salient features of Computer – mediated education (CME) – which makes use of computer applications such as e – mail and internet to deliver instruction.

Keywords: Education goals, Networking, Internet, Massive Open Online Courses, and Computer mediated education.

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EFFECTIVE TWO LEVEL KEY FRAME EXTRACTION TECHNIQUE FOR VIDEO ANNOTATION

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ABSTRACT
The insufficiency of labeled training data for representing the distribution of the entire dataset is a major obstacle in automatic semantic annotation of large-scale video database. Semi-supervised learning algorithms along with adaptive techniques, attempt to learn from both labeled and unlabeled data, are promising to solve this problem. In this paper, retrieving videos using key words requires obtaining the semantic features of the videos. Most work reported in the literature focuses on different key frame extraction techniques and shot detection methods along with annotating a video shot with a fixed number of key words, no matter how much information is contained in the video shot.Two level keyframe extraction is performed for removal of redundant keyframes.The aim is to find minimal of Keyframes.

Keywords— component; formatting; style; styling; insert (key words)

A HYBRID TECHNIQUE FOR STOCK MARKET PREDICTION USING MACHINE LEARNING APPROACH & SENTIMENT ANALYSIS

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ABSTRACT
Explosion of data, we have all heard, The ostensible solution is to use diversified data, including anything from political scenario, socio demographics, and high-volume data streams from the sources ranging from structured to unstructured data .The construction of a predictive system that properly projects future changes of a stock price is decisive for algorithmic trading. The usage of technical analysis for financial prediction has been positively engaged by many researchers' .This study deals regarding the enactment of the predictive system which is based on amalgamation of a Technical analysis and Sentiment analysis. Technical indicators are used as input for machine learning algorithms to predict future directions of market movement and Sentiment Analysis (SA) is the study of people's attitudes, opinions and emotions toward an entity. The entity can symbolize news articles, individuals, events, or political debates. Further performance of outcome is found satisfied using multiple performance metrics..

Keywords— Data Mining, Machine Learning, Stock Market, Sentiment Analysis, Natural language processing, Text analysis

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CONTROL STRATEGIES FOR MOTOR DRIVE CONTROL USING NEUTRAL POINT DIODE CLAMPED CONVERTER

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Abstract— To overcome the some of the difficulties the NPC converters can be proposed to be consisting of two legs (eight power switches and four clamping diodes).This possibility of designing the multilevel converters reduces the output voltage distortion, conduction losses, harmonics and computational complexity. eight-switch three-phase NPC converter is developed instead of the conventional NPC converters (twelve power switches and six clamping diodes) and SVPWM scheme will be used for generating the pulses for an eight-switch three-phase NPC converter. Output of NPC converter is connected to dc motor and control characteristics are observed. The effectiveness of proposed work has carried in MATLAB/SIMULINK.

Keywords— spwm, thd, shi, chb, svm

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A SYSTEM FOR IDENTIFYING SKIN CANCER USING IMAGES

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Abstract— In this paper, we propose an automatic system to identify the skin cancer using image processing concepts. In this process, we extract the feature vectors form dermoscopic images. The features which are extracted, have the discriminative behavior between cancer effected and not effected images. The features like ABCD, Mean, Standard deviation, Mean Absolute Deviation, of color and texture features of images are more useful to discriminate the cancer effected and not cancerous images. The classification is done with popular statistical method GMM. We evaluated the experiments on different dermetoscopic images and the results are very impressive.

Keywords: Skin cancer, ABCD features, GMM, Dermoscopic Image

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ECG SIGNAL DE-NOISING BY USING EMPIRICAL WAVELET TRANSFORM AND EXTENDED KALMAN FILTER

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ABSTRACT

Isolating a records bearing signal from the background noise is a preferred issue in signal processing. In clinical discipline at some stage in Statistics acquisition of ECG sign, various noise assets inclusive of power line interference, baseline wander and muscle artifacts contaminated with the data bearing ECG sign. For better assessment and interpretation, the ECG sign ought to be free of noise. We have conventional strategies like EWT (Empirical Wavelet Transform) and EMD (Empirical Mode Decomposition) with Adaptive Filter were used to take away the energy line interference but those algorithms and strategies are futile to reduce the Power Line Interference (PLI) and provide much less SNR and computational time is greater. So, we proposed a new technique that's EWT (Empirical wavelet transform) +EKF (Extended Kalman Filter) to eliminate the PLI .To validate the proposed strategies, the recordings from MIT/BIH (Physionet) database were used. The EWT+EKF de-noising techniques have much less computational complexity and are more green compared with the EMD+ Adaptive Filter and EWT+Adaptive filter primarily based de-noising methods.

Keywords: Electrocardiogram, Power line Interference, Empirical Mode Decomposition, Band pass Filter(BPF), Discrete Wavelet Transform(DWT) , Empirical Wavelet Transform, Adaptive Filter, Extended Kalman Filter.

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RECLAIMING THE TROUBLES OF BLOCKCHAIN

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Abstract – Now-a-days everyone is rushing towards disruptive technologies like Blockchain, Machine Learning and Artificial Intelligence etc., Business organizations are merely adopting the blockchain technology by its features like cryptographically secure, distributive and non-tamper database. Even though it is more secure and robust, like we know every coin has two sides, blockchain also facing major problems like 51% attack in Bitcoin Blockchain, Static way of smart contracts deployment in Ethereum Blockchain and so on. In this paper, we are going to propose some of the feasible and adoptable solutions to reclaim the troubles exist in blockchains. By considering the white paper of Bitcoin by Satoshi Nakamoto and yellow paper of Ethereum by Gavin Wood, we extend the concept of mining in Bitcoin and deployment of smart contracts in Ethereum blockchain. In context of Bitcoin mining, due to the increase of difficulty to mine, pools are formed and incentive of bitcoin is shared by pool members equally. As these pools become major problem in future, mining of bitcoin or any other crypto currency can follow the proof of stake and Byzantine Generals' Problem or same kind of proof of mining techniques. In this paper, we come up with a new proof of mining techniques which can reclaim this 51% attack and also can control the distribution of incentives to miners satisfactorily so that there won't be any need of formation of pools. Now, in context of smart contracts deployment in Ethereum Blockchain, there is a huge problem of operating with real world dynamic values from IOT devices and other means because of its non-tamper nature. Due to this, to update the smart contracts relatable to such dynamic values, more gas and transactions gets wasted even though many API's are being helpful to achieve this problem. We are going propose a default method to operate with such kind of dynamic values in an efficient way with the help of existed API's and other things which are related to achieve a solution for this problem.

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ELECTRICAL HAZARDS AND SAFETY

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ABSTRACT

The electricity resembles to human body as a cut on body incepts bleeding, similarly any deterioration of insulation leads to leakage of electricity. On increase of leakage current, the circuit will be isolated but in absence or non-operation of protection system this leakage may create dangerous situation like shocks and in extreme cases fires. In order to control cases of electroculations and fire hazards, proper awareness among the general utilizes of electricity is essential. This paper describes the basic fundamentals of the electrical shocks, electroculations, fire hazards etc and their preventions with safety precautions.

Keyword: Electrocution, Switch gear, Earth fault, Leakage current, MOCB, AB Switch

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IMAGE BASED CAPTCHA USING POLYGON FILLING: A NOVEL APPROACH

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ABSTRACT

CAPTCHAs, have become an ubiquitous defense used to protect open Web resources from being exploited at scale. The widely deployed CAPTCHAs are text-based, image based, audio, video based and puzzle based which typically require users to solve a recognition task. In this paper, we have proposed a novel approach, an image based CAPTCHA using basic Polygon filling Algorithm. This method includes recognizing overlapped shapes which is difficult for bots as, intersecting the basic shapes results in additional complex image. This is easy to implement and can be used in various web resources for their protection and security.

Keywords
CAPTCHA, Polygon filling, Transformations, Bots, Web resources.

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DIFFERENT VARIANTS OF PARTICLE SWARM OPTIMIZATION, ITS LIMITATIONS AND FUTURE DIRECTIONS

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Abstract: The optimization problems attract the attention of many researchers for studying swarm intelligence techniques. Swarm intelligence (SI) is a nature inspired computing technique mainly used for solving optimization problems. Ant colony optimization, particle swarm optimization (PSO), Biogeography based optimization, cuckoo search are some of the techniques in SI. Out of all these techniques, PSO has become more popular and stronger algorithm in the field of optimization. Here we discussed about working of PSO and different variants of it. All these variants are used to solve different types of optimization problems. We have also discussed limitations in existing approaches, which can be helpful for the researchers to carry out their research.

Keywords: Particle swarm Optimization, Variants, future directions

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SMART SOLUTION FOR OFFLINE MAPS AND NAVIGATION

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ABSTRACT:

Smart Navigation is the future trend of Smart cities that are being built based on unparalleled and abundantly exploring technological innovations. This paper introduces a novel approach in calculating and approximating the user's travel offline by tracking the points made by , when on move. The most widely used Offline map application use combination of previously used cache and make some approximation or by saving the route thus by slowing down the device consuming more RAM space. The effectiveness and operation of our results suggests that combining the features of maps with tracking makes it easier to preserve the daily activity alongside routes. Due to the proficiency of our location approximation and the methods we used to display the routes, it shaped in a way that our application can withstand other market competitors in aspects like re-routing, route tracking, calorie tracking mode of transport, time to travel, type of pointing a location and calculating the best and shortest path between any two places

Keywords: Off line Maps, route tracking, shortest distance , memory space, Navigation.

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APPLICATION OF DIFFERENT CONTROLLERS AND THEIR EVALUATION FOR SUPER HEATER TEMPERATURE CONTROL IN THERMAL POWER PLANT

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Dr. G V Marutheeswar

Abstract— Superheaters are heat exchangers that transfer energy from flue gas to superheated steam. Controlling of steam temperature at the superheater outlet is a very difficult task in thermal power plant. A superheater model and an appropriate optimal control strategy are the essential tools for improving the accuracy of this control system. Superheater is simulated as a unit of a control loop that generates steam of desired state values. To simulate the steam superheater on the computer, the heat exchanger assembly is described by sets of non-linear partial differential equations (PDE). The equations are then solved by modified finite difference method. A linearized model of the superheater is identified using system identification tool box in order to design optimal control strategies for Superheated Steam (SHS) temperature system. Then to tune Proportional Integral Derivative (PID) controller parameters optimally, different tuning schemes were applied to superheated steam temperature system. However, due to new challenges in keeping up with rapid changes in load demand and the transients, performance of the PID controller is far from being optimal. Hence a Model Predictive Controller (MPC) is designed for the superheated steam temperature regulation in a supercritical coal-fired power plant. Compared with the performance of the plant using a conventional PID controller, the steam temperature controlled by the MPC is found to be more optimal which leads to more efficient plant operation and energy saving.

Index Terms - Superheater; Temperature Control; PID Tuning; MPC.

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DESIGN OF LOW POWER JOHNSON COUNTER USING LECTOR TECHNIQUE USING 50nm TECHNOLOGY

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Abstract— Power dissipation is an important consideration in the design of CMOS VLSI circuits. In the case of battery-powered application, high power consumption leads to reduction in the battery life and affects reliability, packaging and cooling costs,. With technology processes advancing towards deep submicron and nano regimes, the scaling down of the threshold voltage levels in turn causes an exponential increase in sub threshold leakage currents leading to increase in leakage power. With the advance of each generation of the fabrication process a five-fold increase in leakage power dissipation is present. Leakage currents flow when the circuit is idle and so power is wasted. Efficient leakage power reduction techniques have become critical for the deep submicron and nanometre circuits. In this paper, a 4-bit Johnson counter is designed using LECTOR technique and is analyzed with different types of sleep techniques. We have used digital schematic editor (DSCH) for designing; simulation and layout generation is done using Micro wind Layout Editor.

Keywords— CMOS, Scaling, Leakage power, D flip-flop, Johnson Counter, Dual sleep, Dual stack, Stacked sleep, LECTOR

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BIG DATASECURITY CHALLENGES: HADOOP PERSPECTIVE

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Abstract - With the exponential growth of big data, it has become increasingly vulnerable and has been exposed to malicious attacks. These attacks can damage the essential qualities of privacy, integrity and availability of information systems. In order to deal with these malicious intentions, it is necessary to develop effective security mechanisms. This paper first describes Hadoop and its components and its current security mechanism, and then analyzes security problems and its risks. In addition, some important aspects of big data Hadoopsecurity and privacy have been proposed to increase your tract and safety and, ultimately, based on previous details, Hadoop security Challenges concludes.

Keywords: Hadoop, MapReduce, HDFS, Hadoop Components, Hadoop Security and Data Encryption and HDFS Encryption

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PARAMETERS TO DESIGN AN EXPERT SYSTEM TO REDUCE RISK FOR RAINFALLINDUCED DISASTER: HILL PERSPECTIVE

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Abstract:
This paper considered Uttarakhandflood as a case study, which have claimed thousands of lives where communication failure made the situationworst. To overcome this situation, deployment of WSN with MANET is proposed to be setup on the path oftragedy. In this solution, Low Power IEEE 802.15.4e enabled devices are assumed to be deployed. To provideforewarning, in such situation, Alert Network made by MANET, WSN and IoT enabled devices has beenproposed. In addition, the research introduces parameters including angle, pressure and velocity. Using these parameters an equation is proposed to be implemented with the Alert algorithm to be implemented on deploying devices on Alert network. The calculation of river flow of river Mandakini from the Chorabari Glacier to RudraPrayag has considered for representing the impact of the proposed equation in tragedy. In order to minimize thecost and maximize the effective outcome the research has presented the months in which the cloud bursthappens in the entire region making rainfall induced disaster worst. The work provides threshold value based onIMD's and TRMM's data, to be used to issue alert message for any algorithm. This threshold value also used inproposed alert algorithm. This paper is going to help to design an accurate warning system or mobile application tobe installed on smart phones and devices on Alert networks. This Alert network will be helpful to forewarnsociety, through providing accuracy with the introduced parameters.

Keywords: Alert, Parameters, rainfall, Disaster, risk reduction, Network.

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INTELLIGENT PESTICIDE SPRAYING SYSTEM USING QUAD COPTER

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Abstract— Traditionally pesticides are sprayed in agriculture manually so this kind of system literally harms the humans and lead to many serious health issues. So there should be a method to reduce this kind of backdrops. This paper concentrates on overcoming the backdrops of traditional pesticide spraying system using drones. This paper concentrates "how a drone can be used to spray the pesticide" They are called rotorcrafts because it work's with a set of revolving twisted chord aerofoil's. The quadcopter is getting more excessively used due to many reasons such as Easy to build and assemble, complexity is less. Generally, in most of the cases, drones are used in Transporting objects, military, spying, educational use, rescue etc.

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FUZZY DEFORMABLE BASED FUSION APPROACH FOR TUMOR SEGMENTATION AND CLASSIFICATION IN BRAIN MRI IMAGES

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Abstract
In recent years, the automatic identification and classification of tumor regions have gained more interest due to accuracy and reduced time complexity. One of the important strategies in tumor identification is segmenting the image as tumor and nontumor region, and this helps the researchers more significantly, as the MRI image comes in different modalities. This work introduces novel optimization based strategy for segmenting and classifying the image. Initially, the MRI images in the database are subjected to pre-processing and given to the segmentation process. For segmentation, this work utilizes the deformable model, and Fuzzy C Means (FCM) algorithm and the resultant segmented images are hybridized through proposed Dolphin based Sine Cosine Algorithm, preferred to be Dolphin-SCA. After segmentation, the tumor and non tumor-related features are extracted using the power LBP operator. The extracted features are subjected to Fuzzy Naive Bayes classifier for the classification, and finally, the classifier finds the suitable tumor class labels. Here, the entire experimentation is done by taking the MRI images from the BRATS database, and evaluated based on sensitivity, specificity, accuracy and ROC metrics. The simulation results reveal the dominance of proposed scheme over other comparative models, and the proposed scheme achieved 95.249% accuracy.

Keywords: MRI image, Tumor region, segmentation, classification, BRATS database

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SRAM   Using by Memory Block

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Abstract- CMOS technology feature size and threshold voltage have been scaling down for decades forachieving high integration density and high performance. The continuing decrease in the aspect ratio and the corresponding increases in chip density and operating frequency have made power consumption a major concern in VLSI design. This paper provides the outline structures of Static Random Access Memory (SRAM) for low power dissipation with 6T AND 8T SRAM. The reason for attaining low power in the SRAM is by reducing the voltage at output node. The memory block of 4 BIT using 8T designed by 90nm technology with supply voltage of 1.2V. It is implemented by using synopsys tool using custom compiler.

Keywords- CMOS, SRAM, SENSE AMPLIFIRE,DECODER.

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A PRAGMATIC STUDY ON HEURISTIC ALGORITHMS FOR PREDICTION AND ANALYSIS OF CRIME USING SOCIAL MEDIA DATA

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Abstract
Advancement in technology and Social media has grown to become one amongst the foremost powerful communication channels in human history and this is where individuals are sharing their perspectives, thoughts, suppositions, and feelings. Law enforcement units are having hard time fighting crime with ever-growing population, regional issues and political con-sequences. The adoption of social media data for crime analysis is increasing day by day. Crime analysis can help use the resources wisely. A crime prediction alerts the department at the right time to focus their staff with better equipment in suspected areas. Crime analysis prevents threats to life and money loss in terms of damage. In recent days, the collection of crime data from different heterogeneous sources becomes a primary step for the crime analysis and prediction. In this paper Overview of Heuristic Based Crime Prediction and Analysis algorithms identified by different authors. Also, various sources of social media used for analysis and prediction are also reviewed in detail. This information can be considered for one of the prominent asset for crime investigation through social media data procedure and also, we had identified the different algorithms and research gaps of that algorithms with related to crime analysis and prediction.

Keywords: Crime, Crime Analysis, Law enforcement, Prediction Algorithms, Crime Prediction, Prediction Algorithm's, Social Media, Predictive Analysis; Social Media..

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DEVELOPMENT OF A FRESH APPROACH TO USE COOPERATIVE DIVERSITY FOR EFFICIENT & EFFECTIVE COMMUNICATION IN MODERN WIRELESS SYSTEMS

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Abstract—Cooperative communication system for wireless mobile system is the most challenging and powerful technology for implementation in the mobile and wireless communication domain. Though, various protocols have been suggested for cooperative communication, but none of them is feasible in implementation because of attenuation, noise and cost. In this paper, all the systems used are incorporated by traditional mobile system with minimum changes, so that cost can be minimized. In the proposed approach we use a multiple input multiple output technique at receiver end to improve signal strength. Random data packets have been generated which have been modulated using QPSK technique and then passed through all types of attenuations and noises. The received packets were then analyzed in terms of signal to noise ratio (SNR) and symbol error rate (SER) [1]. It has been found that more than 5dB improvement has been achieved in comparison to traditional mobile system.

Index Terms—Amplify and forward, Attenuation, Co-operative Communication, MIMO.

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PROPOSED CLASSIFIER FOR DETECTING SPAM PROFILES IN SOCIAL MEDIA USING ARTIFICIAL INTELLIGENCE

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Abstract

This research has dealt with the analyzing communities' behavior for finding whether they are spam or not. For the identification, an appropriate training and suitable information gathering is needed. For the evaluation of the proposed work, hybridization for suitable classifier has been taken place. SVM (Support Vector machine) algorithm is used as a classifier that classifies the complete data in different categories.LDA (Linear Discriminant Analysis) algorithm is used as dimensionality lessening method in the pre-processing step for machine learning and pattern-classification applications. Neural network is used as a classifier method for enhancing the classification rate. Hybridization of Neural SVM has been used as a suitable classifier. Parameters, namely, Accuracy, Total error rate, computation time has been used for the performance calculation. The calculation has been done on the basis of neural network, LDA, Neuro-SVM for different number of samples tested and later the comparison has also been made of the proposed work with the existing work.

Keywords: Social Networking, SVM (Support Vector Machine), LDA (Linear Discriminant Analysis), NN (Neural Network), Neuro-SVM

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DESIGN OF EQUALIZER FOR ADSL MODEM

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Abstract
Performance of any communication system depends on the characteristic of the channel and the presence of noise. Channel distortion is deterministic in nature, but noise behavior is random and cannot be predicted in advance(beforehand). To reconstruct the signal on the receiver side,use of equalizer can be one of the solution to compensate distortion by the channel and minimize the effect of noise. This paper has proposed fractionally spaced equalizer for custom architecture of ADSL modem. The obtained result in the paper shows that there is an improvement in the performance of ADSL modem with the use of fractionallyspacedequalizer because it is immune to the phase change. The obtained results are compared with symbol-spaced equalizer for different lengths and gauge of the wire. MATLAB 2015 is used for the simulation of code and implementation of ADSL modem is done on FPGA, to calculate the amount of power consumption.

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A COMPARATIVE ANALYSIS OF TURBO_WAVELET AND TURBO_DRNL SSB FOR SPEECH PROCESSING IN COCHLEAR IMPLANTS.

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Abstract— A Cochlear Implant (CI) device is capable of replacing the mechanical parts of the auditory system. Direct stimulation to the auditory nerve fibres through electrodes which are inside the cochlea is done for this purpose. Cochlear implants are used to stimulate the nerve fibers or cells that are present in the ear. Wavelet Transform (WT) based approach aims at achieving lower spectral leakage and reduced computational complexity. This approach also provides high temporal resolution, and fine spectral resolution. Conversion of a signal into a series of small waves is called wavelets. This is obtained by wavelet transform which provides a way for the analysis of waveforms which are bounded in both frequency and time. WT splits up the signal into bunch of signals. It also provides information about the frequency band with time intervals which is important for analyzing non stationary signals. Analysis of the signal takes place at different frequency bands and with different resolutions. Further the decomposition of the signal into a detail information and coarse information takes place. The analysis of conservation of speech content is done through hearing. Reconstructed signal is compared with the input signal for analysis. The audio signal obtained in this approach closely resembles the input speech signal in simulation. Noise interference is reduced in this approach. This wavelet based processing gives good temporal as well as the frequency resolution compared to other speech processing strategies. It also reduces the computational complexity which makes it more efficient compared to other speech processing strategies. Thus this scheme can be employed for practical use in implantable working systems. For obtaining better speech perception in quiet and in challenging background noises as well as when inputs are varying a biologically motivated speech encoder offers many advantages. Hence amethod which comprises of using a combination of Kalman withdual resonance nonlinear (DRNL)and (Single Sideband) SSBtechniques is used which is referred to as Turbo_DRNL SSB technique. A combination of Wavelet with Turbo may give a better speech perception in quiet and in background noises as well. Hence a novel method referred to as Turbo_wavelet is used for getting a commendable performance when used with varying inputs and under challenging background noises.

Keywords—Wavelet Transform, Kalman, Temporal, Frequency Resolution and DRNL (Dual Resonance Nonlinear)

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PARALLEL HARDWARE ARCHITECTURE FOR IMPLEMENTATION OF HIGH SPEED MAC

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Abstract—Multiply and accumulation (MAC) is basic function in most of the signal processing applications like video, image processing, pattern recognition. Multipliers corresponding to the MAC unit are designed using combinational logic circuits. Modern computers consist of dedicated MAC unit and multiplication is usually performed using serial hardware which is referred as a unit cell. This MAC unit cell as supported in many architectures fail to meet the real time response for high rate data applications. The rationale of this paper is to propose parallel architecture for multiply and accumulate operation with high throughput rate. The proposed architecture performs the multiplication of operands involved in the MAC unit parallely and accumulates the result. The architecture also enables reusing of hardware for higher order taps based on the reusability factor. The functional units of the proposed architecture are developed at module level using RTL and behavior is simulated in Xilinx ISE 14.1 and synthesized on Virtex 7 family of FPGA. The obtained throughput for 128 taps is 16 MACs per cycle with reusability equal to 1 at clock frequency of 8.33 MHz for precision fixed to 8 bits.

Keywords— MAC, Real timer response, PHA, Throughput rate, Verilog HDL, Xilinx ISE 14.1, Vertex7 FPGA, Space and Time Complexity.

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AN EFFICIENT SOFTWARE TESTING BY TEST CASE REDUCTION, PRIORITIZATION AND PARALLELIZATION

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ABSTRACT
Software Testing is the process of verifying and validating system with goal of detecting and eliminating errors or it involves validating an attribute and to see it generate expected outcome and required outputs.here apfd,prioritization technique,test case rank,test case reduction used and algorithm is developed to optimize the testing efficiency &reduce the execution time by reducing no of test cases, prioritization, fault detection, and further priotized parallelization concept is used to maximize producivity.
.
Keywords: Test Optimization,Prioritization,Optimization.

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SMART MED-MINDER

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Abstract: Key to most parts of medication from primarily care to specific medications, drugs prescribed by physician have turned into a noteworthy segment of healthcare frameworks overall. Inferable from their psychoactive impacts, these medications are frequently taken in ways not expected by the specialist or by somebody other than the individual for whom it was recommended. Patients frequently neglect to take their medication prescribed by the specialist or take it out of the plan suggested by the specialist. There are additionally examples of young people taking medications, for example, sedatives, stimulants and depressants. Thus, the major problem is that after the issuing of medicine prescribed by the specialist, its utilization can't be monitored. This paper provides insights on how to construct a framework around physician endorsed drugs which is helpful in validating the usage of medication on the basis of identity of the patient and the scheduled prescribed to that patient. It also helps in facilitating the doctor or pharmacist to monitor the utilization of medication through an app which will be used by the pharmacist register the patient with the complete personal information and the prescribed medication.

Keywords: IoT healthcare network, IoT Architecture, Visions of IoT

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CREATING CONVOLUTIONAL NEURAL NETWORK AND TRAINING IT TO CLASSIFY IMAGES USING MACHINE LEARNING

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Abstract— Machine Learning, also the sub part of artificial intelligence is a process of making a computer learn from examples and experiences. It is be used in various fields such as data mining, personal assistance, social media services, spam email detection etc. One of the most used application of machine learning is Image processing, Image recognition and Image classification. For image recognition neural networks are used in machine learning, which are inspired by real neural networks of humans that we use to classify images. For creating neural networks the Keras library is used which is written in python and runs on top of the tensor flow library.

Keywords— Machine Learning, Convolutional Neural Networks, Pooling, Relu, keras

TRANSACTION ANALYSIS USING BIG-DATA ANALYTICS

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Abstract- Big data is the term for a collection of data sets so large and complex that it becomes difficult to process using on-hand database system tools. Due to some properties of Big-data, it is hard to analyze the data, thus Big-data analytics can be the alternate tool. In this paper, we are using Big-data analytic tool as Hive. It is simple to write a query and easy to understand, the queries same as SQL. Why not SQL because it is a row-level data searching and it is used when the database is relatively small, does not analyze the complex data. For these reasons Hive tool used and it is helpful for storing wide range amount of data as well as process complex datasets. Analyzing data help the business managers make well- informed decisions to handle the company forward, better efficiency, raise the profits and achieve organizational goals.

Keywords: Big-data; Big-data Analytics; Apache Hadoop; Apache Hive; Data Analysis.

VIDEO ANALYSIS USING MACHINE LEARNING

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Abstract— The tremendous acclamation of the videos and the diminishment in the price of the advanced gadgets, broad measure of video recordings are transferred at a higher rate for web based perusing and recovery purposes. Machine learning is an application of artificial intelligence (AI). It provides systems the ability to learn and improve their performance from the previous experience, without being explicitly programmed. It further focuses on the development of computer programs that can access data and use it for themselves. This paper focuses on the analysis of video, its applications etc. Further the paper discusses a basic system structure that would aid in developing a system for video analyses.

Keywords— Artificial Intelligence, Machine learning, Video analyses.

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A FAST ROBUST APPROACH FOR VIDEO SHOT BOUNDARY DETECTION BASED ON CNN FEATURE

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Abstract— As the expansion of various technologies and applications, growing of video files is rapid and there is a more demand in analysing content and retrieving data from video.For video analysing detecting shot boundary(SBD) plays a very important role and said to be that it is one of the step carried out in analysing video.Some of proposed systems are already available for detecting shot boundary,but they lack in metrics like computational cost and inefficiency.As proposed system detecting shot boundaries in video dataset that overcomes above mentioned problems.Methodology having with pre-processing stage involving singular value decomposition(SVD) and candidate segment selection(CSS) are to be carried out before detecting shots which removes non-boundary shots.Where Histogram based SBD is used which is simple and more convenient. Convolutional Neural Network(CNN) reduces calculation time for detecting shots where which is used for the purpose of extracting features from video data set based on graphical processing unit,processes parallely with video sequence and also takes similarity of local frame and sliding window this achieve detection speed.

Keywords— Data capturing,SBD,Pre-processing stage,Shot transition, SBD based on Histogram, CNN, Dual-threshold sliding window.

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NEXT GENERATION ONTOLOGY BASED KNOWLEDGE PROVISIONING FOR SPECIALLY ABLED PEOPLE

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Abstract— Disability can be by birth or in view of some appalling (or tragic) events that may have happened throughout everyday life. Improving their lives is a prime concern of the legislature and also that of the general public. Helping the general population with disabilities and delivering education to them online is a challenging task as it requires the disabled to conform to the learning situations. E-learning is a useful method that can assist the people to gain knowledge and acquire education. The challenges identified with inadaptability can be dealt with utilizing Semantic Web Technologies, for example, Web Ontologies. This paper presents a prototype for helping the disabled acquire the knowledge they are interested in by means of Web ontology.

Keywords — Disability, inadaptability, E-learning, Semantic Web, Web Ontology.

DES AND MD5 BASED HEALTHCARE DATA PROTECTION WITH BIG DATA ANALYTICS

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Abstract— In the current days big data has become a trending technology that many industries like banking, education, social media, transportation, etc., are started to make use of big data technology to store and process the huge amount of data being generated in their fields. Big data has also started to play an important role in the field of healthcare. Healthcare data is generating in different formats for example text, video, image, digital etc. and it is becoming too huge that it cannot be managed by any traditional database management tools. Thus, hospitals need to maintain patient's record in such a way that no one should able to catch the data except an authorized one. To do that every hospital must provide security to the patient's information that is by keeping the data in cipher text format.

Keywords: Big data; Hadoop; Apache Pig; Healthcare; Security.

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IOT: ISSUES, CHALLENGES, TOOLS, SECURITY, SOLUTIONS AND BEST PRACTICES

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Abstract— Internet of Things is "The network that means all the living and non-living things will be connected to each other in this network and further this network will interconnect with other networks forming a bigger network. IoT is facing many issues and challenges in the development, particularly related to security in the IoT environment. Even though there are many researchers who have analyzed such issues and challenges, there is no particular method to apply for IoT applications to overcome the problems of IoT issues and challenges. This paper briefs the IoT issues and challenges along with the methods for providing solutions and how we can ensure security in the IoT network. IoT best practices that are securing networks, securing devices and securing overall IoT systems are also discussed in this paper. Since IoT is a growing technology in today's life it is very important to solve IoT issues and understanding its challenges for the betterment.

Keywords— IoT; Technology; Tools; Security; Issues and Challenges; Best practices.

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SECURE SECRET IMAGE CARRIER USING RUBIK'S CUBE AND MODIFIED LSB

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Abstract-
Data trade amongst sender and recipient turns out to be quick and simple. The nature of information sending, particularly the protection, should be taken note. Hiding, the information is necessary for securing information. It should be possible utilizing methods like cryptography and steganography. This paper defines the image steganography utilizing secret grayscale image and to hide the secret image, the RGB image is used as a cover. Since a secret picture is inserted within a cover, the encrypting procedure is done to give a more dependable security. The encryption technique utilized depends on the principle of Rubik's cube, by moving the pixel position in a digital picture. The modified LSB replacement technique uses in this Steganography works space. The goal of this plane is to get a great character hidden secret picture to put information secret.

Keywords- Steganography, embedding, extraction, Rubik' cube, LSB.

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MODIFIED TECHNIQUE FOR THE TRAFFIC SIGN BOARDS DETECTION AND RECOGNITION USING MATLAB

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Abstract—
This paper work is based on automatic detection of traffic sign with the aid of image processing. The objective of the paper is such that it aims to research the current technology for recognizing road signs in real time from moving vehicle. The most processing innovation for insightful vehicle frameworks is vision and picture preparing. This is examining most properly. For the purpose of this paper is to separate the stop sign and the yield sign from each other. This work utilize essential picture system to naturally perceive diverse activity sign by using computer vision with MATLAB for object detection, here the emphasis will mostly be on stop and yield sign which are in red color. The algorithm employed here are k-NN and Morphological. These incorporate three stages, the first is preprocessing. It will stack the contrast, brightness and clarity of image, so if these parameters are not required qualities then modification will be made. This stage is crucial stage which is image processing and recognition. It will process the actual image to find region of interest where the sign is located, first the system will detect colors and then look for color of interest, removing the background and additional noises from detected sign image, so red is the most important component in the image then process and the system will then define region in which the color is concentrate then apply shape of the traffic sign. In that case if no sign is present there will not be any sign to identify and hence there will be nothing or an error which will be the output and this output to give a driver alert system and diminish road accident for a predominant and safe driving, yet furthermore it would be a great progression for later use in autonomous vehicles.

Keywords—Road sign detection, image recognition, driver alert system, camera mounted on car.

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ANALYSING DIFFERENT MACHINE LEARNING APPROCHES FOR MALICIOUS CONTENT DETECTION IN SOCIAL MEDIA: A SURVEY

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ABSTRACT:

From past many years social networks like Facebook, Twitter, Linkedin, etc., have become more powerful communication channels to everyone irrespective of gender, age, community, religion and what not. Online sources say people who are using these networks are more than 2.19 billion in 2018 when it was 1.74 billion in 2017.when these many users are active then there is a high chance of crime or spam happening all over the world and there is even more chance of sharing those details indirectly through these media. Social media is proven to be more prevailing tool to find criminal activities. Because of these activities many innocent people are suffering from different attacks like authenticity, trustworthiness, theft, robbery, blackmailing and so on. Many researchers have contributed their part to find these kind of anomalies using different approaches .In this paper we aim to survey various research papers which tried to detect and predict these activities mainly in Facebook but not limited to it using different machine learning algorithms thus by sharing our contribution to society. Our goal is to do an ample analysis of diverse articles to better understand the state-of-the-art, research gaps, techniques and future directions which used a single algorithm and used combinations of algorithms for finding anomalies.

Keywords: Ensemble, Facebook, Crime, Machine Learning, Random forest, anomaly detection, spam etc.

DESIGN AND IMPLEMENTATION OF DISCIPLINED PARKING MANAGEMENT SYSTEM FOR SMART CITY

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ABSTRACT
Parking issue has become an ever-growing challenge in metropolitan cities where urbanization is increasing at a high rate. In which finding an empty space to park the vehicle has become a troubleshooting issue for all people. Surveys have found a huge audience at shopping malls, airports, universities and other commercial sectors. Due to huge growth in population and undertaking of smart city development adds additional overhead to the existing traffic congestion issues. This calls for a smart parking system which simplifies the issue with minimum utilization of resources and also helps in minimizing the delay needed in finding the empty parking spot, the system is designed in such a way that direct information of the parking spot and the entire status of the parking plot along with its availability will be displayed to the driver at the entrance. Thus with this simple deployment, one can reduce the hassle of searching the availability of parking spot and reduce the overall traffic occurrence due to inadequate parking measures

Keywords— smart parking, traffic congestion.

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FRAUDULENT LOAN PREDICTION USING MACHINE LEARNING ALGORITHMS

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Abstract— There are many frauds that are being done by the people in loans. So, here concern is about fraud loan risk which is common in banks based on various attributes. This work predominantly focused on prediction of fraud loan risk. Fraud loan risk is predicted using classification techniques in machine learning. By detecting the risk of fraud loan will support the bank for early prediction of this risk will be useful .Various data mining classification approaches and machine learning algorithms are applied for prediction of fraud loan in banking dataset. In this study, the dataset of fraud loan is experimented to explore the data mining algorithm to find outperforming algorithm.

Keywords—Machine Learning, Algorithm, Preprocessing, accuracy score, confusion matrix, classification report

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STUDY AND ANALYSIS OF   ONLINE TELUGU CHARACTER MODELING FOR VARIOUS FEATURES SETS

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Abstract— Feature extraction plays vital role in online hand written character recognition. Local Features captured through co-ordinate system approach plays significant role in determining the online telugu character recognition. In this paper, we have instigated the performance of various features using Artificial Neural Networks(ANNs). ANN model is tested with various combination such as (x,y) co-ordinates , pen-up and pen-down ,). Finally it is observed that features have given better accuracy. 95.18 % performance is obtained for 300 epochs for 52 Telugu characters. The database used for the study is HP-online Telugu database.

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BIG DATAANALYSIS APPLIED FOR SHORT TERMSOLAR IRRADIANCE FORECASTING

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Abstract—An improvement of accuracy in Forecasting of Solar Weather requires more specific parameters. Parameters that are feasible to implement and the collected data to be ready to be blended and becauseof this, the parameters need to be easy to use and its of prime importance that it remains the case. In this case giving our focuson ge¬tting the pollution parameter in order to make a module that will integrate with an existing solar weather prediction system. The module takes in pollution data uses the light beams reaction to the particulates per million content and its characteristic reaction to compound that'sclassified as a pollutant or a heavy molecule. It is getting the data about the light beams hitting the surface below the cloud cover, and that gives an output of energy that's hitting the ground to suncast system.

Keywords—big data; suncast system, weather forecasting; renewable energy; light diffraction coefficients; solar irradiance;

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A REVIEW ON VISUAL SALIENCY DETECTION BASED ON MULTI-SCALE K-NN FEATURES

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Abstract: Image Retrieval is the process of getting knowledgeable information about the images that can be used in various applications based on matches and differences in face recognition, pattern recognition, and feature extractions. Now a days so many feature extraction techniques are available but so many flows and accuracy could not meet as we could find in the literature survey. We are proposing a system based on visual saliency which can extract and store the features from a given set of images and finally this database uses as input to k-NN algorithm to produce more accurate and detailed result of user query.

Keywords— Digital image, image retrieval, feature extraction, k-Nearest Neighbor algorithm (k-NN), tags, patterns

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DUAL WATERMARKING TECHNIQUE FOR PROTECTION OF IMAGES

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Abstract— Image watermarking is a tool used for authentication, ownership, intellectual property protection and many other security aspects of e-data. Dual watermarking is effective and efficient to prevent attacks, because it uses a private key and a public disordered mixing algorithm for the recovery of images. This can be a good way of protection of copyright and authenticity of images. In this paper, dual watermark scheme for protecting images is proposed, which provides a better way of protection of images against copyright infringements than the regular watermark technique.

Keywords— Dual Watermarking (DWT), Image watermarking, watermarking techniques.

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ENABLING CLOUD DATA SERVICE SECURITY WITH KEY EXPOSURE

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Abstract:
Distributed storage evaluating is seen as an essential administration to check the honesty of the data publically cloud. Current evaluating conventions territory unit all bolstered the customer's mystery key for examining is totally secure. In any case, such suspicion may not persistently be charge, because of the probably frail feeling that all is well with the world and additionally low security settings at the shopper. On the off chance that such a mystery key for examining is uncovered, the greater part of the present reviewing conventions would unavoidably wind up unfit to figure. Amid this paper, we tend to have practical experience in this new feature of distributed storage evaluating. We tend to examine an approach to downsize the damage of the customer's key introduction in distributed storage inspecting, and gives the essential sensible determination to this new drawback setting. We formalize the definition and along these lines the security model of examining convention with key-presentation versatility and propose such a convention. In our style, we tend to utilize the parallel tree structure and in this manner the pre-arrange traversal strategy to refresh the key keys for the shopper. We conjointly build up a remarkable appraiser development to help the forward security and subsequently the property of piece less evidence. The wellbeing verification and subsequently the execution examination demonstrate that our anticipated convention is secure and temperate.

Keywords: Conjointly, Traversal, Exposure, Auditing, Investigate

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HEART DISEASE PREDICTION USING EFFECTIVE MACHINE LEARNING TECHNIQUES: A SURVEY

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Abstract— In today's era deaths due to heart disease has become a major issue approximately one person dies per minute due to heart disease. This is considering both male and female category and this ratio may vary according to the region also this ratio is considered for the people of age group 25-69. This does not indicate that the people with other age group will not be affected by heart diseases. This problem may start in early age group also and predict the cause and disease is a major challenge nowadays. Here in this paper, we have discussed various algorithms and tools used for prediction of heart diseases.

Keywords— Classification, Heart Disease, Decision Tree, Data Mining.

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AN EFFICIENT SCHEME FOR BIG DATA ACCESS WITH PRIVACY-PRESERVING POLICY IN CLOUD

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Abstract:- How to administration the entrance of the huge amount of enormous information terms into a horrendously troublesome issue, especially once tremendous learning are keep inside the cloud. Figure content policy Attribute essentially based coding (CP-ABE) might be a promising coding strategy grants end-clients to engrave their insight underneath the entrance arrangements sketched out finished a few qualities of information clients and exclusively permits information clients whose characteristics fulfill the entrance strategies to modify the info. In CP-ABE, the entrance arrangement is associated with the figure message in plaintext type, which can also release some individual information in regards to end -Clint's. Existing systems exclusively halfway conceal the characteristic qualities inside the entrance approaches, through the property names are as yet unprotected. Amid this paper, we tend to propose Associate in Nursing efficient and fine-grained immense learning access administration topic with security safeguarding policy. In particular, we tend to conceal the total characteristic inside the entrance approaches. To help information coding, we tend to also style a one of a kind Attribute Bloom Filter to measure regardless of whether Associate in Nursing trait in inside the entrance approach and locate the exact position inside the entrance strategy if it's inside the entrance arrangement. Security investigation and execution examination demonstrate that our topic will safeguard the protection from any LSSS get to arrangement while not utilizing copious overhead.

Index Terms: Watchwords Big Data , Access Control, Privacy- protecting Policy ,Attribute Bloom Filter, LSSS Access Structure.

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AN EXTENSIVE STUDY FOR THE DEVELOPMENT OF WEB PAGES

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Abstract- How quick does the web change? Does a large portion of the substance stay unaltered once it has been created, or the report continuously refreshed? Do pages change a little or a considerable measure? Is the degree of progress connected to some other property of the page? These inquiries are important to the individuals who mine the web, including all the famous web search tools, however few examinations have been performed to date to answer them. One striking special case is an investigation by Cho and Garcia-Molina, who crept an arrangement of 720,000 pages once a day more than four months, and considered pages having changed if their MD5 registration changed. They found that 40% of all site pages in their set changed inside seven days, and 23% of those pages that fell into the .com space changed day by day. This paper develops Cho and Garcia-Molina's investigation, both as far scope and regarding affectability to change. We slithered an arrangement of 150,836,209 HTML pages once consistently, finished traverse of 11 weeks. For each page we recorded a checksum of the page, and an element vector of the words on the page, in addition to different other information, for example, the page length, the HTTP status code, and so forth. Additionally, we pseudo arbitrarily chose 0.1% of the greater part of our URLs, and spared the full content of each download of the comparing pages. After finish of the slither, we examined the level of progress of each page, and explored which factors are connected with change force. We found that the normal level of progress differ pages change more regularly and more extremely than littleronces. This paper portrays the slitter and the information changes we performed on the logs, and exhibits some measurable perceptions on the level of progress of various classes of pages

Index Terms: Click Graph, location Boosting, Tracing Places.

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SECURITY HEALTH MONITORING AND ATTESTATION OF VIRTUAL MACHINES IN CLOUD COMPUTING

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Abstract- Cloud customers need guarantees regarding the security of their virtual machines (VMs), operating within an Infrastructure as a Service (IaaS) cloud system. This is complicated by the customer not knowing where his VM is executing, and on the semantic gap between what the customer wants to know versus what can be measured in the cloud. We present architecture for monitoring a VM's security health, with the ability to attest this to the customer in an unforgivable manner. We show a concrete implementation of property based attestation and a full prototype based on the OpenStack open source cloud software.

Key words: cloud computing, IAAS, virtual machine, security health, infrastructure, attestation

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COUNTRY LOCATION CLASSIFICATION ON TWEETS

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Abstract:-
The expansion of enthusiasm for utilizing online networking as a hotspot for explore has roused handling the test of naturally geolocating tweets, given the absence of express area data in the lion's share of tweets. As opposed to much past work that has concentrated on area characterization of tweets confined to a particular nation, here we attempt the assignment in a more extensive setting by ordering worldwide tweets at the nation level, which is so far unexplored in a constant situation. We break down the degree to which a tweet's nation of cause can be controlled by making utilization of eight tweet-innate highlights for grouping. Moreover, we utilize two datasets, gathered a year separated from each other, to examine the degree to which a model prepared from authentic tweets can at present be utilized for grouping of new tweets. With order probes every one of the 217 nations in our datasets, and on the main 25 nations, we offer a few experiences into the best utilization of tweet-intrinsic highlights for a precise nation level characterization of tweets. We find that the utilization of a solitary component, for example, the utilization of tweet content alone – the most generally utilized element in past work – fails to impress anyone. Picking a suitable mix of both tweet substance and metadata can really prompt significant enhancements of in the vicinity of 20% and half. We watch that tweet content, the client's self-announced area and the client's genuine name, which are all innate in a tweet and accessible in a continuous situation, are especially valuable to decide the nation of source. We additionally probe the appropriateness of a model prepared on authentic tweets to group new tweets, finding that the decision of a specific blend of highlights whose utility does not blur after some time can really prompt practically identical execution, evading the need to retrain. Be that as it may, the trouble of accomplishing exact order increments somewhat for nations with numerous shared characteristics, particularly for English and Spanish talking nations.

Key words: Characterization, Constant geolocation, Micro blogging, Twitter.

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A RAPID PHRASING SEARCH FOR ENCRYPTED CLOUD   STORAGE

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Abstract:
Cloud computing has made much vitality for the examination orchestrate beginning late for its different motivations behind premium yet has in like way raise security and affirmation concerns. The point of confinement and access of puzzle reports have been perceived as one of the focal issues in the zone. Specifically, different specialists inspected answers for examine encoded archives set away on remote cloud servers. Cloud enlisting is a progression, which gives inconsequential effort, versatile computational reason for detainment. The most remote point and access of report have been tremendous issue here. While, different plans have been proposed to perform conjunctive watchword look, less thought has been noted. In this paper, we show a verbalization look for procedure inlight of create channels, which is speedier than existing structure. Our structures use conjunctive catchphrase request to help functionalities. This approach other than depicted the false positive rate.

Keywords:
Bloom Filters, Conjunctive Keyword Search, False Positive Rate, Hashing, Phrase Search.

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RELEVANT WEB REVISITATION BY CONTEXT AND CONTENT KEYWORDS

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ABSTRACT:
Retuning to the previously viewed web page is a common yet uneasy task to the large volume of personally accessed information on the web. This paper leverages humans natural recall process of using episodic and semantic memory cues to facilitate recall and personal web revisitation technique called web page prev through context and content keywords. The episodic memory means that it used for incidental memory and also used for a context (graphical) semantic memory used for a webpage in (day to day) that include content keyword. Relevance feedback mechanism is also involved to tailor individual's memory strength and revisitation habits. Compared with the existing web revisitation tool memento, dynamic management of context and content memories. There relevance feedback, the finding a web page prev a among time, location and activity context content based re –finding. Delivers the best performance, compared to context based re-finding and content based re-finding.

Index Terms- web revisitation, access context, page content, relevance feedback

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DEVELOPMENT OF 3D MODEL OF TIBIA FEMORAL BONE IN KNEE JOINT FOR FEA

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ABSTRACT

Introduction: Tibia femoral bone is part of knee joint which is a very complex joint. Now a days knee pain is the most frequently observed problem in elderly people. Worldwide statistics reveals about100 million people experience knee pain hence analysis of knee is very essential for diagnosis and treatment. Thiswork mainly focuses on segmentation and 3D rendering of knee joint bone and the developed model can be used for finite element analysis of knee joint loading.

Methodology: MRI of knee images were collected from JSS multispecialty hospital, Mysuru. Preprocessing is done using median filter. From the preprocessed image region of interest is extracted using interactive segmentation method. Using these segmented images 3D volume rendering is done i.e. 3D model of segmented images is developed. Finite element meshing technique is carried out on 3D model of knee joint to create meshed model. Figure 1 shows the flow diagram for 3D reconstruction of tibia femoral bone model. The developed model can used for finite element analysis.

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SEGMENTATION OF HAND WRIST BONE AND MEASUREMENT OF EPIPHYSIS AND METAPHYSIS IN HAND X-RAY IMAGES

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ABSTRACT

It is very difficult identify the unknown person age who have died in suspicious circumstances or mass disaster because they often don't have evidence to indicate their chronological age. But using bone it is possible and mostly used by an experienced doctor to identify person age which provides the most accurate result when compare to other diagnoses. The doctor requires tremendous amount of time in manual identification and the doctor decisions result is highly subjective and experience. In this method by using hand wrist structure an automatic person age identification is performed. When compared to the use of full hand bone structure this method provide simpler way and reliable. To extract the hand wrist bone parts namely epiphysis and metaphysis is important. The width ratio is used to identify the person age. This is useful for automatically identify person age. This method will be useful identification of a person in forensic application.

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A SURVEY ON CROSS LAYER DESIGN BASED ROUTING PROTOCOLS IN MANETS

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Abstract:
A Mobile AdHoc Network (MANET) is usually outlined as a network that has several free or autonomous nodes, typically composed of mobile devices or alternative mobile items, which will prepare themselves in varied ways in which and operate while not strict top-down network administration. Growing interest and pass into of wireless networking technologies is underlining new challenges in the design and optimization of communication protocols. Traditionally, protocol architectures follow strict layering principles, that guarantee ability, quick readying, and economical implementations. However, lack of coordination between layers limits the performance of such architectures due to the specific challenges posed by wireless nature of the transmission links. To overcome such limitations, cross-layer style has been projected. Its core plan is to take care of the functionalities associated to the initial layers however to permit coordination, interaction and joint improvement of protocols crossing completely different layers. This paper presents different cross layer plan models, different cross layer based steering conventions created by different researchers in MANETs, and different issues which are under dynamic research.

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SYNTHESIZATION OF LOW POWER FOLDED TREE DIGITAL SIGNAL PROCESSOR ARCHITECTURE FOR WSN APPLICATIONS

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Abstract: A Wireless Sensor Networks spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, sound, pressure, etc. Radio communication exhibits the highest energy consumption in wireless sensor nodes. This paper describes the design of the newly proposed folded-tree architecture for on-the-node data processing in wireless sensor networks, using parallel prefix operations and data locality in hardware.

Keywords— Wireless sensor nodes, Folded-tree, Parallel prefix operations

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ANOMALY DETECTION TECHNIQUES - CAUSES AND ISSUES

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Abstract:

Anomaly means something which is not normal. Any data point which deviates or placed in distance from all other normal data points is an anomaly. That is why anomalies are also called as outliers. Anomaly detection is also called as deviation detection because anomalous objects have attribute values that are different from all other normal data objects. In this paper we have discussed about various causes of anomalies, anomaly detection approaches and also issues that are to be taken care during finding out the best technique for anomaly detection.

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A REVIEW: MAMMOGRAPHIC IMAGE FOR DETECTION AND DIAGNOSIS OF BREAST CANCER

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Abstract

Breast cancer has become a major health issue in women in the world over the past 50 years, and its incidence has increased in recent years. Early detection is an effective way to diagnose and manage breast cancer. In the modern medical science there are ample of new methodologies and techniques for the timely detection of breast cancer. Computer-aided detection or diagnosis (CAD) systems can play a key role in the early detection of breast cancer and can reduce the death rate among women with breast cancer. The purpose of this paper is to provide an overview of recent advances in the development of CAD systems and and highlight the available breast cancer detection techniques. Generally, a CAD system consists of four stages: (a) preprocessing, (b) segmentation of regions of interest, (c) feature extraction and selection, and finally (d) classification. An overview of algorithms in preprocessing and segmentation in the mass detection is given.

Keywords - Computer aided diagnosis (CAD), mammograms, masses, , thresholding, segmentation

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DESIGN AND ANALYSIS OF LOW POWER VCO ENABLED QUANTIZER FOR CT SIGMA DELTA ADC

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ABSTRACT—
This paper presents design and analysis of low power Voltage Controlled Oscillator (VCO) enabled quantizer in Continuous Time (CT) Sigma Delta Analog to Digital converter (ADC) using 180nm CMOS technology using Cadence Virtuoso Tool. The VCO based quantizer in S-? ADC includes loop filter, VCO quantizer and 3-bit feedback Digital to Analog Converter (DAC). The basic building block of loop filter is Operational Amplifier (OP-AMP). The two stage OP-AMP designed offers 61.51dB gain with the unity gain bandwidth of 30.59MHz. The keystone of the ADC is VCO based qauntizer clocked at 27.34MHz, which obtains fourth order noise shaping of its quantization noise. A low power VCO is designed using seven stage ring oscillator and Logic Structure Reduction Flip Flop (LRFF) based D-Flip Flop. The VCO based qauntizer with CT S-? ADC consumes a power of 2.57mW with a supply voltage of 1.8V.

Keywords — Continuous time(CT) Sigma delta Analog to Digital converter(ADC), Operational Amplifier (OP- AMP), low power Logic structure Reduction Flip flop (LRFF).

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PERFORMANCE COMPARISON OF SELF-TUNING FUZZY PID CONTROLLER AND THE ADAPTIVE CONTROL (MRAC) WITH PID COMPENSATOR TO HIGH-PERFORMANCE BRUSHLESS DC MOTOR

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Abstract:
This paper showcases the performance comparison of two different control techniques applied to high-performance brushless DC motor. They are self-tuning fuzzy PID controller and the adaptive control (MRAC) with PID compensator. The very purpose of the control algorithm is to force the rotor speed to follow the desired speed accurately at times. This objective should be achieved on different speed/time tracks irrespective of load and other variations. Produced results have shown that the second control scheme i.e. adaptive control (MRAC) with PID has better performance. This brushless DC (BLDC) motors are in use for many industrial applications for the reason that they have high efficiency, Torque, and low volume. An expected outcome of the project is to create an improved fuzzy PID controller to control the speed of brushless DC motor. The proposed controller is called proportional–integral–derivative (PID) controller and Fuzzy proportional– integral– derivative controller. Conventional PID controller may not satisfy with control characteristics and tune the parameters. Unlike the conventional Fuzzy has the ability to satisfy control characteristics. The experiment results prove that that Fuzzy PID controller has better control performance than the conventional PID controller. The modelling, control and simulation of the BLDC motor have been done using the software package MATLAB/SIMULINK.

Keywords: BLDC Motor, Fuzzy, proportional–integral–derivative (PID), MRAC, Conventional PID controller, brushless DC (BLDC) motors MATLAB/SIMULINK.

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ASSURE COLLABORATION DATA APPORTION SCHEME FOR PRIVATE KEYS IN CLOUD

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Abstract
Cloud Computing, users can achieve an growing and balanced methodology for data sharing among the group members and individuals in the cloud with the characters of tiny management and tiny maintenance cost. the security of key scattering relies on upon the sheltered correspondence channel, on the other hand, to have such channel is a strong feeling and is troublesome for practice. In this proposition a protected multi- proprietor data sharing plan for element bunch in the cloud by giving AES encryption while procedure the data any cloud client can safely impart data to others. We propose protected way for key appointment with no sheltered correspondence channels, and the customers can securely get their private keys from social occasion boss. We propose a secure data sharing method for dynamic members to provide secure key distribution without any secure communication approach and the users securely obtain their security keys from group manager. It provides a multiple levels of security to share data number of multi-owner manner. First the user selects the text based password is known as OTP is generated automatically and sent to corresponding user e-mail account. Finally, our arrangement can achieve fine profitability, which infers past customers require not to upgrade their private keys for the condition either another customer participates in the social occasion or a customer is surrender from the get-together.

Index Terms: Access control, Privacy-preserving, Key distribution, Cloud computing, Broadcast encryption, Data owners, Cloud storage, anti-collusion, group manager, group user.

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WIND ENERGY SYSTEMCOUPLED WITH BIDIRECTIONAL QUASI Z-SOURCE INVERTER FOR MOTOR APPLICATIONS

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Abstract- A Bidirectional Quasi-Z-supply Inverter (BQZSI), using a controllable shoot-through insertion in running permanent magnet synchronous motor is proposed. This BQZSI is simple and exerts a direct control over the wind energy. In addition, this improves the efficiency of the voltage gain and reduces the total harmonic distortion.The Voltage Source Inverter (VSI) is used for Adjustable Speed Drives (ASD). The VSI normally calls for an additional boost converter. This supplementary converter will in turn, increase the cost and design complexity lowering the performance of the power conversion devices. Additionally, the voltage the drop will disrupt the conventional ASD systems, thereby shutting down the crucial loads and procedures.Hypothetically, the three sources - the unique Z-source, Quasi-Z- source, and embedded Z-source have limitless voltage gain. For every additional shoot through state, the commutation time of the semi-conductor switches increases whichproportionately increase the switching losses. Therefore, to prevent the switching loss, appropriate placing of the shoot- through condition in the switching cycle becomes essential. To rectify this, an amalgamation of BQZSI with a method of maximum constant boost control procedure is proposed. This can be achieved with the help of voltage- driven quasi-Z source inverter with continuous conduction mode that is carried out at the input of the converter which will enhance the input voltage by making use of the more switching states with the help of shoot-through state insertion method. By using BQZSI, it is possible to handle the energy on boththe sides and hence can be used with tiny movements on both the directions.This bidirectional converter will improve the performance of the Permanent Magnet Synchronous Motor drive.

Keywords: Bidirectional quasi-Z-source inverter (BQZSI), adjustable speed drives system application,PMSM.

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PROVIDING CYBER SECURITY USING MACHINE LEARNING FOR SOCIAL NETWORKS

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ABSTRACT
Social networks are the most common type of interaction between people these days. Attacks on these networks are currently at an all time high which can be by corrupting the data, introducing malicious data, getting access to confidential data or intrusion on the network. The main requirement is providing security to such networks. As and when security is being provided to these networks, attacks are also evolving. Cyber attacks are becoming complex which means that sometimes the threat for which the solution needs to be found is unknown. Threats are becoming automated, which means threats are AI induced. If threats are AI induced, using less efficient algorithms for cyber security is not the optimal solution. Hence Machine learning algorithms are used in conjunction to provide cyber security for social networks.

Keywords— attacks; cyber security; intrusion; machine learning; social networks;

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AN ADAPTIVE SWARM OPTIMIZATION TECHNIQUE FOR LOAD BALANCING AND TASK SCHEDULING IN CLOUD COMPUTING

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ABSTRACT
In recent era of growing technology, cloud computing has attracted various industries and researchers due to it significant nature in parallel and distributed computing systems. This technology has grown drastically in various real-time applications such as medical field, health organizations, multi-media applications etc. cloud computing urge to provide the better quality of service for clients or users. However, increasing demand of application leads to the imbalance in cloud resources and causes huge power consumption in data centers. Due to multiple tasks imbalance occurs in cloud platforms which degrade the quality of service for clients. Task scheduling is considered as an important aspect which can be used for load balancing in cloud systems. This helps to allocate best available resources to complete the task by considering various other parameters such as computation time, scalability, makespan, throughput etc. However, various techniques have been proposed for task scheduling in cloud computing but these techniques still suffer from various issues such as makespan, execution time etc. To address this issue, an adaptive swarm optimization approach is presented for heterogeneous virtual machine systems. Proposed approach addresses the multi-objective problem by developing a probabilistic model resulting in optimization and convergence rate improvement. During task execution in cloud computing, if any VM is overloaded then the task is removed from that VM and proposed adaptive swarm optimization technique is used to find any other available optimal resource for task completion. An extensive simulation is performed along with comparative analysis. Experimental study shows that proposed approach outperforms when compared with state-of-art technique for load balancing in cloud computing systems.

Keywords— Cloud Computing, Load Balancing, Task Scheduling, Load-Balancing, Optimization

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AN EFFICIENT METHOD FOR IMAGE MINING USING GLCM AND NEURAL NETWORK

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Abstract
Currently, content-based Image recovery (CBIR) drives for producing approaches which supports viable searching and scanning of vast picture progressive libraries by considering unwavering image texture features and has been a rapidly growing inspection bearing among image information recovery, computer vision, and database. The learning procedure of CBIR is achieved with the Neural Network method together with GLCM feature abstraction in our projected technique. Furthermore, with the ABC algorithm the normal/abnormal arrangement of the medical dataset images is managed. Lastly, to regulate the function of the projected method the solutions were replicated and associated with the available method. In the working platform of MATLAB, the projected method is applied.

Keywords: GLCM (Gray Level Co-Occurrence Matrix) Feature; CBIR (Content Based Image Retrieval); ANN (Artificial Neural Network); ABC (Artificial Bee Colony).

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ANOMALY DETECTION TECHNIQUES - CAUSES AND ISSUES

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Abstract:
Anomaly means something which is not normal. Any data point which deviates or placed in distance from all other normal data points is an anomaly. That is why anomalies are also called as outliers. Anomaly detection is also called as deviation detection because anomalous objects have attribute values that are different from all other normal data objects. In this paper we have discussed about various causes of anomalies, anomaly detection approaches and also issues that are to be taken care during finding out the best technique for anomaly detection.

GENERAL REGRESSION NEURAL NETWORK APPROACH FOR IMAGE TRANSFORMATION BASED HYBRID GRAPHICAL PASSWORD AUTHENTICATION SYSTEM

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Abstract— In this digital generation, computer, and information security plays a prominent role for both individuals and business organizations. In this interconnected business environment, information is the most valuable asset and it is of utmost importance to both individuals and organizations. The task of protecting information can be achieved through authentication. Today, textual password authentication is with username and password combination commonly used for many web applications. But textual passwords are the weakest form of authentication and it is easily guessed by the attacker by applying the various techniques such as brute force, dictionary attack, etc. To provide security from vulnerable attacks, graphical passwords are another alternative authentication mechanism for replacing the textual passwords. This paper proposes image transformation based hybrid graphical password authentication model utilizes general regression neural network model and feature extraction methods for user identification. Three types of image transformations such as normal image, mirror image and shift image are considered to enhance security. In this paper, three types of feature extraction techniques such as SURF, LBP and HOG are considered for extracting image features. The performance of the proposed model is analysed, in terms of usability, security and storage space analysis and the results proved that the proposed system is resistant against various attacks like brute force, dictionary attack, shoulder surfing etc.

Index Terms— Image Transformation, Feature Extraction, Graphical Passwords, General Regression Neural Network

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AN CUTTLEFISH ALGORITHM BASED OPTIMIZED MULTIPLE TIME SERIES CLINICAL DATA FOR HCC PREDICTION

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ABSTRACT
Clinical data mining techniques are used by clinicians to provide therapy, diagnosis, and prognosis of different kinds of diseases. The clinical data consists of different kinds of data in which multiple time series data is one type of data where the features changing over time and these changes contain some important information. Hepatocellular carcinoma (HCC) is a primary malignancy of the liver and it is now the third leading cause of cancer deaths. For prediction of HCC with high accuracy, the multiple measurement data were merged by using a merging algorithm and the distribution of data was determined by statistical measurement. After this, those data were given as input to the classifier to classify the data as patients with HCC and patients without HCC. The selection of optimal time period for multiple measurement data is more required to be determined automatically for HCC prediction. So in this paper, Cuttlefish Algorithm (CFA) is introduced for optimal time period selection. The optimal time period is selected based on the color changing behavior of cuttlefish. The colors and patterns seen in cuttlefish are generated by reflected light from different layers of cells stacked together. In order to find global optimal solution, reflection and visibility are two processes used as a search strategy in CFA. After the time period selection, the statistical measures and frequency based measurement features and calculated and the classification process is carried out. The experimental results show the effectiveness of the proposed prediction method in terms of accuracy and balanced accuracy.

Keywords: Multiple time series data, Hepatocellular carcinoma, Cuttlefish Algorithm, optimal time period.

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COMPARATIVE STUDY OF IOT PLATFORMS AND SUPPORT FOR EDGE COMPUTING

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Abstract. The Internet of Things has power to make one's life comfortable and overcome challenges that people face even in their daily life. Today facilities like smart healthcare, smart homes, smart grid, remote monitoring of devices have become an indispensable part of our lives, the reason being Internet of things. To create smart devices, applications are rapidly moving to the cloud, because amount of data generated is increasing tremendously. But there are some applications that require real time processing, low latency, support for mobility, very large number of nodes, working in remote areas. These applications demand edge computing where data is stored and processed near the end device. IoT connects physical devices and facilitates them to communicate with each other and control them remotely. Now we are entering an era where the applications require data to be stored and processed at the periphery of the network. In this paper our focus is on study of Iot applications, core IoT services providing platforms based on cloud computing, their comparison, challenges and support for edge computing.

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AN ADAPTIVE BAYESIAN COMPUTATION MODEL FOR CDMA MULTIUSER DETECTION USING EVOLUTIONARY COMPUTATION SCHEME

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ABSTRACT
Demand of wireless communication is increasing drastically where CDMA (Code Division Multiple Access) is considered as most promising technique for real-time communication. However, due to extreme utilization of these technologies several challenges occur such as interference and packet drop resulting in poor communication. To address these issues, multi-user detection schemes have been adopted widely which are based on the filtering techniques and MMSE (Minimum Mean Square Error) based multiuser detection schemes. In this work we address these issues and proposed a novel approach of multi-user detection for asynchronous CDMA using combined optimization and evolutionary computation. Bayesian computation model is applied which helps to compute the Log Likelihood Ratio (LLR) using Monte Carlo simulation. Later genetic algorithm is incorporated to obtain the optimal solution for LLR probability resulting in reliable communication. An extensive simulation study is presented which shows significant improvement in the performance when compared with state-of-art multiuser detection schemes.

Keywords— CDMA, Multiple access interference (MAI), Multi user detection, Bayesian Model, evolutionary computation, Log-Likelihood ratio.

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PROBABILISTIC MODEL FOR OPTIMAL CELL SELECTION FOR SEAMLESS HANDOVER IN LTE/LTE-A NETWORKS

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ABSTRACT
Increasing communication demand require high data traffic and better quality of service of real-time applications in wireless networks such as video streaming, voice and data communication. In order to meet the desired communication demands, LTE/LTE-A radio access networking technique have been developed which can support high speed UEs. In this field of wireless communication, handover plays important role for high dynamic UEs. Several techniques have been presented to improve handover performance for LTE/LTE-A network. However, conventional techniques suffer from various issues such as pin-pong effect which may degrade the communication quality due to frequent handovers which is caused due to inappropriate or optimal cell selection. In this work, we focus on handover management and developed a novel approach where optimal cell selection process is implemented and later we derive a probabilistic model handover decision making. An extensive experimental study is carried out using MATLAB simulation tool where proposed approach is implemented and compared with the conventional techniques of handover management. Comparative study shows that the proposed approach achieves better performance in terms of packet drop, packet delay and system throughput.

Keywords— LTE/LTE-A, QOS, 3GPP, Handover, Mobility, Seamless.

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A COMPARATIVE PERFORMANCE EVALUATION APPROACH TO ASSESS DATA SECURITY USING CRYPTOGRAPHIC ALGORITHMS

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ABSTRACT
Data security is of utmost importance these days due to widespread usage of cloud environment for storage of data. As the data is stored in chunks in multiple location servers, it is quite difficult to manage the access control and privacy. Being significant to any stream, data security has gained immense popularity in research. Cryptography plays a vital role in preserving data confidentiality from unauthorized access and intruders. Though this area is researched a lot but new cryptographic schemes are introduced frequently to upgrade the level of security. In this paper we review some of the most popular cryptographic mechanisms used in data storage environment, especially in cloud to protect privacy and integrity of data. We finally compare efficiency of algorithms with respect to operational time consumption. Simulation results demonstrates the comparative performance of symmetric, asymmetric algorithms and hashing mechanisms among the peers.

Keywords— Data Security, Cloud Computing, Cryptography, Access Control, ABE.

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MICROBLOGGING BASED SENTIMENT ANALYSIS USING R PROGRAMMING

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Abstract—
This Most popular websites that have social aspects are Face book, Instagram, twitter etc. Micro blogging is a web service that allows the subscriber to broadcast messages to other subscribers of the service, example of such micro blogging web service is provided by twitter. The process of identifying human emotions and thinking is termed as sentiment analysis, which is also known as opinion mining. In this paper we will discuss about the varied kind of information which is evolved from micro blogging websites such as twitter and also we will discuss about how to create word cloud and how we will perform sentiment analysis on the real time extraction of tweets from twitter by using R programming. In this paper we will discuss about the practical implementation of the automatic sentiment analysis based recommender system on cloud using R programming.

Keywords— Micro blogging, Sentiment Analysis, Social Networking, word cloud, Recommender System.

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STUD KRILL HERD ALGORITHM FOR OPTIMAL SIZING AND LOCATION OF DG IN A RADIAL DISTRIBUTION SYSTEM

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Abstract
Distributed Generation (DG) plays a vital role in modern power systems to achieve the requirements and satisfaction of end users while transmitting and distributing power from one to another point. Due to technology advancements, DG technologies are gearing-up and are becoming alternatives to conventional energy sources to improve system reliability. Stud Krill Herd Algorithm (SKHA) is one of the new bio-inspired, heuristic techniques which are based on the Krill Herd Algorithm (KHA) with stud operators. The main aim of the paper is to minimize the system power losses and voltage profile improvement. The proposed algorithm is implemented on IEEE 33-bus and IEEE-69 bus test system. The results of the base case are compared with Krill Herd Algorithms and Stud Krill Herd Algorithm.

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STUDY, ESTIMATION OF GEOMANGETICALLY INDUCED CURRENTS AND ITS EFFECT ON POWER TRANSFORMER

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Abstract
This paper deals with the case study, estimationof Geomangetically Induced Currents (GIC) at our location NIT Agartala, India and its possible effect on a power transformer.Due to the Geomagnetic Disturbances(GMD) GIC's are induced in the power systems. For this paper, we considered the geographic coordinates of our location. Using the power simulator tool we estimated the amount of GIC induced in the power transmission lines in Agartala (132KV) by assuming a uniform electric field and also a time varying electric field. After analysing the GIC in Agartala, India which is at low latitude location. We tried to show the GIC impact by analysing on the high latitude regions. The input parameters are assumed same for the both regions and the maximum field induced due to GMD is also assumed same as Agartala. We observed that the effects of GIC are seen primarily at higher latitudes. This is because thechanges in magnetic field that cause GIC are greatest in these regions. We showed the magnitudes of GIC with a comparison table.The possible effect of this GIC on power transformer is shown by injecting the GIC (DC) to the neutral point. We developed a Simulink model to see the estimated results.

Keywords: Estimation, Geomangetically Induced currents, Geomagnetic Disturbances, power transformer.

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