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ICCMST 2020

International Conference on Computational Methods in Science & Technology, ICCMST 2020, MOHALI

Book of Abstract

11–12 June 2020

Editors:
Dr. Manish Mahajan,
Dr. Shashi Bhushan

CHANDIGARH ENGINEERING COLLEGE
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CONFERENCE PROCEEDINGS

AICTE Sponsored
International Conference on
Computational Methods in Science & Technology
ICCMST 2020 MOHALI

11 – 12 June 2020

Editors:

Dr. Manish Mahajan, Dr. Shashi Bhushan

Associate Editors:

Dr. Yogesh Kumar, Dr. Manish Kumar

Organized by:

Department of Computer Science & Engineering

&

Department of Information Technology

Chandigarh Engineering College

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WELCOME TO ICCMST 2020

AICTE Sponsored International Conference on Computational Methods in Science & Technology (ICCMST 2020) is an international forum for researchers, engineers, academicians as well as industrial professionals from all over the world to share and publicize their research work and development activities in various research areas. This conference provides opportunities to our college students & faculty members to interact with the external researchers and delegates to exchange new ideas and application experiences. It also helps to find global partners for establishing educational and research relations and for future collaboration. The conference holistically aims to promote translation of basic research into applied investigation and convert applied investigation into practice. This conference will also create awareness about the importance of basic scientific research in related fields and synchronizing with product market.

After passing a rigorous round of reviews by the Technical Program Committee, out of 172 submissions from 12 nations all over the world, a total of 90 manuscripts have been finally accepted after peer review and have been considered for publication in Scopus indexed journal/UGC CARE approved journal. In addition to this, 119 posters were also accepted for presentation. Reviewers from all around the world contributed in the review process and we would like to thank them for their valuable efforts. We would also like to thank the Keynote Speakers from within the country and abroad, who had given their consent to be share their experiences amongst the researchers from all around.

CREDITS AND ACKNOWLEDGEMENTS

Finally, the Conference Chairs would like to express their gratitude towards a considerable number of volunteers and helpers who have devoted their time and endless patience to the organization of this conference. CGC is a powerful and ever-growing learning association of many enthusiastic people who have organized this conference for the first time and we are very grateful to be a small part of it. In particular, we have to thank the chairs, who were working on a voluntary basis for a whole year to make this conference a success.

We would also like to thank the all the members of the International Program Committee, who provided timely and insightful suggestions and reviews without complaint and little credit. Finally, we would like to thank the Advisory Board Members and Organizing Committee Members of the conference for their support in this amazing endeavor. These are the people who have worked incredibly hard behind the scenes to guide all the aspects of the conference. Special thanks go to Hon'ble Chairman sir, S. Satnam Singh Sandhu and Hon'ble President sir, S. Rashpal Singh Dhaliwal for believing in us and giving nod to organize such an event. We would also like to take this as an opportunity to thank all those who have actively took part as local organizers of the conference. Last but not least, we would like to thank the Administration of CGC Group, Technical Partners, Publication Partners and our Sponsors for their timely support. We especially welcome conference delegates who are attending ICCMST – 2020 and hope it will be great learning experience. We kindly ask all ICCMST 2020 committee members to extend a heartiest and warm welcome to all the participants and research scholars, who are now becoming a valuable part of the constantly expanding CGC community.

Warm greetings and welcome to ICCMST 2020.

Prof. (Dr.) Shashi Bhushan
Prof. (Dr.) Manish Mahajan
Conference Conveners

MESSAGE

S Satnam Singh Sandhu
Chairman, Chandigarh Group of Colleges

CHANDIGARH ENGINEERING COLLEGE
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"Computing is not about computers any more. It is about living."

— Nicholas Negroponte

It is my immense pleasure writing this forward for the abstract book of AICTE Sponsored 1st International Conference on Computational Methods in Science & Technology (ICCMST-2020) being organized by CGC Chandigarh Engineering College during June 11-12, 2020. This event is aimed towards sharing innovations, challenges, latest trends and future scope in the field of computing. Researchers, Professionals, Educators, and Students will be on a common platform addressing the needs of the hour.

I believe in the power of computing as today's era is witnessing the advancements in every field of daily life due to rapid developments happening through the use of computers in technology.

We have always strived to achieve excellence, meeting expectations of delegates arriving to attend the conference in terms of quality of speakers, timeliness of invited talks and discussions, as well as knowledge sharing and networking opportunities. This year, too, all efforts go into making it an enriching experience for you.

I am pleased to note that researchers from various Institutes / Universities and Industries from different parts of the country and abroad are presenting their research papers on current aspects of Machine Learning, Blockchain, Cloud Computing, Soft Computing, Computer Vision, IOT, Communication Network, System Design, Web-based Learning, Green Computing, and many more advanced areas.

I am sure that this conference would serve as a platform to connect various academicians, researchers and scholars to go beyond borders in search of new frontiers in the research of the millennium and as well to showcase their innovations and findings.

I take this opportunity to wish you all a great success for the International Conference ICCMST-2020.

MESSAGE

S. Rashpal Singh Dhaliwal
President, Chandigarh Group of Colleges
Landran, Punjab, India

CHANDIGARH ENGINEERING COLLEGE
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"I do not fear computers. I fear lack of them."

— Isaac Asimov

With a pledge to achieve sustainable success in the extremely competitive world of engineering and technology, CGC Chandigarh Engineering College is organizing AICTE Sponsored 1st International Conference on Computational Methods in Science & Technology (ICCMST-2020).

To face various emerging challenges in different fronts of engineering and technology, it has become indispensable to explore diversely integrated and interdisciplinary engineering approaches.

I am sure that this conference would greatly benefit researchers, students, and faculty. Young scientists and researchers will find the contents of the proceedings helpful to set roadmaps for their future endeavors. I welcome the delegates and also express my wholehearted congratulations to all the staff & students of CGC, CEC and wish the conference a grand success.

I wish you success in your deliberations to make the event a successful one.

MESSAGE

Dr. P.N. Hrisheekesha
Campus Director, Chandigarh Group of Colleges Landran, Punjab, India

"The computer was born to solve problems that did not exist before."

— Bill Gates

I am pleased to welcome all the dignitaries from all around the globe on the occasion of AICTE Sponsored 1st International Conference on Computational Methods in Science & Technology (ICCMST-2020) being organized by CGC Chandigarh Engineering College.

I am sure that this conference engrossed with the fresh ideas, enthusiasm, and vision of the hosts, will prove to be a wonderful experience for all the attendees.

Computing has reduced the gap between man and machine and it is going to continue to reduce this in the future too. Will "Artificial Intelligence" control human behavior in the future? Such questions are indeed a matter of concern in today's era.

To discuss more such trends, issues and algorithms in the field of computing, we have to get together online on June 11-12, 2020 at CGC-Chandigarh Engineering College. I hope the talks will be fruitful and researchers and delegates attending the conference will present the useful results.

I appreciate the efforts of teams involved in organizing the conference and wish them all the best for the successful completion of the event.

MESSAGE

Dr. James J. (Jong Hyuk) Park
Professor,
Department of Computer Science and Engineering , Seoul National University of Science and Technology (SeoulTech),232 Gongneung-ro, Nowon-gu, Seoul, 01811, Korea

"By 2029, computers will have emotional intelligence and be convincing as people."

— Ray Kurzweil

Dear Colleagues,

I am glad to find out that Department of Computer Science & Engineering, Chandigarh Engineering College, Mohali, one of the Pioneer Institutions of Northern India is organizing AICTE sponsored International Conference on Computational Methods in Science & Technology" (ICCMST-2020) for two days on 11th & 12th June, 2020.

Heartiest Wishes for the success of the ICCMST 2020!!!!

MESSAGE

Dr. Pradip Kumar Sharma
M.Tech., PhD.
Department of Multimedia Engineering, Dongguk University, Seoul, Korea

"Man is still the most extraordinary computer of all."

— John F. Kennedy

I am glad to find out that Department of Computer Science & Engineering, Chandigarh Engineering College,Mohali, one of the Pioneer Institutions of Northern India is organizing AICTE sponsored International Conference on Computational Methods in Science & Technology" (ICCMST-2020) for two days on 11th & 12th June, 2020.

This conference is expected to provide an opportunity to Academicians, Researchers and Industry Practitioners to share their research ideas and interact closely online with each other.

I wish all the success to the conference and I congratulate the organizers of the institute in taking a leading step in this direction.

MESSAGE

Dr. Anil Lamba
Vice-President, Cyber Secruity
EXL Service, Inc, USA

"With all the abundance we have of computers and computing, what is scarce is human attention and time."

— Satya Nadella

Allow me to warmly thank the organizers of this important Conference for giving me the privilege of welcoming and addressing you all. For me it is an honour and a pleasure.

I hope ICCMST 2020 will be magnificent and successful.

MESSAGE

Dr. Prihandoko, S.Kom, PhD
Deputy Director
Doctoral Program, Gunadarma University, Indonesia

CHANDIGARH ENGINEERING COLLEGE
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I am very pleased to be involved in this prestigious event. The ICCMST 2020 brings together academicians, researchers, and industrialists to exchange and share experiences and research results. It also provides an interdisciplinary opportunity for researchers and practitioners to present and discuss the most recent innovations in Computer Science. I hope you will enjoy this valuable event. Though this event is conducted in a virtual mode of delivery, I believe this would not degrade the achievement of its objectives.

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Contents

Poster Abstract

A Survey on Big Data Classification By Machine Learning Methods

Gitanjali Goyal **Dr. Kamlesh Lakhwani**
Department of CSE, Lovely Professional University (LPU), Jalandhar, Punjab

Abstract

Big data is very popular now days because knowledge can be easily removed from evaluating large sets of data. In big data, the basic problem is resources because big data cannot be handled by static resources. Big data comprises of sensitive data, and this data must be essential and should be protected sufficiently as it is processed and stored. Therefore, the main necessity is to design an efficient classification technique. In order to overcome the different problems with existing techniques, novel classification techniques will be reviewed in this review paper. This review paper focuses on the use of various classification techniques and provide comparative study of major classification techniques. The main objective of the paper is to highlight significant methodologies and technologies that are usually employed in the process of classifying big data. This paper offers an analytical review of the methods and theory of data classification focused on the present literature.

A Review of Automatic Retinal Blood Vessel Segmentation Techniques

Sonali Sharma **Abhishek Gupta**
Department of CSE , Shri Mata Vaishno Devi University, Katra, India

Abstract

In clinical ophthalmology segmentation of blood vessels and optic disk in retinal images is of great interest. The analysis of vessels in retinal images provides a better way for diagnosing several cardiovascular and retinal diseases. Manual segmentation of vessels and optic disk is done by the clinical ophthalmologists who are professional and highly experienced in performing segmentation. Manual segmentation is extremely hard task and is prone to human errors. Therefore automatic segmentation of vessels and optic disk in fundus images is important in medical application. We have presented a review paper on the technologies for the automatic segmentation of blood vessels in retinal or fundus images. In this review paper we have discussed the comparisons of different segmentation techniques for segmenting the vessels in the fundus images. Many blood vessel segmentation techniques are developed with effective results.

Techniques for Plant Disease Detection using Leaf Images : A Review

Ramanjeet Kour **Sanjay Sharma**

Department of CSE , Shri Mata Vaishno Devi University, Katra, India

Abstract

Classification and identification of plant diseases is the biggest task because of their distinct visual symptoms and visualization is used to correctly identify and classify them. Plant diseases are a major cause of production and monetary losses in the worldwide industry of agriculture.Plants as well as trees health monitoring and diseases detection, is a critical issue for sustainable agriculture. In agriculture, there are no electronic sensors available to monitor and detect diseases in the real-time scenario for health supervision purposes of plants as well as trees. Currently, digital image processing with artificial intelligence mechanisms is a widely used concept for monitoring the healthiness of plants and trees based on their leaf images within a specific time period. In this review article, we present a comprehensive study for plant leaf disease classification using an existing segmentation algorithm in computer vision tools with an artificial intelligence approach. This review paper recognizes the need for developing a rapid and cost-effective model based on image processing to achieve better performance in the agriculture industry that would facilitate advancements in agriculture by designing intelligence models. So, this paper we presents a brief survey of advanced techniques for plant disease detection using leaf images

Extrapolation of Risk Factors Among Drug Abusers using Data Mining Techniques

Shubpreet Kaur **Dr. Williamjeet Singh**
Nisha Kumari **Dr. Monica Sood**

Department of CSE, Chandigarh Engineering College, & Department of CSE, Punjabi University, Patiala, Punjab

Abstract

Need- A variety of psychoactive substances have a greater effect on the person's daily life and work competence which is associated with many adverse consequences to health. Hospitals across the nation are swamped with patients suffering from conditions associated with drug abuse. Methodology- This paper explores the epidemiology of number of problems with an emphasis on the implications of findings for the potential of drug abuse treatment. Severity of disorder of initiation of drug abuse is discussed as a concern that may have particular implication for the selection of specialized substance abuse treatment forms. Results- Various risk factors have been studied and the data is then analyzed using WEKA(data mining) tool. Naïve bayes and decision tree data mining techniques have been applied. Performance is measured in terms of true positive rate and precision value. Results reveal that peer pressure (95%) is the primary reason for initiation of drugs. Decision tree gives better results than naïve bayes.

Live Botnet Detection Technique in Internet Security

Dr. B.K. Verma **Shelja**
Ishdeep Singla **Reecha Sood**
Upinderpal Singh
Department of Computer Science & Engg. Chandigarh Engineering College, Mohali, Punjab

Abstract

Global Internet threats are undergoing a profound transformation from attacks designed solely to disable infrastructure to those that also target people and organizations. This alarming new class of attacks directly impacts the day to day lives of millions of people and endangers businesses and governments around the world. For example, computer users are assailed with spyware that snoops on confidential information, spam that floods email accounts, and phishing scams that steal identities. At the center of many of these attacks is a large pool of compromised computers located in homes, schools, businesses, and governments around the world. Attackers use these zombies as anonymous proxies to hide their real identities and amplify their attacks. Bot software enables an operator to remotely control each system and group them together to form what is commonly referred to as a zombie army or botnet

Management Zone Delineation in Precision Agriculture Using Machine Learning Algorithms

Rashmi Karkra **Sukhdeep Kaur**
Dr. Milanpreet Kaur **Rajeev Sharma**
Rashmi Rathi Upadhyay
Department of Computer Science & Engg. Chandigarh Engineering College, Mohali, Punjab

Abstract

In Agriculture, Precision Farming approach has been recognized under the pressure of rapidly increasing harmful impacts in the environment due to improper farming technique being applied and also to produce more and healthy food. In Precision Farming various technologies are used like GPS, RS and GIS etc. to gather data and analyze it to generate meaningful information. Traditionally, application of enrichments (fertilizers) to field was uniform which conflicted with the variability property of soil. The soil parameters varied in field as a result soils requirement too varies. This is case where Management Zone Delineation (MZD) comes into the picture, in such cases as it deals with studying and managing variations in the field which could help in deciding where and when the chemical treatment or fertilization is necessary. There is need to develop optimized Management Zone (MZ) which will help in improving variability application of inputs especially fertilizers. The development of Management can be treated as Machine learning problem, with either classifying or clustering the field into number of contiguous zones and classifying contaminants respectively. In machine learning, there are many clustering algorithm technique with their different quality attributes; optimization of algorithm can be done using evolutionary algorithm. Hence in this proposed work we are going to devise a novel machine learning algorithm to analyze water quality and to delineate management zones in precision agriculture

SDN-Based Approach to DDoS attack

Rajeev Sharma **Harjot Singh**
Pardeep Singh **Rashmi Karkra**
Department of Computer Science & Engg.. Chandigarh Engineering College, Mohali, Punjab

Abstract

The detection of attacks on large administrative network domains is nowadays generally accomplished centrally by analyzing the data traffic on the uplink to the net. The first phase of an infection is usually difficult to look at. Often attackers use e-mail attachments or external media, like USB sticks, hardware with preinstalled malware, or contaminated mobile devices to infect target systems. In such scenarios, the initial infection cannot be blocked at the network level. Within the SDN-based cloud, the essential features of SDN, including global view of the entire network, software-based traffic analysis, centralized control over the network, etc. greatly improves the DDoS attack detection and mitigation capabilities of the cloud. In this paper, we first discuss about various essential features of SDN that produces it suitable networking technology for cloud computing. Moreover, we propose an approach to detect DDoS attacks in SDN-based cloud by utilizing the features of SDN. The proposed approach can detect the DDoS attacks with very low communicational and computational overhead.

Breast Cancer Detection Using Image Processing Techniques and Classification Algorithms

Harvind Viswanath **Lorena Guachi-Guachi**
Mechanical Department, Chennai Institute of Technology, Kundrathur, Chennai
Research Group, Yachay Tech University, Ecuador
Bryan Chachalo **Erik Solis**
Yachay Tech University, Hacienda San Jose, Urcuqui 100119 Ecuador
Saravana Prakash Thirumuruganandham
Sapienza University of Rome, Via Eudossiana 18 RM 00184, Italy

Abstract

Breast cancer is the top cancer in women worldwide. Early detection of this disease and its classification into cases can improve the prognosis and even save lives by promoting timely clinical management to patients. An accurate diagnosis of breast cancer and its classification into benign, malignant and normal cases is a challenge in cancer research. Because of the ability to enable the computer to learn from past samples to detect and classify patterns, in machine learning, classification algorithms are widely used for cancer identification. However, many of them are focused on binary classification (cancer and nocancer; benign and malignant). In this work, we present a Computer-Aided Diagnosis (CAD) approach for diagnosis and classification of patients into three conditions (malignant, benign and normal) from pixel mammogram images. For the classification task, we explore and compare three outstanding classifiers: Support Vector Machine (SVM), k-Nearest Neighbors (K-NN), and Random Forest (RF) to analyze their accuracy in decision making. In addition, we discuss the effects of pre-processed mammogram images before entering the classifier, which results in higher effective classification

Various Roles of Remote Sensing in Water Level Identification

Sukhdeep Kaur **Rashmi Karkra**
Milanpreet Kaur
Department of Computer Science & Engg.,. Chandigarh Engineering College, Mohali, Punjab
Gurpreet Kaur
Reseacrch Scholar , Murdoch University, Perth, Australia

Abstract

Nowadays Remote sensing image processing is a wide-ranging area of research because of the variety of applications in fields like GIS, space science, Disaster management and Agriculture monitoring. Among all these, the disaster management (due to floods and droughts) is very useful in to protect the living beings and their properties. This paper reviewed various techniques for river water level identification. To accomplish this task, preprocessing is performed on the input satellite images and followed by the segmentation which is carried out with the help of the anisotropic diffusion segmentation. In input image, river spot (which contains land) is identified using different methods and then for image smoothing morphological operation is utilized. During testing phase, a model like State Vector Machine can be used to test the image for water region identification and for the identification of the river stage. Methods for moisture level presence are also reviewed using some automated method which depicts better then threshold technique.

Comparative Analysis of Various Data Hiding Techniques

Navdeep Kaur **Kiran Hizara**
Rupinder Singh **Jagbir Singh Gill**
Department of Computer Science & Engg,. Chandigarh Engineering College, Mohali, Punjab

Abstract

With the tremendous growth of internet over the past few decades the transmission of digital media have emerged exponentially. To ensure the secure and un-tampered delivery of data at the destination, various data hiding methods have been developed in the past few years. Such data hiding methods differ from each other in terms of embedding capacity, security, accuracy and speed. Some of the data hiding techniques have been analysed and presented in this paper to demonstrate the visible differences among different methods

Machine Learning Based Cognitive Decision Making in the Area of Smart City

Manish Kumar **Atul Prakash**
Sachin Bhardwaj
Department of Computer Science & Engg.,. Chandigarh Engineering College, Mohali, Punjab, *Faculty of Engineering Dayalbagh Educational Institute Agra

Abstract

All of us are living in the era of big data, where each and every device are generating data. It may be household appliances, the stock market, vehicles, power grids, banking sector, communication devices, healthcare appliances, social networking sites, news feeds, traffic management systems and all others. There is a need for handling and managing such a huge amount of data effectively and efficiently so that we can optimize the use of resources and services for providing a better and smart life to the people of our society. These three terms Big Data, IOT systems, Data Science and Analytics are buzz words and play an important role, as IOT systems connect devices and collect data and data science helps in exploring or in the mining of data for getting and drawing useful conclusions from data. Data Science uses machine learning algorithms that learn the behavior of users and systems and predict the future behavior. In this paper, we are proposing the role of machine learning techniques for cognitive decisionmaking that further helps in the better decision making and effective use of the resource. For the practical implementation of the concept, we have chosen ”Smart City” as a domain.

Recent Advancement of Data Mining in the Field of Intrusion Detection System.

Sachin Bhardwaj **Manish Kumar**
Yogesh Arora
Department of Computer Science & Engg.. Chandigarh Engineering College, Mohali, Punjab

Abstract

Intrusion detection system is a process of detecting intrusion in database, network or any other device for providing secure data transmission. Rapid growth and involvement of internet raises concerns about how to protect and convey the digital information in a safe manner. During recent years, the number of infiltrations on networks has significantly elevated and leads to an interest in network intrusion detection among the researchers. Various data mining techniques are u s e d to monitor and analyze a large amount of network data and differentiate these data into anomalous and normal data. The data mining techniques such as classification and clustering are used to identify. the intrusion attacks. This paper provides a comparison of different types of data mining techniques used in Intrusion detection and prevention system. Due to these techniques effective detection of the malicious activities in the network traffic can be done

Performance Analysis of Localization Algorithm for Different Network Parameters using Particle Swarm Optimization in Wireless Sensor Networks

Vikas Gupta

Department of Computer Science & Engg.. Chandigarh Engineering College, Mohali, Punjab

Abstract

Wireless sensor networks (WSN) has become a key area of research. Localization of Sensor nodes in WSN is extremely important for successful transmission and reception of the data. Localization is used to determine the geographical location of the sensor nodes which are randomly distributed in the area of interest. In the present work the existing DV-Hop localization algorithm which is a range free localization algorithm is studied and evaluated in terms of localization error. Then a swarm based soft computing technique, PSO is applied on original DV Hop localization algorithm and localization error is calculated by varying the communication range, anchor ratio, number of nodes, and the size of network area. And it is found from the simulation results that use PSO improves the original algorithm.

Improved Detection of Diabetic Retinopathy by Segmentation of Retinal Vessels

Sukhpreet Kaur **Amandeep Ummat**
Sheilly Padda **Ranbir Singh Batth**

Department of Computer Science & Engg,. Chandigarh Engineering College, Mohali, Punjab, LPU, Phagwara

Abstract

The retinal blood vessels are one of the useful parts of an eye, which helps in detecting number of diseases related to eye. The retinal vasculature of an eye helps in detecting various diseases like diabetic retinopathy, occlusion etc. This paper is related to the detection of disease named as Diabetic Retinopathy (DR) which is caused due to prolonged untreated diabetes in human beings. These diseases are detected by analysing the patterns of the vascular structure of an eye. The input images of an eye are taken from the online available datasets which have images of healthy as well as abnormal retinas. The identification of various eye diseases can be done by the segmentation of retinal blood vessels. But the whole process of segmentation of retinal blood vessels includes the image segmentation, extraction of different features, features selection, feature classification and then detection of the diseases of an eye. This whole process is very important and must be performed in this order for improved and better results. In this paper, features were extracted using Independent Component Analysis (ICA), then the features were selected and optimized using different optimization techniques. Then finally the features were classified using Naïve Bayes classifier. This whole process was done for both healthy as well as abnormal retinas. The input images were taken from DRIVE and CHASE online datasets. The results were proved using parameters accuracy, sensitivity and specificity parameters. The proposed algorithm gives the accuracy of 95.28% which is higher than the existing techniques.

Transport in Fullerene Device Coupled to 1B, 2B &10th Group Elements

Milanpreet Kaur **Sahil Kumar**
Ravinder Singh Sawhney **Sukhdeep Kaur**
Rashmi Karkra

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Abstract

Nanotechnology or nanotech is the science that exploits the material to develop large scale equipment using atoms and molecules. The research leads to new field of electronics that accounts for organic molecule with in electronics device referred to as molecular electronics. The electronic properties of single molecular junction constrained within two semi-infinite metallic electrodes are largely affected by the choice of electrode material The two probe device formed by the mechanically control break technique has been modelled with nine distinct electrode material from group IB(nickel, palladium & platinum), 2B(copper, silver & gold) and 10th (zinc, cadmium & mercury) group of periodic table. The quantum characteristics of these mechanically state devices were obtained by Extended Hückel theory together with nonequilibrium green function method. We evaluate the quantum characteristics, namely density of states, transmission spectrum, current, conductance, which essentially determine the behavior of a molecule linked to different electrodes.

A Comprehensive Survey on VANETs Routing Protocols for Security and Prevention: Issues and Challenges

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Abstract

In these days, research on Vehicular Ad Hoc Networks (VANETs) is an emerging area and main focused on the designing of an efficient routing protocol for security and fast transmission purpose. There are a lots of routing protocols already designed by the researchers for urban areas with high vehicle node density, fully connected networks, and are not suitable for packet delivery in a sparse, partially connected VANET. In this paper, we presented a comprehensive review on VANETs routing protocols for security and prevention regarding the major issues and challenges. However, the process of communication in an open-access environment makes security and privacy issues a real challenge, which may affect the large-scale deployment of VANETs. Researchers have proposed many solutions to these issues and we start this survey paper by providing background information of VANETs and classifying security threats that challenge VANETs. After clarifying the requirements that the proposed solutions to security and privacy problems in VANETs should meet, on the one hand, we present the general secure process and point out authentication methods involved in these processes. On the other hand, privacy preserving methods are reviewed, and the tradeoff between security and privacy is discussed. In Addition, a survey of existing work based on routing protocol and attacker detection accuracy is also discussed with a tabular and graphical representation. The main purpose of this survey is to provide a comprehensive overview of VANETs routing protocols and privacy preserving methods with the role of different artificial intelligence techniques.

Image Segmentation: Techniques and its Applications

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Abstract

Segmenting an image to meaningful parts is a fundamental operation in image processing. Image segmentation is the process of partitioning a digital image into multiple segments. In this paper, various image segmentation methods are explained. This paper presents an overview of some well known image segmentation techniques. The segmentation process divides a given image into different regions and objects. Image Segmentation has become popular due to its many vision applications. With the growing research on image segmentation, it has become important to categories the research outcomes and provides readers with an overview of the existing segmentation techniques in each category. In this paper, we present different image segmentation techniques such as thresholding, edge based segmentation, and region based segmentation, Neutral Network and also covered finding threshold value for it. In the computer vision, Image segmentation is most of judging or analyzing function in image processing and analysis. Image segmentation refers to partition of an image into different regions that are homogenous or similar and inhomogeneous in some characteristics like color, intensity or texture. The main goal of this survey is to explore various techniques of image segmentation.

Minimizing Energy Consumption in Cloud Computing using MBFD with Genetic Based Minimization of VMM

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Ms. Dapinty

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Abstract

Cloud computing has brought a revolution in the domain of computing, enhancing every aspect of computing. But with increase in number of users and their demands, there is an increase in the number of data-centers and the electronic devices used to cool them. This results in the emission of high carbon dioxide and hence affects the environment enormously, which generates the requirement of green computing. Green computing aims at environmentally sustainable computing and responsible use of computers and related resources. The commitment to reduce power consumption and environmental impact becomes increasingly important due to limited primary sources of energy and rapid climbing of energy demand by computing. In cloud computing, Virtualization plays a significant role and entire performance of cloud depends on Virtual Machine (VM) allocation and Virtual Machine Migration (VMM). To overcome these problems, the number of researchers has proposed efficient algorithms for minimizing SLA violation with the Quality of Service (QoS) at a satisfaction level. Virtual machine consolidation is considered as a technique that guarantees energy-QoS balance.The existed implemented algorithms are complex in nature and consumed a lot of time in order to find and allocate a physical machine. Thus, our aim is for minimizing the SLA violation, energy consumption with number of migrations, MBFD algorithm and ANN technique would be used for energy optimization using VM migration. This paper is divided into 5 sections, first section provides introduction related to cloud computing and the need to make green cloud, second section provides related work, third section specifies our proposed strategy, fourth section describes result analysis and finally conclusion.

Comprehensive Study of Image Compression Techniques

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Abstract

The development and demand of multimedia product grows increasingly fast in the recent years , contributing to insufficient network bandwidth and storage of memory device. Image Compression is the solution associated with transmission and storage of large amount of information for digital Image. It is the technique of reducing the image size without degrading the quality of the image. This paper presents an overview of Image compression, need of compression and various Image compression techniques. The focus of this paper is based on review of Lossless image compression techniques and their subsequent variations.

Conversion of Jumping Finite Automata with Null Moves to Deterministic Jumping Finite Automata

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Abstract

Classical computer models that process information in sequential manner like finite automata are best known for capturing the family of regular languages. However, modern computer models process information in a non-sequential manner. To overcome this problem new investigation area in automata theory called jumping finite automata have been introduced. These automata work similar to classical finite automata except that they process information in discontinuous way. This paper proposes the conversion of Jumping Finite Automata with null moves to Deterministic Jumping Finite Automata with example. The study has been undertaken to check whether Jumping Finite Automata with and without null moves accept same language or not. Beside all these some closure properties of General Jumping Finite Automata (kleene star (K)* and kleene plus (K) +) and mirror image that are not yet defined are also discussed here. The comparison of classical finite automata and jumping finite automata on different parameter has also been discussed.

Software Development Testing Using Prioritization

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Abstract

Software testing is a critical part of any software development, and is done to save resources while doing testing of any software. Software test cases prioritization is the process used for providing priority to the test cases which are built by dividing total code into various small parts. Selection of test cases is also a challenge in the testing and priority of testing for various test cases are also required. Software testing is based on priority of the test cases and also the comparison over priority of the test cases and without priority of the test cases. Graphical user interface testing process is also involved.

Hindi Text Summarization using Extractive Techniques

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Abstract

Text Summarization is a compressing technique of the original text to form a summary which will provide the same meaning and information as provided by the original text. Summarizer helps in saving time and increasing efficiency. Summarization can be done using any of the two approaches: Abstractive text summarization and extractive text summarization. Abstractive summarization refers to recreate the whole document in a few words or lines, which may include new words as well while extractive summarization refers to extract the important words or lines from the original document. Lot of work have been done in major languages like English, Chinese, etc. whereas less work has been done on Hindi. In this paper, a comparative study is done for text summarization using Term Frequency – Inverse Document Frequency and Text Rank algorithms, for the Hindi language on a single document. Idea of using the extractive approach is to provide a summary by selecting the high ranking sentences from the input document. In Term Frequency – Inverse Document Frequency, a numerical value is assigned to each sentence and TextRank is a graph based approach, which uses graphs for ranking the sentences.

Analysis of Performance of Pitch Estimation Techniques

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Gagandeep Kaur — CGC College of Engineering, Mohali
Priyanka Sood — Chandigarh Engineering College

Abstract

Fundamental frequency or pitch estimation is important problem in speech recognition to extract the features of speech signal. It gives information about the speakers emotion and the gender information. Pitch vary within a speaker and can sometimes drop or rise significantly. The Presented work focuses especially on estimation of pitch period, pitch frequency with autocorrelation and cepstum pitch estimation techniques in clean and noisy environment. For Pitch Estimation input signal is recorded from people having different age and sex. Pitch contour by autocorrelation and cepstrum method is evaluated. The random value in the pitch contours corresponds to the unvoiced and silence regions and the continuous segments correspond to the voiced regions. Fine Pitch Error (FPE) is computed for speakers of different age, sex to evaluate performance. The focus here is to study and implement various pitch estimation techniques on both clean and noisy speech and then evaluating the performance of these techniques.

Solutions to Improve Security against Black Hole Attack in Mobile Ad hoc Network (MANET)

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Abstract

Mobile Ad-hoc network or MANET is a type of wireless network that has distributed and connected nodes without dependency on any infrastructure. Black hole node has been a major threat for many years which declares that it has a route to the destination in every case. Many solutions have been proposed to overcome this threat, still, the security threat exists as they are not completely avoided or solved, Also the performance of MANET is affected considerably. The target is to find the solution which is most effective in preventing security threats with the least compromise of the performance of MANET. This paper discusses many different solutions to prevent Black hole nodes in MANET.

Digital Image Watermarking Based on SVD and LSB Techniques

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Abstract

A new method of digital image watermarking is proposed in this paper for the protection of digital image contents. This proposed method presents a method which is based on combination of frequency domain techniques, least significant bit and singular value decomposition. Three different techniques are combined to provide better quality of obtained watermarked image.

Exploring the Attack in Blockchain with Vulnerabilities DDoS and SDN (Software Defined Network)

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Abstract

Blockchain, sometimes referred to as Distributed Ledger Technology (DLT), makes the history of any digital asset unalterable and transparent using decentralization and cryptographic hashing. A simple analogy for understanding blockchain technology is a Google Doc. When we create a document and share it with a group of people, the document is distributed instead of copied or transferred. This creates a decentralized distribution chain that gives everyone access to the document at the same time. No one is locked out awaiting changes from another party, while all modifications to the doc are being recorded in real-time, making changes completely transparent. Blockchains are decentralized in nature meaning that no single person or group holds the authority of the overall network. DoS attacks referring to distributed denial of service. These attacks are very destructive in nature. In this, the hackers use many algorithms to send the request and increase the traffic on the site till the point it is not able to receive further requests and the site crashes. The DDoS attack is analogous to a group of people crowding the entry door of a shop, making it hard for legitimate customers to enter, thus disrupting trade. The incoming traffic originates from different sources so that it makes it challenging for the management to stop the request by simply blocking the IP address of a single person.

Hybrid Task Scheduling Method in Cloud Computing Using Artificial Bee Colony Algorithm

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Abstract

Cloud computing has brought a revolution in the domain of computing. Numerous algorithms are proposed to perform it more effectively. In cloud computing, Virtualization plays a significant role and entire performance of cloud depends on VM allocation and Migration. As many of energy is absorbed in this technology so different algorithms are used to save energy and enhance the efficiency of proposed work known as Green algorithms. In this research work, a green algorithm for VM Migration is introduced using met heuristic algorithm named as Artificial Bee Colony (ABC) optimization algorithm. Every server has to perform different or same functions. A cloud computing infrastructure can be model as PM is a set of physical Servers/host PM1, PM2, PM3… PMn. The resources of cloud infrastructure can be used by the virtualization technology, which allows one to create several VMs on a physical server/host and therefore, reduces amount of hardware in use and improves the utilization of resources. The computing resource/node in cloud is used through the virtual machine. To address this problem, data centre resources need to be managed in resource -efficient manner to drive Green Cloud computing has been proposed in this work using Virtual machine concept with Artificial Bee Colony (ABC).The simulation have been carried out in CLOUDSIM environment and the parameters like Energy consumption, make span, Computation cost ratio (CCR) are measured.

Estimation of Depth of Anesthesia: A review

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Abstract

Anesthesia is a medical treatment that protects patients from feeling pain during surgery. It enables individuals to have processes that lead to longer and healthier life. Physicians use drugs called anesthetics to create anesthesia. Scientists have developed a collection of anesthetic drugs with different effects. These drugs include general, regional and local anesthetics. General anesthetics put patient to sleep during the procedure while local and regional anesthetics just numb part of the body and allow patients to remain awake during the procedure. The indicators of anesthesia for estimating the depth of anesthesia are electrical parameters, physiological & biochemical parameters and mechanical parameters.

Comprehensive Study of Consensus Methods for Blockchain

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Deepansh Sharma **Kapish Goyal**
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Abstract

The achievement of blockchain as the basic innovation for cryptographic forms of money has opened up conceivable outcomes for its use in other application spaces too. The fundamental favorable circumstances of blockchain for its latent capacity use in different areas are its natural security systems and invulnerability to various assaults. A blockchain depends on an accord technique for concurring on any new information. The key commitment of crafted by Blockchain is the accord calculation, which chooses how understanding is made to add another square between all hubs in the checking system. Blockchain calculations can be classified into two primary gatherings. The primary gathering is proof based accord, which requires the hubs joining the checking system to show that they are more qualified than the others to do the attaching work. The subsequent gathering is casting a Vote based agreement, which requires hubs in the system to trade their aftereffects of confirming another square or exchange, before settling on an official choice.

Real Life Application of Differentiation

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Dr. Vandana
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Abstract

This paper describes about the effectiveness of derivatives in factual life. ISSAAC NEWTON –THE FATHER OF CALCULUS discovered the calculus. But each person knows what made Isaac invent calculus??? Here on this paper there are all of the answers of your questions.

Convergence of Lagrangian Function using Iterative Methods

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Abstract

The purpose of present study deals with convergence and rate of convergence properties of iterative methods in two variables. Convergence is obtained at the points which satisfy Khun-Tucker conditions. The facts about three variables are discussed in this paper which is outcome of the main result. In convex problem, convergence is obtained for first order without using derivatives and For second order, convergence required second order derivative and can be guaranteed only for a smaller region of initial values of multipliers. Here the convergence for third order Lagrangian multiplier is proposed. Also convergence of Quasi-Newton versions is discussed.

A Fast and Efficient Color Model for Automatic Monitoring of Plant Based on Leaf Images

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Abstract

Plants are essential to the human life. Consequently, the growth of plants must be taken care by the human which requires high efforts. Therefore, automation is required in this field to take care of the plants. A color-based model is designed to detect a specific color due to its prominence. This color-based model was helpful to identify the plant's green color in this particular application. Validation of the model was performed on three databases and performance parameters were tabulated. The average segmentation accuracy was found as 0.95%, 0.99% and 0.99% on three databases respectively. The growth of the plant was also measured through the segmented image area which can be helpful for the monitoring of the plant's growth.

An Analytical Approach in Wireless Sensor Network Based Internet of Things for Risk Mitigation

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Abstract

With the emergence of new technology, the updates are required in every domain for building the applications. Most of the applications are made by collaborating the two or more technologies altogether in order to obtain a fruitful aspect from it. Nowadays, the focus is laid on the adaptive learning techniques. Trust mechanism to be used to secure the IoT based WSN network.

Cloud Computing: Security Challenges and Issues

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Neeraj Singla **Harmandeep Kaur**

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Abstract

Over the past few years, Cloud Computing has grown extensively. Many companies can no longer sustain without transitioning towards cloud computing platforms. Cloud can provide companies the fast access to their business applications and significantly augment their infrastructure resources. Since the demand for cloud is increasing tremendously, one needs to look at the aspect of cloud security. Security acts as a backbone of any technology. Security in Cloud helps in protecting data from theft, getting overwritten or deletion of the data, natural disasters or even prevents from data leakage. This technology uses the concepts of tokenization and other means like Virtual Private Networks (VPNs), hardware and software based firewalls etc. to enhance security. Cloud Security is such a topic that one can dig deeper to find the root causes for the potential threats. This forms the basis of this research paper wherein we are going to do research about the issue related to cloud security and the challenges that the organization may be facing or can face in the future.

Cloud Outsourcing Based Effective Shortest Distance Calculation on Secured Graph

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Abstract

Cost based shortest distance computation on Cloud, which helps to determine Shortest distance between origin to destination within a given threshold value. Unlimited cloud storage access provides liability to users to compute shortest distance between vertices in a graph with high computation rate. Uploading graph data may be unsecure on cloud so privacy may be concern for users. Proposed work will provide efficient and secure distance computation on public cloud within a given threshold value. In proposed approach, graph data firstly protect and then uploaded on cloud, a user will do secure query to uploaded graph for shortest distance between vertices. In this way proposed approach achieve security and for improving efficiency a shortest distance computation will be done on Cloud.

Performance Evaluation of Zfec and Simple Regenerating Erasure Codes for Linux Filesystems

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Abstract

Growth in enterprise and scientific applications is generating tremendous amount of data, building load on traditional storage management systems. Software Defined Storage (SDS) is a new storage management concept becoming popular to handle this large amount of data in distributed storage environment. Disk fault tolerance is one of the important parameter in SDS and there are various ways adopted to provide it efficiently. Over past few years, erasure coding have been widely used as an efficient fault tolerance method in distributed storage systems. There are various implementation methods of erasure coding available in the research literatures and being adopted by SDS for high availability, reliability and interoperability.

Zfec and Simple Regenerating Code (SRC) are some of the widely used open source library of erasure coding based on Jerasure implementation of RS code. In this research work we compared Zfec and SRC codes for widely used parameter values of n and k. The encoding, decoding and repair scenarios are performed to evaluate throughput and latency. Our aim is to compare codes and its implementation with different file systems data to understand its effect on code performance. The number of failure scenarios are evaluated to understand performance characteristics of Zfec and SRC code implementation.

Pre-Authentication and Proxy Signcryption Algorithm for Fast Handoff in Wireless Mesh Networks

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Abstract

In wireless mesh networks, during intra and inter-domain handoff, there may be authentication delay and reduced quality of service. In order to over these issues, in this paper, we propose a Pre-Authentication and Proxy Signcryption Algorithm for Fast Handoff in Wireless Mesh Networks. A mobile station pre-authenticates itself to the next access point. Neighbour graphs are used for dynamically identifying and maintaining the mobility topology of the network. During inter-domain authentication, proxy signcryption method is applied between the mobile client (MC) and Mesh Node (MN). To ensure security, the authentication messages being transmitted between mobile client and mesh nodes are encrypted and signed in a combined manner such that the transmitted message is considered as signcrypted. By simulation results, we show that the proposed technique enhances network security and quality of service.

Optimized and Efficient OSLSR Routing Protocol used for Wireless Mesh Network

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Abstract

WMN (Wireless Mesh Network) plays a significant role in the upcoming inventions of wireless communication networks. These networks adapt self-configuration, self-organizing and self-healing characteristics. It allows faster deployment, low cost, simple maintenance, reliable services, and high scalability along with attractive network facility, connectivity, and flexibility. A big challenge that this network is facing is security from attacks. This network is more vulnerable to various attacks from within the network as well as from outer sources. These attacks disturb the routing data and therefore reduce the performance of the network. In current work, evaluation is concerned for DDoS (Distributed Denial of Service) attack and wormhole attacked in the network. The results indicate that the impact of the wormhole and DDoS attacks can affect various parameters of the network as throughput, packet delivery, delay, energy, overhead and packet loss in the communication network. It affects the nodes in WMN and thus degrades the overall network performance. Hence, there is the utmost significance of overcoming these attacks. In this research, we designed a novel OSOLSR algorithm for the prevention and detection of the malicious nodes in the network. The accuracy of the proposed technique is measured in terms of throughput, delay, packet delivery rate, energy, overhead, and packet loss. In this research work, performance evaluation defines PDR (Packet Delivery Rate) value is 95% using OSOLSR new method with no attack, as attack increases the PDR decreases like Wormhole attack PDR value is 70 % and DDOS attack PDR value is 60%, also throughput value with wormhole and DDoS attack value is 54 %, 81% decreased considerably. From the results, it is considered that the OSOLSR method and MATLAB 2016a simulation tool given promising results. After that result evaluation, we compared the performance metrics like Delivery rate, delay, and throughput, etc. With existing work in PASER protocol.

Secure OLSR Routing Protocol based on Hash Chain for Efficient Clustering in VANET

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Abstract

Communication can be considered to be one of the most important aspects in the evolution of humanity. As humans evolved, establishing efficient communication mechanisms was considered to be one the most critical area. From the few years vehicular Adhoc networks create much attention. Security and routing is the two most important aspect in VANET. Many number of routing protocol are already existing for VANET. But none of them are made to handle routing and security simultaneously. In this paper Hash Chain technology based clustering algorithm for VANETs is proposed. To analyse the performance of proposed algorithm we combine proposed algorithm with OLSR routing protocol. The performance of the proposed algorithm is validated against the OLSR and OLSR-C routing protocol. The proposed routing protocol outperform in term of End to End delay, throughput and PDR, thus provides a good benchmark for the algorithm's success. The simulation results show that the proposed technique provides superior performance in secure data delivery and average packet delay

Enthralling Aspects in the Analysis of Twin Images in Perspective of Face Recognition and Aging

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Abstract

The human face is an inordinate and unique creation with solitary features. No two human are found to be similar. This aids in the biorecognition and many biometric data processing. When considered the images of identical twins, the results obtained were surprising. The recognition at human level seems to be challenging incase of the image of twins. But when digital recognition is done it is easier as the feature values always remain identical for every individual person. The proposed system reveals the recognition of twins images in a better way as well as estimates the age of the subject. The facts in the images of the twins are also discussed in this paper, The recognition is done with the aid of neural networking and the features which are extracted are achieved by way of segmented fractal based textural analysis. The features that are considered are the texture values from the regions of forehead, both the eye corners, mouth, cheek and chin portions. The cascading object detector is used to identify the feature of a face from the input image. With the extracted features, the image is classified into four groups such as baby face, child face, young face and middle aged face. Deep neural network is used for the classification.

Future of Trajectory Mining Techniques using Clusters on Multivariate Time Series Data Set

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Abstract

Rapid advancement of location acquisition technologies leads to improve the generation of trajectory data, which track the traces of moving objects. A wide spectrum of applications can benefit from the trajectory data mining. Bringing remarkable opportunities, large-scale trajectory data also constitute great challenges. In this paper, the various applications of trajectory data mining, e.g., road transportation, path discovery, location prediction, movement behavior analysis, and so on are discussed. Many techniques have been proposed for processing, managing, and mining trajectory data in the past decade, fostering a broad range of applications.

Furthermore, this paper reviews an extensive collection of existing trajectory data mining techniques.

A Process Model for Software Architecture

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Abstract

Software development life cycle (SDLC) is a process model adopted and followed during the development of software. Software Engineering encompasses software engineering process models, project planning, management, and Software Development Life Cycle activities. In this paper, we are proposing a software process model for architecture-based software development from the conventional models by taking spiral process model. This process model is coined as Software Architecture Development Life Cycle (SADLC).

Breast Cancer Classification using Artificial Neural Network and Transfer Learning on Histology Images

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Abstract

From past few years, the breast cancer is the second main cause for deaths of women around the world. Previously, breast cancer cell was being detected with the help of biopsy and pathologist which was the only way. In recent years, computer aided technique machine learning is introduced in which computer first trains on specific patterns on breast cancer cell his to pathological images and then detect whether cell is cancerous or not. In this paper, comparison of two approaches is made for classification of breast cancer into benign and malignant using his to pathological images. First approach is artificial neural networks in which features are being carried out with the help of 30 hidden units present in three hidden layers (10 units in each layer) and after then features are embed in soft max layer for classification of benign and malignant cancer. In second approach, transfer learning technique VGG19 model is use for classification. The result shows VGG19 transfer learning model perform better in comparison to artificial neural network where VGG19 achieve 98.4% accuracy and artificial neural network achieve 83% accuracy.

Recent Trends on Multicast and Cognitive Mobile Ad-hoc Networks

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Abstract

Multicast and cognitive ad hoc networks are the primary techniques used by various networks. The key application of cognitive networks is the ability to reconfigure the transreceiver for dynamic spectrum access which reduces congestion by transmitting over secondary network. Whereas multicasting helps in achieving better data delivery by sending data for multiple destinations to a single node called as group leader. The main challenge in these kinds of networks is the excessive energy consumption. In recent years researchers have worked on these networks to try and reduce the energy consumption as much as possible. This paper presents the work done by researchers who have managed to conserve energy of mobile devices in multicast and cognitive Mobile Ad-hoc Networks followed by the findings on what they missed and future directions. There is a need to use both multicast and cognitive ad hoc networks together, so as to achieve better network performance in terms of data delivery, energy efficiency, network lifetime, etc.

A Survey on Multimodal Databases for Human Emotion Recognition

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Abstract

Multimodal human emotion recognition is an emerging area of research. It is a significant pattern recognition problem that encourages researchers for the development of Multimodal human emotion detection systems. The Multimodal databases contain text, audio, video or physiological signals of humans for the training, testing and validating the developed Multimodal emotion recognition systems. This paper presents a systematic study of existing Multimodal human emotion recognition databases. It describes various important stages involved in the construction of database namely design criteria, recording environment, hardware setup, acquisition, and post-processing. It provides the summary of existing Multimodal databases by common parameters such as elicitation method, number of participants, number of samples, duration of samples, speaking language of participants, targeted modalities, annotation of samples and accessibility of the database. Further, it provides valuable and possible future directions namely application specific, real-world situations and geographic regions wise participants' selection for the construction of Multimodal human emotion recognition databases.

Energy Optimization in Live VM Migration based on Hybrid Algorithm

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Abstract

Technical advancements in IT industry raised the biggest concern of energy consumption that leads to increase in cost of data-centre. Virtualization environment promise high potential in terms of load balancing and energy saving. The transfer of VM on one host to another is the concept behind VM migration which results in optimal resource utilization along with increase in energy consumption in data-centres. The objective of this work is to optimize energy consumption in live VM migration while maintaining QoS (Quality of Service) with minimum migration overhead. The purposed approach of hybrid algorithm allocates VMs to hosts in a manner so that energy can be optimized. Results demonstrate that the proposed algorithm minimized energy consumption and cost as compared to other algorithms.

Energy Based Resource Provisioning for IoT Application in Fog Computing

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Abstract

Fog computing (FC) is a new computing paradigm that considers an extension f cloud computing. In this computing, solutions are provided to the users for processing delays. Resource provisioning in fog computing is a critical task that becomes more tedious due to the unavailability of the required resources to respond. Research on resource provisioning in FC is still in its inception. In this style of computing, resource provisioning is based on energy and cost. This paper presents different scheduling techniques. This framework introduces a resource provision policy for flexible allocation of resources to applications. The policy has been demonstrated through iFogsim. The experimental results represent the feasibility and effectiveness of the resource provisioning in fog.

Intrusion Detection in Cloud Computing Environment Using Snort and Iptables

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Abstract

Cloud Computing has been envisioned as the next generation architecture of IT enterprise. Cloud Computing is an internet based technology which provides services to user on demand. It provides a pay per use access to a pool of shared resources like network storage etc. Cloud Computing depends on the Virtualization for service implementation and distribute resources over web as web services. The major issue of Virtualization is the security which has been examined as an unproven commodity when user stipulates for cloud resources. In this paper I have discussed common security threats to virtualization. Based in these threats I have discussed a security mechanism of Snort and IP tables.

Security Threats & Provocation in Internet of Things

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Neeraj Sharma **Sharanjit Kaur**
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Abstract

The Internet of Things (IoT) opens open doors for wearable gadgets, home apparatuses, and programming to share and impart data on the Internet. Given that the common information contains a lot of private data, saving data security on the common information is an significant issue that can't be ignored. In this paper, we start with general data security foundation of IoT what's more, proceed with data security related difficulties that IoT will experienced. At long last, we will likewise call attention to examine headings that could be the future work for the answers for the security challenges that IoT experiences.

Machine Learning in Healthcare using Artificial Intelligence and Results approved by Companies: A Survey

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Abstract

As Machine Learning and Artificial Intelligence capabilities rapidly evolve it's vital to scale from experimentation to implementation. The businesses successfully achieving Machine Learning and Artificial Intelligence at scale are disproportionately financial outperformers. Machine Learning and Artificial Intelligence in healthcare system is currently geared towards improving patient outcomes, aligning the interests of various stakeholders, and reducing expensive healthcare costs. One of the biggest hurdles for artificial intelligence in healthcare system will be overcoming inertia to overhaul current processes that no longer work, and experimenting with emerging technologies. Machine Learning and Artificial Intelligence faces both technical and feasibility challenges that are unique to the healthcare system and in industry. When patient files are faxed, emailed as unreadable Document file, or sent as images of handwritten notes, extracting information poses a unique challenge for Machine Learning and Artificial Intelligence But big IT companies like Apple have an edge here, especially in onboarding a large network of Health system partners, including healthcare providers and electronic health record(EHR) vendors. Generating new sources of data and putting EHR data in the hands of patients as Apple is doing with Research Kit and Care Kit promises to be revolutionary for clinical studies. In our first industry Artificial Intelligence deep dive, we use the CB Insights database to unearth trends that are transforming the healthcare system and industry.

An Efficient Approach For Handling NLP Applications using Machine Learning and Deep Learning

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Abstract

In order to understand the meaning of text documents there is need to use text analytics and natural language processing and process it using artificial intelligence and machine learning algorithms. The document can be of medical, Financial, legal, social media, etc. As a human, computers are not able to understand the natural language and they can't read between lines. But by the addition of Machine learning and deep learning user is able to write programs to perform various tasks. In the paper, the complex application of NLP with structured and unstructured machine learning has been described. In another section, work covers the review on various field of NLP where machine learning has played an important role. To learn hierarchical representations of data multiple processing layers has been employed by deep learning methods and state of the art results in produced in various domains. That's why the use of deep learning with NLP has also been part of the paper.

Data Mining Techniques and Predictive Analysis

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Ms. Gagandeep Kaur **Mr. Parteek**

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Abstract

Data Mining is the technique which helps in extracting applicative information from a passel of data that leads to various deductions. It is comprehensive expertise which uses machine learning, statistics, AI and database technology. It is all about unearthing ingenious relationships amid the data. Here we are discussing various techniques that we can draw upon/ employ to make this process effective.

Empowering Intrusion Detection in Iris Recognition System: A Review

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Abstract

Although the iris recognition system is the most robust system and hard to duplicate however the existing iris recognition system can be easily fooled by the scammers and criminals in several ways. Several incidents are reported in news that hackers and scammers breeched the security system and misused the flaws of the existing system. Scammers can easily make the duplicated iris images either of printed form or in digital form. Iris can be scanned during unconscious state or a sleeping person with partly opened eyes. Iris can be forcibly scanned by criminals to unlock individual accounts. Iris images can be easily taken during taking photographs or selfie through mobile phones and misused in later stages. Researchers made sincere efforts of overcoming these security issues and enabling iris recognition system more robust to protect users from frauds. This paper examines the potential security threats and studies the efforts being made to empower more security and intelligence of iris recognition system. Iris security algorithms are being developed by using Glint Detection, Pupil Dilation Detection, Eyelid Blink Detection, Purkinje image and so on.

A Survey of Various Techniques used for Load Balancing and Energy Efficiency Issues of Cloud

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Navleen Kaur **Sachin Majithia**
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Abstract

In cloud computing environment, the efficient utilization of resources from one cloudlet to other cloudlet depends on the scheduling of load and tasks. Scheduling of tasks is the most difficult task in the cloud environment. Cloud work either under loaded, overloaded or balanced environment. So there is need to overcome these problems. Due to heterogeneous nature of cloud resources and on demand request, there is need of dynamic allocation of resources and also load balancing on the cloud system. With the use of effective resource scheduling, cloud system will execute the tasks in minimum time but will also increase the resource utilization ratio, i.e. educes the resource consumption. Objective of scheduling is to specify best resource for execution of tasks so that scheduling algorithm can improve various quality of services (QoS) parameters like resource utilization, task rejection ratio, reliability, energy consumption, execution cost etc. without affecting service level agreement (SLA), considering constraint (deadline, priority etc.) and avoid the load imbalance (over utilized and underutilized) problem. Resource allocation plays an important role in the optimal handling of the load scheduling problem using static and meta-heuristic approaches In this paper, a novel model for load balancing and energy efficiency of cloud across with migrating the resources from server to server has been proposed. The objective of optimization of energy consumption on cloud has also been discussed in the paper. Along with the optimization techniques, the detailed literature review and various cloud services, issues and characteristics have been presented. To achieve the proposed work, CloudSim simulators and standard programming languages will be used. And, the performance of the proposed work will be analyzed by using the various performance parameters such as response time, etc.

A Review on Cloud Computing Environment

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Abstract

In computer's world these days cloud computing plays very important role. It gives user facilities like group of things such as software, platform and infrastructure services. Virtualization is the backbone of cloud resource sharing. Security is also a main problem of cloud. Multiple users have their own perception related to the cloud. By making use of cloud computing techniques the user is easily able to use to resources anywhere by using internet. So this technique is very useful in user's daily life. One of the factors for cloud computing is cloud services which were provided by the cloud (IAAS, PAAS, and SAAS). These services enable users to access infrastructure, platform and software. Even resources are allocated to users according to their requirements. But many people think that using cloud resources and its services is not safe because there is no guarantee of information which is controlled or maintained by the vendors. There are some security issues which are usually experienced while using the techniques of cloud computing. The present research presents an overall investigation data security, protection and issues in the cloud. The paper also defines the literature review related to the cloud computing issues and treats. Various security concerns are also discussed in this paper.

An Approach Based on Neural Learning for Diagnosis of Prostate Cancer

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Abstract

Prostate cancer is one of the dominant cancers among males instigating 13% of total cancer deaths. Cancer prognosis can help increase the survival rate of cancer patients. Machine Learning methodologies have played a major role in cancer prediction. In this study, we have highlighted the Machine Learning methodologies for predicting prostate cancer diagnosis. The dataset used in the study is publically available at Kaggle. Our study points to the necessity of handling data imbalance to attain more consistent outcomes. The proposed approach has improved the prediction accurateness from 84% on the imbalanced dataset to 93% after balancing the data. Also, Computer simulations show the prominence of neural networks that performed best with balanced as well as unbalanced dataset.

Securing Privacy in Data Mining: A Survey of Techniques

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Abstract

Since two decenniums the expansion of dominant data mining tools and their use on data available over the internet in electronic form has posed threats to individual's privacy and data security. It is believed that legitimate privacy involvement is with spontaneous connection to an individual's records, especially connection to keen information. Awkward or devoid discovery control can be the basic reason of privacy controversies. Methods that involve securing data privacy while increasing the data usefulness are termed as privacy-enhanced data mining (PEDM) methods. To deal with privacy troubles, plentiful data security-intensifying techniques have been worked upon. In this survey, a scheme of classification for privacy-enhanced data mining techniques is given which categorizes various techniques according to the data distribution. This classification scheme divides the privacy-enhanced data mining techniques into two groups; centralized privacy-enhanced data mining techniques and distributed privacy-enhanced data mining techniques. Thus based on the data distribution user can apply the technique according to the need of the application.

Threat & Leverage in Deep Learning

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Neeraj Sharma

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Abstract

A neural system is a progression of calculations that attempts to perceive basic connections in a lot of information through a procedure that copies the manner in which the human mind works. Deep learning is to a great extent answerable for the present development in the utilization of AI. The innovation has given PCs unprecedented forces, for example, the capacity to perceive discourse nearly on a par with a person, an aptitude too precarious to even consider coding by hand. Deep learning has likewise changed PC vision and significantly improved machine interpretation. It is presently being utilized to guide and upgrade a wide range of key procedures in medication, fund, and advertising—and past.

Comparative Analysis of Automatic Licence Plate Detection Techniques

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Abstract

In recent years, the number of vehicles has been increasing enormously which has caused difficulties in detecting a vehicle as well as the person involved in any criminal activity or traffic violation. To work out this issue, an Automatic Number Plate Vehicle Detection System has been in use for quite some time now. This system is crucial to traffic control, criminal activities and surveillance applications. It is an automated system that consists of two major steps, first is to detect the number plate (unique identification plate) of the vehicle and second is to recognize the characters. This work contributes to evaluate the various techniques previously used in the automatic number plate vehicle detection system.

Fruit Quality Evaluation using Different Learning Techniques: Review

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Abstract

A good quality evaluation is an important factor in agricultural field to maximise the overall turnover. The manual analysis is a very time consuming phase during post harvest as it requires intense human labor and cost. Also, it might not be accurate due to missing of defects that cannot be observed with human eye. Hence, the automation in this process can overcome all the drawbacks that are phased in manual evaluation. Many researchers have worked upon the problem of fruit quality by using various machine learning and deep learning techniques like KNN, K- means clustering, NN, CNN, SVM etc. Various parameters have been used till now to check for the results of the systems like accuracy, rms, precision and recall. The main aim of the paper is to survey the existing works proposed by the authors and analyze their successes and issues.

Distributing Safety Messages using Unicast, Multicast Protocols and Implement Redundancy Detection Algorithm in Vehicular Adhoc Networks

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M. Tech Scholar

Parminder Singh
Associate Professor

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Abstract

Disseminating critical messages is a challenging process of detecting and managing routes in a vehicle ad hoc networks (vanets). other problems with vanets are associated with delay and reduce the performance of the overhead network. these problems can be mitigated in the case of unicast and multicast protocols being used effectively. we have considered a multi-hop based model in which vehicle traffic will be considered as the basis of a hop counting. for multi-hop models, clustering approach is used to increase packet delivery and provide a stable way for data transmission. clustering has proven to be an effective approach to integrate networks into a cohesive range and is widely used in vehicular ad hoc networks (vanets). vehicular adhoc network is a data intensive network that provides accurate data to users. unfortunately, data loss is also a common problem in vanets. therefore, routing protocols guarantee maintaining the path and provide surety of message delivery. here, the unicast and multicast protocols are used and we compare these protocols to the vanet-cloud model. in addition, the purpose of this paper is to minimize data loss and provide accurate data to the user. the network is organized in such a way that data can be retrieved for which the concept of virtual ip is used. in this paper, we use the redundancy detection algorithm to improve communication about existing techniques.

Scrutiny of Region based Text Detection Systems

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Abstract

Most of the digital media such as images and videos are used to share information that carries textual information, sometimes that textual information is very important and want to save for future use and that can be possible with text extraction. The scene image holds multiple objects as well as textual information. Extracting the text from scene images become very crucial task due to noise, text size, complex background and multiple objects that exist in the image. Finding the location and detecting the text becomes very challenging in digital image processing field. Multiple different traditional methods works with deep learning and used for text detection from images. This paper shows different text detection methods, extraction techniques and compares performance on the basis of different parameters such as precision rate, recall rate and f-measure. Standard datasets are used for performance analysis.

A Systematic Analysis on Various Data Mining Techniques

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Abstract

With the advancement in technology large amount of data is being stored in databases and it is very important to extract this data for efficient analysis to take necessary decision regarding the information. Management of data is basically done by data base management system, Data Ware House and Data mining. Various techniques have been developed to store large amount of data and then extract this data for better decision making. Data ware house support various applications like Information processing, analytical processing, and data mining. Data mining is the first step in extracting large information from the database. Data mining is done to explore large amount of information in some particular patterns and so as to validate these results to some new subset of information This paper discuss about various data base, data warehouse and data mining techniques that are being used to store large amount of data and then extract the data for better decision making.

Brain Tumor Detection Techniques Based on Machine Learning

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Abstract

In recent years medical imaging (X-ray radiography, MRI (magnetic resonance imaging), endoscopy, CT-Scan (computed tomography), and many more) has been widely used for an early diagnosis of the diseases. Brain tumor is the utmost cause of people's death. Brain tumor detection is the crucial step in tumor diagnosis. The manual process of detecting brain tumor is complex and time consuming. Therefore, there is the need of automatic brain tumor detection methods. Various methods include deep learning and make it easier to detect tumor. There are various classifiers have been purposed that are defined in this paper. Segmentation of MRI images is also a very crucial step. There are various methods of segmentation that have been used for tumor detection. In this paper different segmentation methods and classifiers are explained. On the basis of accuracy parameter results of different techniques are analyzed and compares graphically.

Comparative Analysis of Various Medical Image Segmentation Methodologies in Temporal Order

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Pawan Kumar
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Abstract

Medical image processing is a vast and emerging field. By this medical practitioners are able to inquest into structure, functions and pathology of a human body. Basically image processing process comprised of following basic stages: enhancement, segmentation, quantification, registration, visualisation and also involves compression, storage and communication. Medical image processing made it possible to diagnose various dangerous diseases like cancer and tumour at early stage. But extracting correct boundaries of infected region through segmentation is a major challenges. There are many techniques to do the segmentation of medical images like energy based methods, Active contour methods, region based, clustering based, Fuzzy Logic based, Hybrid methods, Markov Random field based models, ANN, deformable models. Also classification of image segmentation methods can be based on generations like first generation implemented region growing algorithms, second generation algorithms implemented uncertainty models, pattern recognitions and clustering based algorithms and third generation implemented Atlas based segmentation and rule based segmentation methods. Researchers basically aim to get a accurate and automatic segmentation technique with up to date software. This papers provides valuable insights into trends of methodologies followed in image segmentation fields along with the major software used at industry level as well as academic level.

Hybrid and Blind Watermarking Approach for the Security of Digital Images in Ridgelet Domain

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Abstract

In this paper, a hybrid and blind watermarking scheme is proposed for the protection of copyright of digital images. the scheme based on hybridization of two advance transforms such that ridgelet transform and robust principle component analysis (rpca) are used in which ridge let coefficients are used embedding process after passing them through svd decomposition. the motivation behind using these two method's combination is to improve the imperceptibility of the watermarking scheme. the imperceptibility requirement of the scheme is achieved using hybrid coefficients which are achieved by applying rpca to intensity component of hsi converted host image. them l matrix of rpca is used to extract the high frequency ridgelet coefficients of the cover image. the watermark information is inserted by resizing the watermark to 128*128 sizes. the security of the proposed scheme is achieved by applying arnold scrambling to watermark image before embedding. svd is applied to both scrambled watermark and ridgelet high frequency coefficients. experiments of the proposed scheme are conducted on various types of natural images. experiments results show that, compared with existing schemes, the proposed scheme is robust to various attacks while having high imperceptibility. also, the proposed scheme is performed better than many existing schemes.

Genetic Algorithm for Denoising of RGB images

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Abstract

Image Deblurring is an important image enhancement tool required by both image processing applications for artists as well as for computer vision systems. Many different techniques for deblurring of a blurred image have been developed. In this paper, we are presenting a new technique for image deblurring with the application of optimization algorithm called genetic algorithm. The work uses GA to refine the Kernel function used for deblurring of Image. The kernel for blurred is image is computed first by using Laplacian of Gaussian (LoG) filtering and then applying morphological operations to extract the PSF. The PSF or kernel function thus computed is then used to compute Mean Squared Error when applied to deblur the image. The resultant MSE is utilized as objective function and is minimized by adjusting the parameters for LoG filter and blurring filters in term of chromosomes in Genetic Algorithm. After successful iterations, the MSE is minimized and best fit kernel function used to deblur the image. Different quantitative performance metrics like MSE, Coefficient of Correlation and Standard Deviation etc are used to evaluate our work. The result of our technique is compared with existing blind deblurring algorithm.

Performance Probing of Different Plant Disease Detection System based on Leaf Constraints

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Vatika Jalali
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Abstract

India has become nation founded on agricultural. Agricultural productiveness plays a first-rate function in an Indian country where the population of 60% relies upon agriculture. There is a need of approach by which leaf diseases can detect automatically and provides help in cultivation. Farmers do a lot of struggle to enhance production of crop because of more than one disease disturbing the plant so there may be a want to be identified the disease at the initial stage. The main purpose of this paper is to evaluate the image processing segmentation and classification techniques for detecting the diseases from the infected leaf. Segmentation partitions of the image into significant parts for the better evaluation and analysis of the image. Segmentation techniques provide more deep knowledge of image pixels that are helpful for leaf disease detection. More collected knowledge in the field of interest in an image that helps in the explanation of the object scene. There are various successful segmentation techniques like k-means clustering algorithm, region-based method, edge-based, thresholding etc.

Power Saving Mechanisms in MAC Protocols for Wireless Sensor Networks – A Survey

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Abstract

The wireless Sensor Networks are the resource and energy-constrained networks widely deployed in various difficult distributed applications require to operate for longer span, sometimes years with no human intervention, hence earning clout in researcher's community, industry and users. In this paper we will discuss the protocols classification, power usage break-up at sensor node, the power consumption by the most prevalent MAC protocols for WSNs, and finally overtures to abridge the power consumption in WSNs. We provide a comprehensive survey and evaluating study in which we thoroughly discussed the energy-saving mechanisms proposed and applied in the WSN MAC protocols. The paper also ascertains the canonical methods for improving energy-efficiency of the WSN MAC protocols and paves the future endeavors.

Recognition of Iris Image Dataset with Recent Image Processing and Deep Learning Techniques

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Abstract

Current years, biometric recognition of users has gained the main vital in the world from its applications, like military protection, social password, medical and forensic. IRS (Iris Recognition System) is one of the most growing biometric traits. Due to their real and unique features as a biometric characteristic, iris verification, localization and normalization, segmentation, feature extraction, classification methods, and matching are described. The evaluation of the IRS based on segmentation and preprocessed methods approved before extracting the eye characteristics. It is also providing an extensive analysis of the vital limitations and classification methods using CNN for iris are defined. CNN classification method to study and analyze work at various resolutions and improve the existing work and existing issues. The classification methods which only use handcrafted feature extraction, by evaluating characteristics extraction and classification together.

Detection and Lung Cancer Classification Techniques for CT Scan Image Data

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Abstract

Current years, several CADS (Computer-Aided Diagnosis Systems) are implemented for detecting the various diseases. LCD (Lung Cancer Detection) at the initial phase has become very vital and also simple with DIP (Digital Image Processing), classification and machine learning methods. LC is a kind of disease, i.e., measured as one of the best primary reasons for death worldwide. Japan and Malaysia, these are the third most common malignancy kind and the second kind of tumor between men and women. This paper described the CT scan images that are utilized to find cancer or disease level of that node. The major aim of this paper, develop a novel system to detect disease in the early stage and saving patients' life. ML methods have been used to implement CADS for LC such as KNN, SVM, and DT. The LCD system consists of the acquisition phase, preprocessing, segmentation, extract the features, classification of the cancer type and calculate the maximum ACC rate, specificity, and sensitivity.

Pixel-Level Crack Detection using Image Processing Techniques and Machine Learning Algorithms

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Abstract

In fast developing country people are facing many accidents. Crack on concrete surface is one of the sign of worsening of structure which is hazardous for the maintenance as well as continue exposure will lead to utmost damage to surrounding environment. Detection of crack is one of the most important part of maintenance system. Manual inspection is one of the most common method for detection of crack. In the manual inspection, a layout of crack is prepared manually. Manual approach is very time consuming and also depend upon knowledge as well as experience. It is not suitable for quantitative analysis. In place of manual inspection automatic crack detection is proposed. Literature gives various methods and techniques for identifying the crack. This paper also represents the various issues which help the researcher to fulfil further research.

Load Balancing in Cloud Computing: The Online Traffic Management

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Shanky Goyal

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Abstract

Cloud computing is a kind of Internet-based computing. Clouds are highly configured infrastructure, which allow the users to make the payment only for the services procured. Cloud computing is basically delivery of different type of services to an organization's computers and devices over the Internet. These resources can include tools and applications like data storage, servers, databases, networking, and software. As opposed to keeping records on a selective hard drive or other nearby storage devices, cloud-based storage makes it conceivable to spare them to a remote database or server farms in a protected and versatile manner. The electronic device just needs to access the web, using which it gets to access the data and the software programs to run it. Cloud computing is now days becoming a popular option for people and businesses for a number of reasons including cost savings,

increased productivity, speed, efficiency, performance and security. For the most part the cloud is placed on data centers which are amazing to deal with countless clients. Load balancing mechanism comes into role to manage the workloads, which further defines the efficiency of the cloud. The basic aim behind balancing the load over the machines is to distribute workloads and then computing resources across one or more servers by reducing the energy consumption and providing maximum resource utilization. This paper gives concise information about load balancing, necessity to maintain the load and basic algorithm used to maintain the load over the cloud. In addition to this Static and dynamic load balancing algorithms have also been compared.

On Creation of Dogri Language Corpus

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Abstract

The prerequisite for any Natural Language Processing (NLP) task, is the corpus. Corpus is defined as a large collection of structured text. Dogri is one of the official languages of India but is under-resourced in terms of computational resources needed for any NLP task. This paper proposes a methodology to construct a standard corpus which can be used for performing various language processing tasks like stemming, part-of-speech tagging, information retrieval, etc. The digitized text required for creating the corpus is not available due to the scarcity of online resources containing Dogri text. The only online source which is available is the Dogri Newspaper "Jammu Prabhat ". Hence, the text is to be extracted from portable document formats (pdf) of that newspaper which are first converted to images before extraction of the text. To achieve this, an open-source tool-Tesseract is used for extracting the text from images. The methodology that is used for the corpus creation of Dogri Language is discussed in detail in the paper. The challenges faced during the research and the acquired results have also been discussed.

A Review on Facial Recognition Including Local, Holistic and Hybrid Approaches

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Abstract

Face plays a major role in social intercourse for conveying identity and feelings of a person. Facial expression recognition is the method of recognizing the face expression of the person, and a required factor of human–computer interaction (HCI) etc where identifying the expressions on a face is essential. The facial expression recognition process includes the face detection and expression recognition using different classifiers like Haar classifier and Fisherface which is based on FLDA(Fisher's linear discriminant analysis) etc. The main steps for FER are facial image pre-processing, face detection, detecting facial components, extracting features, and then classifying into the respective expression category and the databases which include Cohn-Kanade, Yale, JAFFE, CMU AMP, AR, BU-3DFE etc, can use to test and train the algorithm. and faces are classified into eight expressions: happy, angry, surprise, contempt, disgust, fear, surprise, and neutral.

A Systematic Approach for Day-Night Vision for Vehicle Detection System using Deep Learning

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Abstract

In today's era, the rapid escalations in the number of automobiles on the roads and highway lanes have created many challenges regarding the efficient management and safety control of the traffic.Vehicle surveillance has proved to be a laborious challenge as it includes detection of moving objects in complex environment. Many researchers have proposed techniques for Vehicle Detection at day time and that gives a more promising way to control and manage road traffic at day. However, existing algorithms have low performance while detecting vehicle at night. This paper provides the overall review of methods used by researchers for detecting vehicle at day and night conditions. Also, it provides a complete analysis of the methodology which is best suitable for further research at night vision detection.

Statistical Oriented Comparative Analysis of Various Machine Learning Classifier Algorithms

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Abstract

Classification using machine learning has emerged as the core aspect of modern digital technologies. There are various classifier algorithms available for classification, analytics and feature selection etc. Evidently, a suitable choice of right algorithm can be helpful in selection for particular problem by considering a fundamental field that plays an important role in machine learning which is Statistics, that is of historical importance to it. In this paper, we have presented a statistics-based comparative analysis of different classifier algorithms on a regular day application problem and calculate their efficiency which would help in making choice of suitable classifier for a particular problem.

Motor Imagery and Mental Task Classification Algorithms in Non-Invasive Brain-Computer Interface

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Abstract

Brain-Computer Interface is an interface which enables the human to command device using brain signals. The task which the human is intended to perform can be classified using the brain signals. In this paper, we have presented a comparative analysis of methods using which the task can be effectively classified. A brief comparison between the various machine learning algorithms used for the extraction of feature and classification purposes is given in this paper. There are so many tasks that a human brain can perform and this paper focuses on the mental tasks and motor imagery tasks for brain signal classification.

Computing High Dimensional Algebras with GAP, I

Zekeriya Arvasi **Alper Odabas**
Department of CSE, Eskisehir Osmangazi University, Turkey

Abstract

Crossed modules and cat1 -algebras are known as two- dimensional algebras. We rewrite these structures to make them clear explanation to the second part of this work.

Computing High Dimensional Algebras with GAP, II

Dr. Zekeriya Arvasi **Dr. Alper Odabas**
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Abstract

In the following of part I, we consider that how higher dimensional algebra structures can be computed by the GAP computational discrete algebra programming language.

Pixel-wise Adaptive LBP and GLCM Based Feature Extraction for Human Motion Estimation

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Abstract

Human motion estimation and tracking the body gestures to trace the suspect in a crowded place is an area of research for surveillance systems. For the analysis video surveillance is performed through high resolution CCTV cameras installed at security alert areas. The main focus of research is tracking motion in multimodal dynamic background and extracting the features for tracing the suspicious gestures. The researchers believe that the techniques should eliminate the redundant frames, extract the features and reduce the false alarm rate by segregating the video frames into meaningful interpretations for tracking the suspect. Various techniques are discussed and analyzed to study the body motion applying the techniques to the already available CAVIAR database. To improvise upon the existing the techniques the research has proposed pixel-wise adaptive threshold-based segmentation for background subtraction and LBP-GLCM based feature extraction for tracking the motion.

WBAN for Healthcare Applications: A Survey of Current Challenges and Research Opportunities

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Abstract

Mounting utilization of wireless networks as well asthe constant trimness of electrical devices has empowered thegrowth of Wireless Body Area Networks (WBANs). The emergence of WBAN technology has carried expectations and emergence to a brief explanation of the people getting old, numerous lingering illnesses, plus health facility deficiency problems. The implementation and designing of routing protocols becomes a crucial division of WBANs also shows a significant responsibility in the announcement mounds then has a considerable effect on network presentation. Into this paper, in order to facilitate this emerging field, we in brief review the research improvement of WBAN emphasis on the exploration of the routing protocol, classification of fail/malicious nodes, and compare the advantages as well as drawbacks of several prevailing routing protocols. Finally, we set advancing about existing glitches and proposals that provide better concepts on behalf of the trail-up the routing mechanism strategy in WBAN. In addition, major energy and cost minimization issues for WBAN are covered for the data preservation point of view. We appraise and classify the popular energy-efficient and secure routing mechanism to the WBAN structural design. We summarize routing requirements for WBAN in consort through the prevailing outbreaks, coercions and state-of-the-art clarifications. The survey also finds sweeping research complications and trials for WBAN security and we also point out research instructions that could be the future work for the routing and security challenges that WBAN encounters.

Creating the Optimum Transition Between Two Videos in Sign Language Translation System

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Abstract

Sign language is a visual language created by hearing impaired individuals using their gestures and facial expressions while communicating among themselves. According to the reports of the world health organization, while the number of hearing impaired people living in Asia was 100 million in 2018, it is expected to be 139 million in 2030 and 189 million in 2050. Hearing impaired individuals have difficulties in daily life, although they can easily communicate among themselves with the help of sign language. For example, individuals with hearing disabilities who go to the hospital or another public institution have great difficulties express themselves and understanding others. Many private and public institutions provide sign language training to their staff for prevent these problems; however, both the limited training period and the fact that the staff who learn the sign language do not use this language frequently cause them to forget. This unfortunately causes wasted labor and time. In the literature, there are a few avatar translation systems on this subject. However, as a result of the feedback received from hearing-impaired individuals, it was concluded that the avatar's mimic is inadequate and therefore the understandability is low. In addition, it has been determined that the comprehension is high in real human model translations. In this study, it was focused on eliminating the bounces during the transition of word videos that occur in sentences formed by combining sign language word videos, thus making the sign language video look like a single video, not a merged video. The last frames in the video of the first word to be combined and the closest ones of the first frames of the video of the second word were determined and intermediate transition frames were created with Generative Adversarial Network (GAN). Thus, thanks to the frames produced with these GAN techniques, the transition between the two videos can be softened.

Applications of Machine Learning Techniques for Disease Diagnosis: A Review

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Abstract

The proliferation of machine learning techniques indifferent capacities for real life problems has changed the way inwhich problems are perceived and solved. We study the present status of ML applications in medical care and explore their potential. Machine Learning can be employed for different varieties of healthcare data (structured and unstructured). Some well-known ML techniques which are used for diagnosing diseases like cancer, diabetes mellitus, hepatitis, and cardiovascular diseases include Neural Network (NN), K-Nearest Neighbor (K-NN), Decision Tree (DT) and classical Support Vector Machine (SVM). Within this exploration, the utilization of machine learning for detection and diagnosis of diseases is studied. The key focus is to discover machine learning techniques (MLT), which are extensively utilized to anticipate, forecast and treat vital regular illnesses, for example, malignancies (cancers), diabetes, hepatitis, and cardiovascular diseases.

Comparative Study of Various Ad-hoc Network Security Protocols

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Yashesvee Bhutani **Gaurav**
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Abstract

This paper presents survey of secure ad hoc routing protocols of all wireless networks. Ad hoc network is a set of nodes that are linked via a wireless medium forming topologies that change rapidly. Attacks on ad hoc network routing protocols disrupt network performance and reliability. Here we briefly present the most Common as well as popular protocols that follow the source-initiated on-demand approaches and table-driven method. The comparison between the proposed solutions and ad hoc network parameters shows the efficiency as per protected protocols. This paper discuss the various routing protocol and their challenges I order to gain authentication in ad hoc network.

A Supervised Approach to Assess Classification Techniques for HIS

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Anurag Shrivastava

Ankit Agarwal

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Abstract

This paper assesses the performance of some most widely used supervised image classification techniques and experimental results are analyzed on two HSI datasets. Dimensionality reduction using well known Decision Boundary Feature Extraction (DBFE) feature extraction technique is performed as preprocessing step to obtain most informative features. The spectral signature so extracted are provided as input to Random Forest (RF), Artificial Neural Networks (ANN) and Gaussian Maximum Likelihood (GML) classifiers to carry out pixel-wise classification. The obtained results of experiments performed on two HSI datasets namely Pavia University (PU) and Pavia center (PC) are analyzed on the basis of parameters like overall accuracy, class wise accuracy kappa coefficient and execution time. The outcomes so obtained shows that RF is a better classifier in terms of overall accuracy, class wise accuracy kappa coefficient and execution time.

Exploring Various Work Done in Sentiment Analysis of Tweets in Recent Years

Nupur Bali

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Abstract

Sentiment Analysis is a recent topic for research and a lot of researches is being done recently in this field. People nowadays are free to write and express their thinking through social media like Facebook, Twitter, Reddit, etc. These may be in the form of reviews, feedbacks, comments, statuses, etc. therefore analyzing these sentiments of people becomes a necessity. It also helps business and organization to improve their services and products. Some sentiments can be negative, positive or neutral. This paper mainly reviews some of the work and researches have done recently in the past years. This paper mainly focuses on work done in analyzing tweets.

Comparative Analysis of Emotion Mining Techniques

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Williamjeet Singh
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Abstract

Emotion is both prevalent in and essential to all aspects of our lives. It influences our decision-making, affects our social relationships, and shapes our daily behaviour. With the rapid growth of emotion-rich textual content, such as micro blog posts, blog posts, and forum discussions, rhymes etc, there is a great need to develop automatic tools for identifying and analyzing people's emotions expressed in text. In this study we have compared different emotion mining techniques, their working principles, advantages and disadvantages. Different application domains discussed indicates that emotion mining is being used in almost every aspect of day to day life, like it is playing a prominent role in Politics, tourism, media, sports etc. The study also focuses on the challenges related to emotion mining.

An Improved Method for the Detection of Retinal Blood Vasculature in Computer-Aided Diagnosis of Hypertensive Retinopathy

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Abstract

Hypertensive retinopathy is a retinal vascular damage caused due to adaptive changes in the arterial and arteriolar circulation in response to the high blood pressure. Therefore, early detection of hypertensive retinopathy is an important task in computer-aided diagnosis of retinopathy. A decreased ratio of the width of retinal arteries to veins in comparison to normal retinal images is the most common manifestations of hypertensive retinopathy. In this paper, a new method is designed using dual top hat transform. The method was tested on 90 retinal fundus images taken from two publicly available database and promising results are obtained in terms of arteriolar-to-venular diameter ratio (AVR). An average AVR of 0.637 and 0.44629 is obtained with publicly available INSPIRE-AVR and MESSIDOR database respectively. Furthermore, an estimation of AVR is achieved with accuracy of 97.08% on INSPIRE-AVR database in comparison to observer 1 while 97.79% for observer 2. The simplicity and efficacy of the proposed method make it easy to apply alone or incorporated with other existing methods to provide a computer aided diagnostic solution.

Providing Security & Comparative Analysis of Various Searching Algorithms with Innovative Computing: Concepts to Practical Approach

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Abstract

Searching is a procedure that is common place in various applications in life. Searching is the process by which we can check and find a specific element from a huge list. For example, one wants to search phone number from the telephone directory. Searching is to be done on every list weather it is sorted or unsorted such a large number of searching algorithms are developed but in this paper, we have covered algorithms like binary search, jump search, linear or sequential search, interpolation search and hashing. This research focuses mainly on how these algorithms work. Also, highlights their working principles and provides a performance analysis of all the mentioned algorithms in terms of time complexity. The idea has been proposed where the searching algorithm is applied to provide security and minimize spam calls in digital India.

A Robust Unsupervised Word by Word Translation for Morphological Rich Languages using Different Retrieval Techniques

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Mustafa **Philemon Daniel**

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Abstract

Word translation or incorporation of bilingual dictionaries is an important capability that impacts many multilingual language processing tasks. In recent years, cross-lingual word embedding has been receiving considerable attention. Recently, it has been shown that these word embeddings can be learned by aligning two monolingual disjoint vector spaces via linear transformations, using as supervision no more than a small bilingual dictionary.

In this paper, the best cross-lingual word embedding is generated for English as source language, and Hindi, Punjabi, Telegu and Tamil are target language and vice versa. Here, there is no aligned document or sentence aligned corpus, nor any bilingual dictionary has been considering. We are following the assumption of intralingual similarity distribution that, for the most common word, the distribution graph is similar between language pair and embeddings are isometric. Different types of retrieval methods nearest neighbor, inverted nearest neighbor retrieval, inverted Softmax, and cross-lingual word scaling are performed and compared for the bi-lingual embedding of language pairs, which is trained for fully unsupervised learning techniques. Bi-lingual word embedding is tested on generated English-Hindi, English-Punjabi, English-Telegu English-Tamil dictionary.

Analysis and Speech Recognition of Under-Resourced Kangri Dialect with Ensemble Model

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Philemon Daniel
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Abstract

Speech recognition architectures have been developed for mainstream languages considering the advantages of large amount of resources and limited phonological diversity. These techniques are not effective for dialects with less or no resources available like the Kangri dialect of Himachal Pradesh, India. A work in progress is presented where an ensemble model is proposed for such dialects. The results for some of the common existing techniques are shown to demonstrate the need for a combination of models.

Evaluation of Next Generation Networks (NGN) Architecture Networking Model

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Abstract

A next generation network is packet-based network that provides services like telephony, data and support for mobility. Initially, the term next generation network was used to refer to the transformation of the core network to IP and sometimes referred to as an all network. This research assesses the contemporary state of architecture of NGN development working models and future components used in NGN in numerous fields and comparison of its working.

Efficient Task Allocation Based on Green Computing in Private Cloud

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Abstract

Cloud computing is a rapidly emerging new paradigm for delivering computing as a service.

There are many research issues in cloud computing. Resource allocation is one of the challenging tasks in cloud environment. The main aim of resource allocation to reduce the infrastructure cost associated with companies. The resources offered in the cloud are probably heterogeneous and extremely dynamic. Due to this dynamic access, load balancing of jobs required. Cloud computing resource allocation should be elastic and intelligent, based on application demand and user requirements [1]. Green cloud computing is a trend which has become popular with the emergence of internet driven services in every field of life. It refers to the prospective environmental advantages that computer based internet services can guarantee to the environment, by processing huge amount of data and information from collective resources pool. Load balancing in an efficient way so that the resource utilization can be maximized and the energy consumption of the data centre could be minimized that can further result in reducing global warming. We have concluded the parameters that should be analysed and improved that will result in reduction of global warming and will increase the profits of cloud provider and the client. Cloud computing resource allocation should be elastic and intelligent, based on application demand and user requirements. Green cloud computing is a trend which has become popular with the emergence of internet driven services in every field of life

Block Chain Challenges Field in Brute Force Attack

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Abstract

Blockchain is a distributed ledger, which is protected against malicious modifications by means of cryptographic tools, e.g. digital signatures and hash functions. One of the most prominent applications of blockchains is cryptocurrencies, such as Bitcoin. In this work, we consider an attack on wallets for collecting assets in a cryptocurrency network based on brute-force search attacks. Using Bitcoin as an example, we demonstrate that if the attack is implemented successfully, a legitimate user is able to prove that fact of this attack with a high probability. We also consider two options for modification of existing cryptocurrency protocols for dealing with this type of attacks. First, we discuss a modification that requires introducing changes in the Bitcoin protocol and allows diminishing the motivation to attack wallets. Second, an alternative option is the construction of special smart-contracts, which reward the users for providing evidence of the brute-force attack. The execution of this smart contract can work as an automatic alarm that the employed cryptographic mechanisms, and (particularly) hash functions, have an evident vulnerability.

A Symmetric Approach for Computational Mathematics and its Applications

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Abstract

Abstract: Computational mathematics involves areas of mathematical work that focus on the application of math to computing technologies. Because so much of the programming and hardware world depends on mathematical operations, there are seemingly infinite ways to apply computational mathematics to computer science. Computational mathematics is about solving real world problems with numbers. It's about learning to think critically and developing analytical skills. Keywords: Geometry, Graph Theory, Technology, Number Theory, Algorithm.

Effective Calculation on Secured Graph using Cloud Outsourcing

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Gurinderjit Kaur **Priya Dogra**
Ishpreet Singh Virk
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Abstract

Cost based shortest distance computation on Cloud, which helps to determine Shortest distance between origin to destination within a given threshold value. Unlimited cloud storage access provides liability to users to compute shortest distance between vertices in a graph with high computation rate. Uploading graph data may be unsecure on cloud so privacy may be concern for users. Proposed work will provide efficient and secure distance computation on public cloud within a given threshold value. In proposed approach, graph data firstly protect and then uploaded on cloud, a user will do secure query to uploaded graph for shortest distance between vertices. In this way proposed approach achieve security and for improving efficiency a shortest distance computation will be done on Cloud.

Keywords: Graph, Cloud Outsourcing, Secured.

A Review on Machine Learning

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Abstract

The purpose of this paper is to provide knowledge about the advancement in the machine learning to the upcoming scholars. The basic definition, structure and various machine learning methods are explained in this paper. Keywords Machine learning, Artificial intelligence, Methods, Supervised, Unsupervised, Reinforcement.

Monolithic 3D Integration

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Abstract

Monolithic 3D Integration is powerful technology to design 3D IC's as the stacked layers can be connected at the transistor scale. This paper reviews the opportunities and applications of Monolithic 3D integrated circuits. Moreover, it also represents technological challenges and offer solutions to achieve high performance and scalability. The demand of future applications is increasing rapidly from self-driven cars and biometrics. Monolithic 3D integration is a leading approach fir building future systems. Monolithic 3D technology enables both speed and energy and improves performance. Also provide better infrastructure in future as well as provides the means for developing rich additional functionality.

Keywords : Monolithic, miniaturisation, SRAM, chip- stacking, coefficients of thermal expansion.

Semantec Alalysis of Text Mining Techniques for Historical Medical Archives

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Abstract

Abstract: Document clustering is associated in nursing unattended learning paradigm. Identification of patterns connected with data processing analysis incredibly widespread. Large scale efforts to alter historical documents square measure creating it progressively simple for researchers of history to hold out searches over immense amounts of historical information from their computers. The importance of document bunch emerges from the huge volume of matter document screated. This paper analyses the extremely cited analysis publications within the field of information mining victimization text mining ways. Common place keyword based search systems treat documents as collections of unrelated words, and don ' t take into consideration their structure and that means. The analysis discovered th at the outstanding analys is square measures associated with data processing are GIS, data and biblio metric analysis. During this paper, we have a tendency to describe are placement semantically bound system for looking archives of historical medical documents covering a large time spans challenges that IoT experiences.

A Review of Big Data Technology with it's Concepts and Applications

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Abstract

One of the most burning topic of today' s era is Big Data. Now a day's Big data is generated by almost all the platforms at very fast pace. As the term says itself, Big data which means data which is the combination of large amount of structured and unstructured data. Today almost all the companies rely on Big Data for the better growth of the company. Useful information can be extracted from the Big Data by using various data analyzing and data extracting tools. This information helps the organisations to improve there market value, productivity and customer services. Big data have great impact on various departments like Education, Medical Management, Social Media, Research and Development. As analyzing big data manually is a very tedious task and therefore for this purpose we have many robust tools such as Apache Hadoop, Cassandra, Hive, Yarn.

Let's study about this emerging technology in more detail.

Keywords: Big Data , Analyzing Big Data, Social Media, Tools of Big Data, Merits of Big Data and Social Media, Big Data in Technology.

An Overview of Pharmacovigilance Studies

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Abstract

A Purpose: Pharmacovigilance (PV) is a relatively new discipline in the pharmaceutical industry. Having under- gone rapid growth over the past 2 decades, PV now touches many other disciplines in the research and devel- opment enterprise. With its growth has come a heightened awareness and interest in the medical community about the roles that PV plays. This article provides insights into the background and inner workings of PV. This narrative review covers the core PV activities and other major areas of the pharmaceutical enterprise in which PV makes significant contributions. Drug safety monitoring activities were organized by the US Food and Drug Administration and academic medical centers in the early 1950s in response to growing concern over the occurrence of aplastic ane- mia and other blood dyscrasias associated with the use of chloramphenicol. This experience was codified in the 1962 Kefauver-Harris Amendments to the Federal Food, Drug and Cosmetic Act as adverse event evalua- tion and reporting requirements. The ensuing decades have seen the development of core PV functions for pharmaceutical companies: case management, signal management, and benefit-risk management..

Keywords : benefit-risk management, case management, pharmacovigilance, signal management.

RMinimizing Mutants for Efficient Software Testing: A Review

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Abstract

Generating huge number of mutants program as possible combinations of various operators, functions, and statements is a great challenge towards the way to success of mutation testing techniques. Programmers and software developers' tries to escape mutation testing cumbersome and expensive procedure due to this reason. If we succeed to decrease the amount of mutants program without disturbing the quality of mutation testing results then it may prove great technique for software testing as well as popularize among programmers. Researchers tries to develop such techniques by which we can decrease the amount of mutants' programs significant level without affecting the quality of the mutation testing. Among mutants reduction techniques; Sampling method, Clustering Method, Selection Method and Higher Order Mutants are very popular. Ratings these 4 available techniques on the basis of their mutants reduction capabilities is still a research problem.

In this research we successfully demonstrate and compared the above 4 mutants' reduction techniques. We find the sampling technique outperformer amongst all that could decrease the amount of mutants up to 90.42% while the cluster method could reduce only 69.42% mutants. The Selection method scored 81.52 % reduction score which is greater than cluster method and lower than sampling method. We also compare the relative performances amongst the mutants' reduction methods. We conclude that: Sampling method is 21% more efficient than Cluster method and 8.9% more efficient than Selection method and Selection method is 12.1% more efficient than Clustering method. Thus the cluster method is the most expensive and sampling method is most economic.

Several image De- Foggy Detection, Filteration and Classification Techniques

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Abstract

Image De-fogging in brightness defined to image calculated in a deprived climate like fog, rain and ocean and pollutants or dust particles. To alter the fog and some other pollutants from the image, various methods are customized, some mainly utilized methods are DCP, Detection, and Classification of foggy images. Haze is an arrangement of dual-components, air-light and DA (Direct Attenuation), low image quality and generate various issues in VS (Video Surveillance), Navigation and Target Tracking, etc. So, it removes from an image, several de-fogging approaches have been discussed in this paper. Image De-fogging can attain utilizing several and single image haze removal techniques. The famous methods are discussed in this paper used for image de-fogging in DCP, Depth-map for accurate estimation, Guided Filter and Transmission methods. These techniques are still efficient in removing haze from images that have very high time-complexity. The guided filter is a new region preservative filter with region-enhancement and smoothing. The previous result was a local linear transformation of the Guided Image. It defines a review of the classification and detection technique of a hazy image. This method mitigates the limitations of filtration and DCP and at the same time preserves the image quality. At that time, described the existing image de-fogging methods containing image restoration, contrast improvement, and fusion-based image de-fogging methods

Review of different Algorithms utilized for Load Balancing and Energy Efficiency over the Cloud

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Nitin Kumar Gohal
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Abstract

In cloud computing environment, the effective use of assets from one cloudlet to other cloudlet relies upon the planning of load and various tasks. Scheduling of tasks is the most difficult task in the cloud environment. Cloud work either under loaded, overloaded or balanced environment. So there is need to overcome these problems. Due to heterogeneous nature of cloud resources and on demand request, there is need of dynamic allocation of resources and also load balancing on the cloud system. With the use of effective resource scheduling, cloud system will execute the tasks in minimum time but will also increase the resource utilization ratio, i.e. reduces the resource consumption. Objective of scheduling is to specify best resource for execution of tasks so that scheduling algorithm can improve various quality of services (QoS) parameters like resource utilization, task rejection ratio, reliability, energy consumption, execution cost etc. without affecting service level agreement (SLA), considering constraint (deadline, priority etc.) and avoid the load imbalance (over utilized and underutilized) problem. There is importance of resource allocation for solving load balancing issue using [12] various approaches. In this paper, we have discussed various load balancing techniques, their procedure, and achievement. The objective of optimization of energy consumption on cloud has also been discussed in the paper. Along with the optimization techniques, the detailed literature review and various cloud services, issues and characteristics have been presented.

POSTER ABSTRACT

Benchmarking Zfec and Simple Regenerating Code (SRC) for Linux File Systems

Shreya Bokare

Centre for Development of Advanced Computing (C-DAC), Mumbai

Abstract

In recent years, deep learning has succeeded in many fields, especially in computer vision and natural language processing. In this poster, we mainly introduce some deep neural networks of deep learning and their applications. Comparing deep learning to traditional machine learning methods, deep learning has a well-built learning ability and can make better use of datasets for feature extraction. Our findings may also explain Abstract learning in human brain.

Web Designing and Development

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Harkrishan Singh

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Abstract

We have created a website that is based on tourism. This website is made using wordpress and hostinger as the host provider. The name of this website is India Team Travel. This website provides you services like air tickets, visa(study and tourist), hotel booking and complete travel packages. In this website every possible thing made easy so every tourist make their journey happy and save they have full guidance about their journey so that they can prepare accordingly. This website first page contains the overwiew of the whole website which contains pages like home page , services page and contact page . whichmade easy to take one overview of whole content. This can help for other people also who want to plan their journey made their journey save and secure Introduction

Waste Detection using Artificial Intelligence

Shubh Malhotra **Shubham**

Shivam

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Abstract

Today, the biggest challenges in most cities and towns of India are confronting is the decline in condition of cleanliness of the environment regarding the garbage management. The main reason behind this is the mismanagement of the garbage collection. This mismanagement creates a widespread of garbage in community which will in turncreates poor health conditions in the immediate area. It also is the main cause for several serious diseases amongs the people in close proximity and degrades the environment of the area. To avoid mismanagement of the garbage and to improve the cleanliness of the society, Garbage Detection System comes in place. In the proposed system, AGUI is also developed to monitor the desired in formation related to the garbage dumps for different selected locations. Depending on the received messages through a drone, the latitude and longitude of garbage area can be received and the garbage can be cleaned. This will capably help us to monitor the garbage collection of various regions in to make the environments mart, clean and safe.

Geo Identification of Waste, Mapping and Triggering Alert System

Siddharth Goyal **Shivam Gaba**

Shashank Garg

Chandigarh Engineering College, Landran, Mohali

Abstract

In, e India, the reisgarbage all around. Many diseases are spreading because of this. Th government is focusing on clean India. The govt. has launched clean India movement but is not coming out with the expected outcomes. Infact, India is generatingb more than 1.50 lakh metricton(MT) of solid waste every day. To make the cities clean, government has launched Swacch Bharat App. But in that, the people need to capture the images to the garbage and geotagthe location. But, again, the problem is that thead option is low. We have tried to solve this problem. We have developed a software, "Geotracking of Waste, mapping and triggering alert system".

Cyber Crime and Prevention

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Shivank Rana
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Abstract

In today's world, everything has become digital. Being one of the most rapidly expanding sectors, internet has become one of themost vital part of our life from work to entertainment there's no other option now but it comes with a price of our privacy. Cybercrimes are attacks made by black hat hackers who break into computer systems or gain unauthorized access to any system in order to steal, change or destroy information. Cybercriminals use the internet and computer technology to hack user's personal computers, smartphone data, personal details from social media, business secrets, national secretsetc. Criminals who perform these illegal activities through the internet are called –Hackers. Cyber Crimes are also on the rapid expansion causing our sensitive data to beused without our permission. Governments are aware of this matter doing everything they can to secure our networks but many say security is just an illusion. In this whole report we will analyse the strength of the people who are trying topsoil the Cyber Ecosystem and the higher grounds where we can deceive them.

Dark Web

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Niharika Verma **Aditi Malla**
Ashutosh Verma
Chandigarh Engineering College, Landran

Abstract

Dark web is just a part of the web where any information stored is not indexed on any other search engine and you require TOR browser in order to access the dark web links by jumping over from one node to the next creating the encrypted traffic tunnel between the computer and the network source anonymizing the IP address. Social activists, whistle-blowers, secret agents make use of these in order to make sure no data is leaked outside the network or in public by any intruders. It can be beneficial for those people involved in sharing ideas, discussions related to the political controversies which if spoken in public can cause a danger to that particular person or organization and so these organizations can create their own website share it only with the specific people they know so that no other person without the website link can view the page containing any confidential information.

Malware's Analysis

Abhishek Jain **Udish Jain**
Antima Jain **Anjaneya Sharma**
Abhishek
Chandigarh Engineering College, Landran, Mohali

Abstract

Malware, or malicious software, is a form of software designed to disrupt a computer or to take advantage of computer users. Creating and distributing malware is a form of cybercrime. Criminals have frequently used malware to conduct digital extortion. Malware includes computer viruses, computer worms, Trojan horses, most root kits, spyware, dishonest adware and other malicious and unwanted software, including true viruses. Viruses are sometimes confused with worms and Trojan horses, which are technically different. A worm can exploit security vulnerabilities to spread itself automatically to other computers through networks, while a Trojan horse is a program that appears harmless but hides malicious functions. Worms and Trojan horses, like viruses, may harm a computer system's data or performance. Some viruses and other malware have symptoms noticeable to the computer user, but many are surreptitious or simply do nothing to call attention to themselves. Some viruses do nothing beyond reproducing themselves.

Smart Farming Using AI & IOT

Ankush Sharma **Aaryan Vij**
Chandigarh Engineering College, Landran, Mohali

Abstract

Demand for agriculture goods is consistently growing to keep up with the world's population growth. The relationship between land, population, and field production is a complex one. Since agriculture becomes modernised, its dependence on land as well as on individual labour decreases. In the backdrop of those challenges, farmers are in need to adopt new technologies. E-agriculture is a one of such concepts that is playing a part in the enhancement of processes associated with Agriculture. This new technology can help improve operational planning and accelerate decision making on farms, large and small. Artificial Intelligence and Internet of Things (IOT) is emerging as part of the solutions towards increased agricultural productivity. IOT in an agricultural refers to the use of sensors, cameras, and other devices to show every factor and action involved in farming into data.

Raspberry Pi

Suraj Yadav **Suparn Sharma**
Sushant Sahdev
Chandigarh Engineering College, Landran, Mohali

Abstract

Rasperry Pi includes series of small single board computer which does notincude peripherals .Like keyboard, mouse etc. but includes accessiories of its own. It is founded by Rasperry Pi foundation and is also known as R Pi .It operates on bunch of operating system like ubuntu, linux and many of the rtonamea few.One cannot compare it with traditional computers butithas unique design of its own as well as features. Talking about Rasperry pi model 4 Bitin cludes ram upto 4GB(LPDDR) at 3200MHz ,at 1.5GHz Cortex A-72 Quadcore ARMCPU, graphics capped at 500MHz by broad comm(versionVI). None of the Raspberry Pi models have a built-in realtime clock. When booting, the time is seteither manually, or configured from a previously saved states hut down to provide relative consisten cyforthe files ystem .The Network Time Protocol is used to update the system time when connected to an work.

E-Commerce

Shivam Garg **Shubham**
Sumit Rana
Chandigarh Engineering College, Landran, Mohali

Abstract

This project deals with developing an E commerce website for online product sale.it provides the user with a catalog of different products available for purchase in stores.

In order to facilate online purchase a shopping cart is provided to the user .The system is implemented using a 3-tier approach, with a backend database, a middle tier of Microsoft internet information service(IIS) and PHP,and a web browser as a front end client . Ecommerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions.

Green Computing

Aanchal **Abhishek Manhas**
Adeeba **Aiman**
Chandigarh Engineering College, Landran

Abstract

Green computing, green IT or ICT Sustainability, refers to environmentally sustainable computing or IT. It is the environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central pocessing units, servers and peripherals as well as reduced resource consumption and proposal disposal of electronic waste. It was conceived by the Environmental Protection Agency in 1992 to promote energy efficiency in hardware of all kinds. The Energy Star label became a common sight, especially in notebook computers and displays.

5G Wireless Communication Network

Gulsimar Kaur **Ishan**
Himanshu **Jyoti**
Chandigarh Engineering College, Landran, Mohali

Abstract

Breast tumorclassification is currently performed by doctor and lab techenician.First the tumor is detected on the breast ultrasound by a doctor suspect the tumor may be malignant, a simple is taken through biosphy and undergoes lab testing to determine if the sample is from a benign or malignant tumor.

5G Wireles System

Jasleen Kaur **Aanchal**
Chandigarh Engineering College, Landran, Mohali

Abstract

Fifth-generation wireless (5G) is the latest iteration of cellular technology, engineered to greatly increase the speed and responsiveness of wireless networks. 5G will also enable a sharp increase in the amount of data transmitted over wireless systems due to more available bandwidth and advanced antenna technology.

Breast Tumors Classification and Detection

Chirag **Chetan**
Chandan kumar **Dheeraj Tiwari**
Chandigarh Engineering College, Landran, Mohali

Abstract

Breast cancer is one of the most common cancers among women. About two out of three invasive breast cancers are found in women with age 55 or older. A Mammogram (low energy X ray of breast) done to detect breast cancer in the early stage when it is not possible feel a lump in the breast. In this paper we have proposed a method to detect microcalcifications and circumscribed masses and also classify them as Benign or malignant. The proposed method consists of three steps: The first step is to find region of interest (ROI). The second step is wavelet and texture feature extraction of ROI. The third step is classification of detected abnormality as benign or malignant using Support vector machine (SVM) classifier.

Service Helper

Daman Kumar **Diksha Kashyap**
Dupinder Kaur **Devashish Khanduri**
Chandigarh Engineering College, Landran, Mohali

Abstract

The introduction of autonomous buses and taxis is expected to generate such benefits as cost reductions—and particularly for regional bus operations with a substantial deficit—as well as enhancing public transit accessibility through decreased trip costs.

Advancement of Artificial Intelligence

Ekta **Kartar Singh**
Deepak Kumar **Dashwinder Singh**
Chandigarh Engineering College, Landran, Mohali

Abstract

Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.).

The Future of Bionic Body

Nidhanshu Sharma **Akshit Saxena**
Reshabh **Chirag Joshi**
Devansh
Chandigarh Engineering College, Landran, Mohali

Abstract

Future prosthetic: towards the bionic human. The science-fiction vision of robotic prosthetic limbs that can be controlled by the brain and provide sensory feedback is coming closer. And replacing missing or lost limbs provides some of the most striking examples of the progress we have made.

5G Wireless Technology

Chirag Batra **Shivam Mittal**
Anmol Bhola
Chandigarh Engineering College, Landran, Mohali

Abstract

5G is the fifth generation wireless technology for digital cellular networks that began wide deployment in 2019. As with previous standards, the covered areas are divided into regions called "cells", serviced by individual antennas. Virtually every major telecommunication service provider in the developed world is deploying antennas or intends to deploy them soon. The frequency spectrum of 5G is divided into millimeter waves, mid-band and low-band. Low-band uses a similar frequency range as the predecessor, 4G.

Quantum Computing Poster

Gaurav Kumar **Ayush Goyal**
Jagjot Singh **Divanshu Jindal**
Chandigarh Engineering College, Landran

Abstract

Quantum computers are designed to outperform standard computers by running quantum algorithms. The essential power of a quantum computer is that you can consider many states simultaneously. In order to make it work, its algorithm must be able to produce an end state that is readable (so, the information that you read out at the end cannot have superpositions). This means that quantum computers require a more complex algorithm design to be useful.

Blockchain

Agam Choudhary, **Anoop Kumar**

Chandigarh Engineering College, Landran

Abstract

A blockchain, originally block chain, is a growing list of records, called blocks, that are linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data (generally represented as a Merkle tree). By design, a blockchain is resistant to modification of the data. It is "an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way". For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for inter-node communication and validating new blocks. Once recorded, the data in any given block cannot be altered retroactively without alteration of all subsequent blocks, which requires consensus of the network majority. Although blockchain records are not unalterable, blockchains may be considered secure by design and exemplify a distributed computing system with high Byzantine fault tolerance. Decentralized consensus has therefore been claimed with a blockchain.

Poster on Internet of Things

Harsh Kumar **Chirag**
Girish **Chetanya**

Chandigarh Engineering College, Landran, Mohali

Abstract

Internet of things, connecting everyday objects to the internet. Illuminates of Thanatos, an international magical organization. Inductive, a variety of vacuum tube.Institute of Transportation, an agency in Taiwa.Interoperability testing, to determine the interoperability of a product.Input-Output Transfer, instructions for computers as in the PDP-8.Completed operations indicator, in Belgian railway signalling.

Anti HIV using Nano Robotics

Aastha Payal **Amit Tiwary**
Aakash Soni **Bishnu Prasad**
Anuj
Chandigarh Engineering College, Landran, Mohali

Abstract

There is no specific technology for the treatment of AIDS. Some drugs of specific composition are given to the patients which are able to increase the life time to a few years only. To make the treatment more specific we use the new technology called Nanotechnology which has bio-medical application. The size of nanorobots is about 100 times lesser than the size of an animal cell and hence it can easily monitor the behavior of cell inside the body. Nanorobots use nano sensors to sense the AIDS infected

WBCs and convert them back into original WBCs. It operates at specific sites and has no side effects. Thus the AIDS patient is provided with the immune system so that he can defend himself from AIDS.

Fraudsters

Daniel R Chugh **Damanpreet Singh Gil**
Bhavya **Harshdeep**
Harsh Kaushik
Chandigarh Engineering College, Landran, Mohali

Abstract

Fraudsters Are Everywhere. Retailer Selling Damaged Or Copy Products. They Are Even On Social Media .They Can Be Anywhere In The World ,.Calling You And Ask About Your Bank Details.

AI In Agriculture

Arsh Arora **Apoorva Singh**
Daksh Grover **Alish**
Chandigarh Engineering College, Landran, Mohali

Abstract

AI bots in the agriculture field can harvest crops at a higher volume and faster pace than human laborers. By leveraging computer vision helps to monitor the weed and spray them. Thus, Artificial Intelligence is helping farmers find more efficient ways to protect their crops from weeds

Understanding the Significance of URL in Phishing Website Detection

Harjot Singh Baidwan **Gaganpreet Singh Dhillon**
Deshwal **Harinder Singh**
Gagan Sharma
Chandigarh Engineering College, Landran, Mohali

Abstract

Phishing is a form of fraud in which the attacker tries to learn sensitive information such as login credentials or account information by sending as a reputable entity or person in email or other communication channels. Typically a victim receives a message that appears to have been sent by a known contact or organization. The message contains malicious software targeting the user's computer or has links to direct victims to malicious websites in order to trick them into divulging personal and financial information, such as passwords, account IDs or credit card details

Electronic Jewellery

Jasleen Kaur **Jaspreet Kaur**
Gurleen Kaur **Harshdeep Kaur**
Himanshi Malhotra
Chandigarh Engineering College, Landran, Mohali

Abstract

Mobile computing is beginning to break the chains that tie us to our desks, but many of today's mobile devices can still be a bit awkward to carry around . Basically jewellery adorns the body and has very little practical purpose. The combination of micro computer devices and increasing computer power has allowed several companies to begin producing fashion jewellery with embedded intelligence. Digital jewellery can be best defined as wireless, wearable computers that allow the user to communicate by the means email, voicemail. It seems that everything we access today is under lock and key even the devices we use are protected by passwords . The whole concept behind this is to able to communicate to others by means of wireless appliances .The other key factor of this concept market is to stay fashionable at the same time.

Smart Helmet using Internet of Things

Nilesh Rathore **Himanshu Sambhi**
Jagneet Singh **Hemant**
Kirat Pandey
Chandigarh Engineering College, Landran, Mohali

Abstract

IOT has enabled us to connect our day to day devices in a network for a sole purpose to exchange data. Today a number of countries has made it mandatory to wear helmet while riding. In this paper, I describe a helmet which is made smart using latest IOT technologies. This helmet for the comfort of riders provide various functions such as Listening to the music on the go, sending SOS messages in case of emergency, use navigation services.

Artificial Intelligence in Health Care

Hardik Dhir **Gaurav**
Harsh Awast **Harsh Mani**
Chandigarh Engineering College, Landran

Abstract

Health care, health-care, or healthcare is the maintenance or improvement of health via the prevention, diagnosis, treatment, recovery, or cure of disease, illness, injury, and other physical and mental impairments in people. Health care is delivered by health professionals in allied health fields. Physicians and physician associates are a part of these health professionals. Dentistry, pharmacy, midwifery, nursing, medicine, optometry, audiology, psychology, occupational therapy, physical therapy, athletic training and other health professions are all part of health care. It includes work done in providing primary care, secondary care, and tertiary care, as well as in public health.

Technology and Health Maintenance

Devanshu **Kashish**
Anmol Bhatheja **Ansh Raheja**
Chandigarh Engineering College, Landran

Abstract

Health care, health-care, or healthcare is the maintenance or improvement of health via the prevention, diagnosis, treatment, recovery, or cure of disease, illness, injury, and other physical and mental impairments in people. Health care is delivered by health professionals in allied health fields. Physicians and physician associates are a part of these health professionals. Dentistry, pharmacy, midwifery, nursing, medicine, optometry, audiology, psychology, occupational therapy, physical therapy, athletic training and other health professions are all part of health care. It includes work done in providing primary care, secondary care, and tertiary care, as well as in public health.

Migration in Cloud Computing

Ritu **Samridhi Vashisht**
Riya **Riya Singhal**
Spriha
Chandigarh Engineering College, Landran, Mohali

Abstract

Cloud migration is the process of moving data, applications or other business elements to a cloud computing environment. There are various types of cloud migrations an enterprise can perform. One common model is the transfer of data and applications from a local, on-premises data center to the public cloud.

Cloud Computing Services

Payal Baghla **Prabhjot Singh**
Prerna Sharma **Priyanshu Bansal**
Pulkit
Chandigarh Engineering College, Landran

Abstract

This poster explores cloud computing and its merits and de-merits which may help an organization in taking a wise decision either in favor of it or against it. Cloud computing is the buzz word now in the field of information technology. It is the concept of where an organization has its data and application hosted on a third party infrastructure. Sometimes the applications are designed and developed by the service provider and the company using it uses that application against its own data. There are several factors for deciding in favor of it as well as several factors that raise strong questions for its acceptance. It is totally based on the need of the organization, whether it leverages cloud computing or not. The relevance of the target dimensions was evaluated with an additional survey conducted among IT managersExtended by a provider market analysis the classification framework was designed and finally checked for applicability and can be used to create concrete cloud procurement processes, refine Cloud strategies or develop migration requirements for governments.

Big Data

Himanshu Chaudhary **Mayank Sawan**
Avishak Kalra
Chandigarh Engineering College, landran

Abstract

There are some things that are so big that they have implications for everyone, whether we want it or not. Big Data is one of those things, and is completely transforming the way we do business and is impacting most other parts of our lives. The basic idea behind the phrase 'Big Data' is that everything we do is increasingly leaving a digital trace (or data), which we (and others) can use and analyse. Big Data therefore refers to our ability to make use of the ever-increasing volumes of data.

The AI Rage

Janak Patel **Jannat Sharma**
Japunpreet **Jayesh pratap**
Chandigarh Engineering College, landran

Abstract

Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.).

Quantum Computing

Jatin **Karandeep Singh**
Chandan Kumar **Harshit**
Chandigarh Engineering College, Landran

Abstract

Quantum computing is an emerging technology. The clock frequency of current computer processor systems may reach about 40 GHz within the next 10 years. By then, one atom may represent one bit Electrons under such conditions are no longer described by classical physics, and a new model of the computer may be necessary by that time. The quantum computer is one proposal that may have merit in dealing with the problems presented. Currently, there exist some algorithms utilizing the advantage of quantum computers. For example, Shor's algorithm performs factoring of a large integer in polynomial time, whereas classical factoring algorithms can do it in exponential time.

The Eye: Machine Learning Aid For Blind And Visually Impaired Users

Rachit Ahuja **Mohit**
Srishti Gupta
Chandigarh Engineering College, Landran

Abstract

There are over 25 million blind and visually impaired people in the world. Among these individuals there are 3 million who are completely blind. There have been several systems/ apps designed to support visually impaired people and to improve their quality of living. Unfortunately most of these systems have limitations. To make the world more accessible to them, we need to build tools that can work with the real world environment. Our app as well as device helps visually impaired people to become more independent by giving auditory cues whenever they encounter objects and people around them. This device calculates the distance between the person and object ,in addition the Artificial Intelligence (AI) used informs about the details of that object. We recommend wearing the device around your neck for better judgement

Edible electronics : Using Pullulan and Polysaccharide Polymers

Rishabh Mittal **Parag Dutta**
Shraddha Gupta
Chandigarh Engineering College, Landran

Abstract

Ingestible electronic device mainly focuses on the health and gut monitoring system for the betterment of an individual. According to recent statistics and analysis we have found that on November 14, 2017 an article in New York Times stated the acceptance of the humans towards the smart pill which was hiked in the recent years . The 2.6 cm pill consists of micro processors and sensors which work on the principle of Internet of Things (IOT) used as a smart way to monitor the health of a human being internally keeping aside the use of heavy scientific machines .

HTML

Pragti **Parv Vohra**
Paras Garg **Rajan Soni**
Pragti
Chandigarh Engineering College, Landran

Abstract

Our Term Project is to study and implement a fingerprint recognition system based on Minutiae based matching quite frequently used in various fingerprint algorithms and techniques. The approach mainly involves extraction of minutiae points from the sample fingerprint images and then performing fingerprint matching based on the number of minutiae pairings among two fingerprints in question.

Our implementation mainly incorporates image enhancement, image segmentation, feature (minutiae) extraction and minutiae matching. It finally generates a percent score which tells whether two fingerprints match or not. The project is coded in MATLAB.

Fog Computing in the Real World Architecture

Abdul Subhan **Anchal Sharma**
Ankita **Ankita Mahajan**
Shiny Naggi
Chandigarh Engineering College, Landran

Abstract

Fog computing, an extension of cloud computing services to the edge of the network to decrease latency and network congestion, could be a comparatively recent analysis trend. though each cloud and fog provide similar resources and services, the latter is characterized by low latency with a wider spread and geographically distributed nodes to support quality and time period interaction.During this poster, we tend to describe the fog computing design and review it's completely different services and applications. we tend to then discuss security and privacy problems in fog computing, that specialize in service and resource accessibility. Virtualization could be animportant technology in each fog and cloud computing that permits virtual machines (VMs) to be in an exceedingly physical server (host) to share resources. These VMs might be subject to malicious attacks or the physical server hosting it may expertise the system failure, each of that lead to the inconvenience of services and resources

Cyber Threats and Security Measures

Ashish Kumar Verma **Asisinder Singh**
Anmol Sharma **Anurag Singh Rathor,**
Ashish Jha
Chandigarh Engineering College, Landran

Abstract

Proposal of cyber security measures in companie. Cyber security is currently the most wanted and most challenging research discipline that is in constant development. Data reference institutions and recognized to security researchers in 2017 shows that cyber criminals using 'low-tech' 'software were successful in 9 of 10 attacks on various web sites. Most web sites had serious flaws for a period of 150 days or more. Various invasions and fraud have cost the company $ 6.6 billion annually. Based on the research of Oracle java in America is the biggest security risk for desktop computers. According to reports java is installed on 65% of computers, 48% of users did not have the latest patches for Java last year been identified 119 new vulnerabilities in the software.

E-Commerce Website

Simran Kaur **Sunakshi**
Suraj **Suresh**
Sudhanshu
Chandigarh Engineering College, Landran

Abstract

The business-to-consumer aspect of product commerce (e-commerce) is the most visible business use of the World Wide Web. The primary goal of an e-commerce site is to sell goods online. This project deals with developing an e-commerce website for Online Product Sale. It provides the user with a catalog of different product available for purchase in the store. In order to facilitate online purchase a shopping cart is provided to the user. The system is implemented using a 3-tier approach, with a backend database, a middle tier of Microsoft Internet Information Services (IIS) and PHP, and a web browser as the front end client. In order to develop an e-commerce website, a number of Technologies must be studied and understood.

Internet of Things

Ishita Singla **Jatin Garg**
Jatin Mahehswari **Kartik Aggarwal**
Chandigarh Engineering College, Landran

Abstract

The Internet of Things (IoT) is the internetworking of physical devices, vehicles and other objects which consists of an embedded system with sensors, actuators and network connectivity that enable to collect and exchange data. The IoT allows objects to be sensed and/or controlled remotely across existing network infrastructure, creating opportunities for more integration of the physical world into computer-based systems, and result in improved accuracy, efficiency and economic benefit. The IoT is a rapidly increasing and promising technology which becomes more and more present in our everyday livesThe Internet of Things (IoT) is the internetworking of physical devices, vehicles and other objects which consists of an embedded system with sensors, actuators and network connectivity that enable to collect and exchange data. The IoT allows objects to be sensed and/or controlled remotely across existing network infrastructure, creating opportunities for more integration of the physical world into computer-based systems, and result in improved accuracy, efficiency and economic benefit. The IoT is a rapidly increasing and promising technology which becomes more and more present in our everyday lives.

Android Operating System and Structure

Janvi **Jashandeep**
Jasjit **Jyotik**
Chandigarh Engineering College, Landran

Abstract

Android is a mobile operating system. Android is a OPEN SOURCE software platform. It is based on the modified version of the Linux kernel. Android is a powerful operating system supporting a large number of applications in smart phones. It is designed primarily for touchscreen mobile devices such as smartphones and tablets.

Solutions of Black Hole Attack in Mobile Ad-hoc Networks (MANET)

Arpita **Arti Sharma**
Anmol Sharma **Fwaad Ahmed**

Chandigarh Engineering College, Landran

Abstract

Mobile Ad-hoc network or MANET is a type of wireless network that has distributed and connected nodes without dependency on any infrastructure. Black hole node has been a major threat since many years which declares that it has a route to the destination in every case. Many solutions have been proposed to overcome this threat, still the security threat exists as they are not completely avoided or solved, Also the performance of MANET is affected considerably. The target is to find the solution which is most effective in preventing security threats with least compromise of the performance of MANET. This paper discusses many different solutions to prevent Black hole nodes in MANET.

Artificial Intelligence Applications

Glorious mahajan **Vikas**
Venu **Vishal**
Virochan **Tarun**

Chandigarh Engineering College, Landran

Abstract

In machine that are programmed to think like humans and mimic their actions. Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.). Manipulation is concerned with articulating appendages (e.g., mechanical arms, locomotion devices) in order to effect a desired state in the physical world. Reasoning is concerned with higher level cognitive functions such as planning, drawing inferential conclusions from a world model, diagnosing, designing, etc. Communication treats the problem understanding and conveying information through the use of language.

Data Warehousing

Purvi Kaur Raina **Rajat Singh**
Raghav Magon **Puspinder Singh**
Ravneet Singh
Chandigarh Engineering College, Landran

Abstract

Data warehousing is gaining in eminence as organisations become awake of the benefits of decision oriented and business intellegence oriented data bases. Specially, problems arise in populating a warehouse with the qualit data. Over the period of time many researchers have contributed to the data quality issues, but no research has collectively gathered all the causes of data qualityprob;ems at all the phases of data warehousing. Viz 1)ata sourcec,2) data integration &data profiling, 3) Data staging and ETL, 4)data warehouse modeling & schema design.

HTML

Pragti **Parv Vohra**
Paras Garg **Rajan Soni**
Pragti
Chandigarh Engineering College, Landran

Abstract

HTML stands for Hypertext Markup Language, and it is the most widely used language to write Web Pages. Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext. As its name suggests, HTML is a Markup Language which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display. Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers. Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

Cloud Computing

Kartik Dhawan **Himani Chaudhary**
Kritika **Gopi Kalyan**

Chandigarh Engineering College, Landran

Abstract

Cloud computing is the bleeding-edge technology in IT industry, today. It joins the ranks of Virtualization, grid computing and clustering, among others, in the IT industry. The problem is that, depending on your point of view, the definition of cloud computing can be quite different.

Artificial Intelligence in Health Care

Jainendra Kumar **Kashish**
Antal **Kavya**
Nupur Arora **Nikhil Joshi**

Chandigarh Engineering College, Landran

Abstract

Artificial Intelligence is the study of how to make computer do things which at the moment people do The better. primary goal of artificial intelligence is to improve computer behavior so that it can be called intelligent. The origins of Artificial Intelligence?? usually incorporate the theories and thoughts proclaimed by several ancient Greek philosophers and scientists. Artificial Intelligence (AI) is a field of study based on the premise that intelligent thought can be regarded as a form of computation-one that can be formalized and ultimately mechanized. To achieve this, however, two major issues need to be addressed. The first issue is knowledge representation, and the second is knowledge manipulation. Within the intersection of these two issues lies mechanized intelligence. AI combines precision and computational power with pure logic, to solve problems and reduce error in operation. Already, robot expert systems are taking over many jobs in industries that are dangerous for or beyond human ability. I highlight that the potential applications of Artificial Intelligence are abundant. They stretch from the military for autonomous control and target identification, to the entertainment industry for computer games and robotic pets.

Artificial Intelligence in Robots

Kamalpreet Kaur **Ishika**
Ishita Garg **Nishant**
Paras
Chandigarh Engineering College, Landran

Abstract

Artificial intelligence (AI), deep learning, machine learning and neural networks represent incredibly exciting and powerful machine learning-based techniques used to solve many real-world problems. While human-like deductive reasoning, inference, and decision-making by a computer is still a long time away, there have been remarkable gains in the application of AI techniques and associated algorithms.

Artificial intelligence (AI) is a relatively new branch of computer science. A tremendous amount of effort has been put into research associated with understanding biological systems, Abstracting key principles of intelligent behaviour, and developing practical applications of AI since the year 2000.

Technology Used for Security

Sahil Pahuja **Sajan Sethi**
Shivam Sharma **Rohit Pant**
Sanjay Kumar
Chandigarh Engineering College, Landran

Abstract

The main of this paper is to illustrate the technology used for security purpose. This paper presents the development process in security system that uses CCTV for security purpose. This security system is implemented using raspberry pi B. By combining the software's and camera this system is used as an intelligent monitoring system. Total security is provided to owner in a face of image at any instant in which area it is implemented. Image is send through IOT(on 'Gmail account of owner').

Deep Learning

Mukul Garg **Nikhil Gupta**
Nasheel Chand **Muskan Gupta**
Naman Gulati
Chandigarh Engineering College, Landran

Abstract

Deep learning is an artificial intelligence function that imitates the workings of the human brain in processing data and creating patterns for use in decision making. Deep learning is a subset of machine learning in artificial intelligence (AI) that has networks capable of learning unsupervised from data that is unstructured or unlabeled. Also known as deep neural

Artificial Intelligence in Medical Diagnosticians

Vaibhav Pandey **Yash**
Yash Kwatra **Yaman**
Suryansh **Sourabh Sachdeva**
Simran Sidana
Chandigarh Engineering College, Landran

Abstract

Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.). Manipulation is concerned with articulating appendages (e.g., mechanical arms, locomotion devices) in order to effect a desired state in the physical world. Reasoning is concerned with higher level cognitive functions such as planning, drawing inferential conclusions from a world model, diagnosing, designing, etc. Communication treats the problem understanding and conveying information through the use of language

A.I. in Healthcare

Galaxy Mandal **Anshika Gaba**
Ritika Kumar **Rashika Kumar**
Spriha
Chandigarh Engineering College, Landran

Abstract

Artificial Intelligence is the study of how to make computer do things which at the moment people do The better. primary goal of artificial intelligence is to improve computer behavior so that it can be called intelligent. The origins of Artificial Intelligence?? usually incorporate the theories and thoughts proclaimed by several ancient Greek philosophers and scientists. Artificial Intelligence (AI) is a field of study based on the premise that intelligent thought can be regarded as a form of computation-one that can be formalized and ultimately mechanized. To achieve this, however, two major issues need to be addressed. The first issue is knowledge representation, and the second is knowledge manipulation. Within the intersection of these two issues lies mechanized intelligence. AI combines precision and computational power with pure logic, to solve problems and reduce error in operation. Already, robot expert systems are taking over many jobs in industries that are dangerous for or beyond human ability. I highlight that the potential applications of Artificial Intelligence are abundant. They stretch from the military for autonomous control and target identification, to the entertainment industry for computer games and robotic pets.

Cloud Computing as Software as a Service

Prateek Anand **Srijan**
Simran jeet Singh **Yashan**
Chandigarh Engineering College, Landran

Abstract

Cloud computing means that instead of all the computer hardware and software you're using sitting on your desktop, or somewhere inside your company'sInstant convenience comes at a price. Instead of purchasing computers and software, cloud computing means you buy services, so one-off, upfront capital costs become ongoing operating costs instead. That might work out much more expensive in the long-term. If you're using software as a service (for example, writing a report using an online word processor or sending emails through webmail), you need a reliable, high-speed, broadband Internet connection functioning the whole time you're working. That's something we take for granted in countries such as the United States, but it's much more of an issue in developing countries or rural areas where broadband is unavailable, it's provided for you as a service by another company and accessed over the Internet, usually in a completely seamless way.

Role of Artificial Intelligence in Daily Life

Piyush Goyal **Nipun Kohli**
Prashant Yadav **Pulkit Swami**
Chandigarh Engineering College, Landran

Abstract

AI is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Leading AI textbooks define the field as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals.[1] Colloquially, the term "artificial intelligence" is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving".[2]As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect. A quip in Tesler's Theorem says "AI is whatever hasn't been done yet." For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology Modern machine capabilities generally classified as AI include successfully understanding human.

Application of Deep Learning in Image Recognition

Akshita Sharma **Sanjoli Sharma**
Chandigarh Engineering College, Landran

Abstract

In deep learning, each level learns to transform its input data into a slightly more Abstract and composite representation. In an image recognition application, the raw input may be a matrix of pixels; the first representational layer may Abstract the pixels and encode edges; the second layer may compose and encode arrangements of edges; the third layer may encode a nose and eyes; and the fourth layer may recognize that the image contains a face. Importantly, a deep learning process can learn which features to optimally place in which level on its own. (Of course, this does not completely eliminate the need for hand-tuning; for example, varying numbers of layers and layer sizes can provide different degrees of Abstraction.)

Deep Learning as Convolution Neural Network

Sachin Narang **Sarthak Jakhmola**
Anurag Karwa **Sanidhya Malhotra**
Sambhav Jain
Chandigarh Engineering College, Landran

Abstract

The goal of this project was to create a generalizable preprocessing framework to increase accuracy in x-ray segmented projects; particularly in the case where only limited data is available. The motivation was to combat the significant variation seen in several of our smaller datasets using simple, reproducible, and generalizable techniques. We tested this in two separate x-ray segmentation cases , shown below.

LI-FI (THE NEXT ERA OF WI-FI)

Ruchi **Pradeep Kaur**
Anupriya **Manpreet Kaur**
Chandigarh Engineering College, Landran

Abstract

In this era of advanced science, a number of wireless connections are available to connect to the internet. It has become a very common and a handy tool to access wireless internet from a coffee shop to a conference hall. One German physicist Harald Hass has come up with a solution which he names as “data through illumination” taking the fiber out of fiber optics by sending data through LED light bulb that varies in intensity faster than a human eye can Identify. This technology is named as Li-Fi transmission which stands for light fidelity. This invention can produce data rates faster than 10megabits per second which is much more than that of an average broadband connection speed.

Li-Fi is a label for wireless-communication systems using light as a carrier instead of traditional radio frequencies, as in Wi-Fi .Li-Fi should not be confused with the more general term visible light communications (VLC), which is the use of the visible light portion of the electromagnetic spectrum to transmit information.

Application of A.I.

Shashank **Shashank Goyal**
Shagun **Harsh**
Chandigarh Engineering College, Landran

Abstract

AI is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Leading AI textbooks define the field as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals. Colloquially, the term "artificial intelligence" is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving". As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect. A quip in Tesler's Theorem says "AI is whatever hasn't been done yet." For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology Modern machine capabilities generally classified as AI include successfully understanding human speech competing at the highest level in strategic game systems (such as chess and Go), autonomously operating cars, intelligent routing in content delivery networks, and military simulations. Artificial intelligence was founded as an academic discipline in 1956, and in the years since has experienced several waves of optimism, followed by disappointment and the loss of funding (known as an "AI winter",followed by new approaches, success and renewed funding

Methods to Prevent 51% Attack on Proof-of-Work Bitcoin

Rashim Narayan Tiku **Ritika Goyal**
Nalini Kumari
Chandigarh Engineering College, Landran

Abstract

Bitcoin is a cryptocurrency based on blockchain technology that enables peer-to-peer transactions without a central authority. Proof-of-Work (PoW) is a popular protocol used in Bitcoin blockchain system to resolve double-spending problems. When two or more miners generate a block that includes transaction information at nearly the same time, an unintentional fork occurs. And because of this, the longest chain of blocks is selected to avoid the double-spending problem. However, if the attacker node has hash power more than half of the total hash power, that node can easily be able to do a double-spending attack, i.e., a 51% or majority attack. Here are shown a couple of ways that have come up in recent scientific research on blockchain which can potentially reduce or even nullify the risk of 51% attack on Proof-of-Work Bitcoin.

Steganography

Abhilasha Girdhar **Lalit Bikramdeep Singh**
Tushar Chopra **Gaurav Sachdeva**
Chandigarh Engineering College, Landran

Abstract

Steganography is the art of hiding the fact that communication is taking place, by hiding information in other information. Many different carrier file formats can be used, but digital images are the most popular because of their frequency on the Internet. For hiding secret information in images, there exists a large variety of steganographic techniques some are more complex than others and all of them have respective strong and weak points.

Different applications have different requirements of the steganography technique used. For example, some applications may require absolute invisibility of the secret information, while others require a larger secret message to be hidden here.

Emerging Popularity of GIT

Shakti Kushwaha Rana **Shashi Shekhar Raut**
Saurav Kumar Rao **Sourav Bhomik**
Shivam Bansal
Chandigarh Engineering College, Landran

Abstract

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple.

Li-Fi Technology

Amit Kumar **Sanjam Singh**
Abhishek Thakur **Abhishek Kaushik**
Ankur Kharbanda
Chandigarh Engineering College, Landran

Abstract

Li-Fi is the next revolution of wireless technology. Light fidelity (Li-Fi) is a groundbreaking technology that utilizes visible light spectrum to unlock the capacity at which to transmit data at 10 times the speed of wireless fidelity (Wi-Fi). This study explores the similarities and differences between Li-Fi and Wi-Fi technology, while attempting to understand and study the factors of Li-Fi's strengths, security and privacy implications and what it means for the future of wireless communications.

Wi-Fi technology and Li-Fi technology relating to their operational mechanism with wireless networking. Also features of Wi-Fi and Li-Fi network were investigated. In addition to above, a comparative study for Wi-Fi and Li-Fi was done to evaluate their performance relating to data transmission, strength, security and privacy. Also features of Wi-Fi and Li-Fi network were considered and compared for network efficacy.

Plant Seedling Classifier

Akshit Arora **Amin Naushad**
Ankita Sood **Akshit Pandita**
Ankit Singla
Chandigarh Engineering College, Landran

Abstract

There are hundreds of kinds of plant seedlings in the natural ecosystem, and it can be very difficult to distinguish between them. Botanists and those who study plants however, are able to identify the type of tree at a glance by using the characteristics of the leaf. Machine learning can be used to automatically classify leaf types on the basis of various features.Recently, the idea of Deep Learning has been widely used for many applications, such as object recognition and classification. In this paper, we extend the idea of Convolutional Neural Networks (CNN) to natural sciences as an approach for classifying the plant seedlings. They have learned to sort images into categories even better than humans in some cases. The Aim of our project is to classify seedlings using Deep Learning Approach.

Network Protocols

Ajit **Ritik Gupta**
Rohit Verma **Rohit Kumar**
Rohan
Chandigarh Engineering College, Landran

Abstract

Blockchain is the backbone Technology of Digital CryptoCurrency BitCoin. Blockchain Technology first came to light when a person or Group of individuals name 'Satoshi Nakamoto' published a white paper on "BitCoin: A peer to peer electronic cash system" in 2008. Blockchain Technology Records Transaction in Digital Ledger which is distributed over the Network thus making it incorruptible

Blockchain

Reena **Sonia**
Veerpal Kaur **Jasmeen Kaur**
Anuj
Chandigarh Engineering College, Landran

Abstract

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Cross Site Scripting

Ayush Gupta **Arnold**
Ayush Rameja **Ayaan Khan**
Bikramdeep Singh
Chandigarh Engineering College, Landran, Mohali

Abstract

Cross-site Scripting (XSS) is a client-side code injection attack. The attacker aims to execute malicious scripts in a web browser of the victim by including malicious code in a legitimate web page or web application. The actual attack occurs when the victim visits the web page or web application that executes the malicious code. The web page or web application becomes a vehicle to deliver the malicious script to the user's browser. Vulnerable vehicles that are commonly used for Cross-site Scripting attacks are forums, message boards, and web pages that allow comments. A web page or web application is vulnerable to XSS if it uses unsanitized user input in the output that it generates. This user input must then be parsed by the victim's browser. XSS attacks are possible in VBScript, ActiveX, Flash, and even CSS. However, they are most common in JavaScript, primarily because JavaScript is fundamental to most browsing experiences. If an attacker can abuse an XSS vulnerability on a web page to execute arbitrary JavaScript in a user's browser, the security of that vulnerable website or vulnerable web application and its users has been compromised. XSS is not the user's problem like any other security vulnerability. If it is affecting your users, it affects you. Cross-site Scripting may also be used to deface a website instead of targeting the user.

Motion Detector Security System

Anamika **Amrita**
Chitwan **Divya**
Aryanshi
Chandigarh Engineering College, Landran

Abstract

Motion Detector Security system is a security application that will respond to any movement held in front of camera. it's security mechanism will text the user about the motion . This alert system is very useful for survellence. The goal of this project is to allow integrated or USB-connected webcams to be accessed directly from Java. Using provided libraries users are able to read camera images and detect motion. Webcam Capture API library allows you to use your build-in or external webcam directly from Java. It's designed to Abstract commonly used camera features and support multiple capturing frameworks. The Basic Idea Behind "Smart Web Cam Motion Detection Surveillance System" Is To Stop The Intruder To Getting Into The Place Where A High End Security Is Required . This System Is Brought Into Effect Providing Relief To The Normal Video Surveillance System Which Offers TimeConsuming Reviewing Process. From the topic, everyone may know that the target of the project is using "web camera" to achieve the target of the "motion detection". In the application, there are many web camera attached to the computer.

IOT

Ankish MIttal **Anshuk Mehra**
Anmol Sharma **Anmol Rana**
Abhishek Yadav
Chandigarh Engineering College, Landran

Abstract

We're entering a new era of computing technology that many are calling the Internet of Things (IoT). Machine to machine, machine to infrastructure, machine to environment, the Internet of Everything, the Internet of Intelligent Things, intelligent systems—call it what you want, but it's happening, and its potential is huge. We see the IoT as billions of smart, connected "things" (a sort of "universal global neural network" in the cloud) that will encompass every aspect of our lives, and its foundation is the intelligence that embedded processing provides. The IoT is comprised of smart machines interacting and communicating with other machines, objects, environments and infrastructures. As a result, huge volumes of data are being generated, and that data is being processed into useful actions that can "command and control" things to make our lives much easier and safer —and to reduce our impact on the environment.

Water Quality Monitoring using IoT

Akshit Singal **Akshat Nigam**
Akshita Kathpal **Aniket Mittal**
Ankur Priye
Chandigarh Engineering College, Landran

Abstract

The conventional method of testing water quality is to gather samples of water manually and send to the lab to test and analyze. This method is time consuming, wastage of man power, and not economical. The water quality measuring system that we have implemented checks the quality of water in real time through various sensors (one for each parameter: pH, conductivity, temperature, turbidity) to measure the quality of water. As a variation in the value of this parameter points towards the presence ofpollutants. The Wi-fi module in the system transfers data collected by the sensors to the microcontroller, andtransfers the data to the smart phone/PC. This system can keep a strict check on the pollution of the water resources and be able to provide an environment for safe drinking water.

Heart Attack Detection using IOT

Ajay Koul
Deepak Kumar
Aabid Jamil
Aakash Sehgal
Arshita Langoo

Chandigarh Engineering College, Landran

Abstract

We all know heart attack can kill your life in 3 attempts but now a days it can be dangerous in first attempt also. If checking our health regularly on daily basis then we can detect so many different diseases by detecting them previously, Life is precious. Many people among us lose their life to heart attack. This is because of their diet, age, less physical activity and many other factors. Heart attack is not easy to detect, To overcome and help our society from heart diseases and attack, we are developing such a system which will help to decrease the death rate and early detection a heart attack. In this system we are implementing a heart beat monitoring and heart attack detection system using the Internet of Things. The sensor is then interfaced to a microcontroller that allows checking heart rate readings and transmitting them over Internet.

Ethical Hacking

Prem Singh
Puneet Sharma
Paras Grovar
Priya
Pranshu Sharma

Chandigarh Engineering College, Landran

Abstract

Ethical hacking also known as penetration testing or white-hat hacking, involves the same tools, tricks, and techniques that hackers use, but with one major difference that Ethical hacking is legal.Ethical Hacking is used in closing the open holes in the system network. It also provides security to banking and financial establishments and prevents website defacements. But there are some disadvantages of ethical hacking such as:All depends upon the trustworthiness of the ethical hacker.Hiring professionals is expensive.

Artificial Intelligence

Rahul Mittal **Rahul Machal**
Raman Katoch **Rahul Garg**
Rahul Upadhyay
Chandigarh Engineering College, Landran

Abstract

Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.). Manipulation is concerned with articulating appendages (e.g., mechanical arms, locomotion devices) in order to effect a desired state in the physical world. Reasoning is concerned with higher level cognitive functions such as planning, drawing inferential conclusions from a world model, diagnosing, designing, etc. Communication treats the problem understanding and conveying information through the use of language. Finally, Learning treats the problem of automatically improving system performance over time based on the system's experience. Many important technical concepts have arisen from A.I. that unify these diverse problem areas and that form the foundation of the scientific disciplin. The elements of a Knowledge Base consist of independently valid (or at least plausible) chunks of information.

Alpha Go and Alpha Go Zero

Manas Beakta **Manan Chaudhary**
Mahesh Singla **Lovneesh Sharma**
Mrinal Garg
Chandigarh Engineering College, Landran

Abstract

Go is known as the most challenging classical game for artificial intelligence because of its complexity.

AlphaGo—a program that used machine learning to master Go—decimated world champion Ke Jie earlier this year. Then, the program's creators at Google's DeepMind let the program continue to train by playing millions of games against itself. ALPHAGO ZER It is able to do this by using a novel form of reinforcement learning, in which AlphaGo Zero becomes its own teacher. The system starts off with a neural network that knows nothing about the game of Go. It then plays games against itself, by combining this neural network with a powerful search algorithm. As it plays, the neural network is tuned and updated to predict moves, as well as the eventual winner of the games.

New Era Internet Protocol- IPv6

Yuvraj Angula **Amol Dogra**
Nikhil Soni
Chandigarh Engineering College, Landran

Abstract

In this we are focusing on the requirement of the internet protocol for the smooth functioning of the organization. It describes the basic need and considerations for switching from Internet Protocol Version 4 (IPv4) to Internet Protocol Version 6 (IPv6). It describes the journey of Internet Protocol Version 4 (IPv4) leading to secure Internet Protocol Version 6 (IPv6). Due to enormously growing number of devices connected to the Internet and the increasing routing complexity, there is a need of a solution. In-spite of continuously introducing add-on solutions to Internet Protocol Version 4 (IPv4). We need to introduce newer and more powerful Internet Protocol Version 6 (IPv6)

Voice Browser

Prateek Kumar **Pranav Aggarwal**
Rahul Jha **Pratyush Sharma**
Priyanshu Kumar
Chandigarh Engineering College, Landran

Abstract

A Voice Browser is a "device which interprets a (voice) markup language and is capable of generating voice output and/or interpreting voice input, and possibly other input/output modalities." The definition of a voice browser, above, is a broad one.The fact that the system deals with speech is obvious given the first word of the name, but what makes a software system that interacts with the user via speech a "browser"?The information that the system uses (for either domain data or dialog flow) is dynamic and comes somewhere from the Internet. From an end-user's perspective, the impetus is to provide a service similar to what graphical browsers of HTML and related technologies do today, but on devices that are not equipped with full-browsers or even the screens to support them. This situation is only exacerbated by the fact that much of today's content depends on the ability to run scripting languages and 3rd-party plug-ins to work correctly.Much of the efforts concentrate on using the telephone as the first voice browsing device

Automatic Parking System

Vaibhav Jain **Paras Sharma**
Pranav Gupta **Ramneek Kaur**
Rahul Goswami
Chandigarh Engineering College, Landran

Abstract

With the increase in vehicle production and world population, more and more parking spaces and facilities are required. In this project, a new parking system called smart parking system is proposed to assist vehicle owners or vehicle drivers to find vacant places in a parking area in a shorter time. The designing and programming is done in such a way that the next vacant slot will be selected from the database and will be displayed in the slot assigned column automatically. Features of this project also includes vacant parking space detection, and also displays the slots where vehicles are already parked in the parking area. There are various facilities provided to the customers such as pass creation, pass renew, slot viewing, etc. The parking fees and parking slots are shown automatically according to the vehicle type.

Artificial Intelligence

Nitish Bhardwaj **Nikhil Sharma**
Pankaj Sharma **Nitish Spiya**
Amrinder Singh
Chandigarh Engineering College, Landran

Abstract

AI is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Leading AI textbooks define the field as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals. Colloquially, the term "artificial intelligence" is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving". As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect. A quip in Tesler's Theorem says "AI is whatever hasn't been done yet." For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology Modern machine capabilities generally classified as AI include successfully understanding human speech competing at the highest level in strategic game systems (such as chess and Go), autonomously operating cars, intelligent routing in content delivery networks, and military simulations.

EmoGing: Facial Emotion Recognition Based Feedback System

Aastha Agarwal **Apoorv Negi**
Divyam Gogia **Chetan Pant**
Chandigarh Engineering College, Landran

Abstract

Facial emotion recognition (FER) is an important topic in the fields of computer vision and artificial intelligence owing to its significant academic and commercial potential. Although FER can be conducted using multiple sensors, this review focuses on studies that exclusively use facial images, because visual expressions are one of the main information channels in interpersonal communication. This paper provides a brief review of researches in the field of FER conducted over the past decades. First, conventional FER approaches are described along with a summary of the representative categories of FER systems and their main algorithms.

3D Internet

Keshav Kumar **Gurvinder Singh**
Himani Bijlwan **Mayank**
Meenakshi Singh
Chandigarh Engineering College, Landran

Abstract

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Autonoumous Vehicles

Manraj **Mohit Soni**
Kunal **Nikita Mittal**
Nandini
Chandigarh Engineering College, Landran

Abstract

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Li-Fi (The Next Era of WiFi)

Harshit **Himanshu**
Nikhil **Jaskirat**
Hardik
Chandigarh Engineering College, Landran

Abstract

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Breast Cancer Analysis using Hadoop

Mukul **Vrinda**
Shweta **Chestha**
Yashika
Chandigarh Engineering College, Landran

Abstract

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Graphical Password Authentication System

Divya Deepu **Amit Ranjan**
Balwant Singh **Minku Kumar**
Ankit Singh
Chandigarh Engineering College, Landran

Abstract

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Bluetooth Technology

Abhishek Birdi **Ritvik Raj**
Vishal **Komal**
Navpreet Kaur
Chandigarh Engineering College, Landran

Abstract

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Artificial Intelligence

Mukesh Kumar **Keshav Jha**
Honey **Honey**
Jaspreet Singh
Chandigarh Engineering College, Landran

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Machine Learning

Urvashi Gambhir **Tarushi**
Varun **Nikhil Atkan**
Simar
Chandigarh Engineering College, Landran

Abstract

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ChatBot

Bakul Garg **Harman Sikand**
Shaina Sharma **Hrishabh Kumar**
Chandigarh Engineering College, Landran

Abstract

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Electronic Waste

Gautam Dhiman **Amit Upadhyay**
Dhruv Jain **Garvit Singh Sohi**
Chandigarh Engineering College, Landran

Abstract

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Deep Learning

Sukhanreet Kaur **Sofia Dhingra**
Sneha Singh **Sushant Sharma**
Simran Sharma
Chandigarh Engineering College,Landran

Abstract

In recent years, deep learning have succeeded in many fields, especially in computer vision and natural language processing. .In this poster, we mainly introduce some deep neural networks of deep learning and their applications.Comparing deep learning to traditional machine learning methods, deep learning has a well built learning ability and can make better use of datasets for feature extraction. Our findings may also explain Abstract learning in human brain.

ATM Simulator

Hitesh Kumar **Gaurav**
Jatin **Sushil**
Chandigarh Engineering College,Landran

Abstract

Students use ATM banking simulation to learn introductory skills necessary to perform ATM banking. This is an introduction lesson to using the Money Instructor Online ATM simulator (MI Bank ATM). Students are given information on how to access the interactive ATM and guided to use the ATM by performing simple steps to withdraw money from their account.

Wi-Vi Next Generation of Wi-Fi Technology

Arti Sharma **Arshdeep Kaur**
Anuradha **Deepanshi Kausik**
Divyansh
Chandigarh Engineering College,Landran

Abstract

Can Wi-Fi signals enable us to see through walls? For many years humans have fantasized about X-ray vision and played with the concept in comic books and sci-fi movies. This paper explores the potential of using Wi-Fi signals and recent advances in MIMO communications to build a device that can capture the motion of humans behind a wall and in closed rooms. Law enforcement personnel can use the device to avoid walking into an ambush, and minimize casualties in standoffs and hostage situations. Emergency responders can use it to see through rubble and collapsed structures. Ordinary users can leverage the device for gaming, intrusion detection, privacy-enhanced monitoring of children and elderly, or personal security when stepping into dark alleys and unknown places .WI-VI is Based on the principle of RADAR and SONAR imaging (doppler effect).

Google Glass

Krishna **Kushagra**
Ketan **Mohak**
Inderjot Singh
Chandigarh Engineering College,Landran

Abstract

The emergence of Google Glass, a prototype for a transparent Heads-Up Display (HUD) worn over one eye, is significant. It is the first conceptualization of a mainstream augmented reality wearable eye display by a large company.This paper argues that Glass's birth is not only a marketing phenomenon heralding a technical prototype, it also argues and speculates that Glass's popularization is an instigator for the adoption of a new paradigm in human-computer interaction, the wearable eye display. Google Glass is deliberately framed in media as the brainchild of Google co-founder Sergey Brin. Glass's process of adoption operates in the context of mainstream and popular culture discourses, such as the Batman myth, a phenomenon that warrants attention. Project Glass is a research and development program by Google to develop an augmented reality Head-Mounted Display (HMD).

Blue Brain

Arshi Bhan **Avnit Kaur**
Ayman **Charita**
Dhruv
Chandigarh Engineering College,Landran

Abstract

Blue brain " -The name of the world's first virtual brain. That means a machine that can function as human brain. Today scientists are in research to create an artificial brain that can think, response, take decision, and keep anything in memory. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man .So, even after the death of a person we will not loose the knowledge, intelligence, personalities, feelings and memories of that man that can be used for the development of the human society. No one has ever understood the complexity of human brain. It is complex than any circuitry in the world. So, question may arise "Is it really possible to create a human brain?" The answer is "Yes". Because what ever man has created today always he has followed the nature.

An Unending Age of Machine Learning

Kashish **Manvi**
Nikhil **Mithal**
Nishchal

Chandigarh Engineering College, Landran

Abstract

Nowadays, large amount of data is available everywhere. This can be achieved through data mining and machine learning. Machine learning is an integral part of Artificial intelligence, which is used to design algorithms based on the data trends and historical relationships between data. It is still a developing field.

ChatBot

Mankirat Singh **Khushi**
Khyati **Labina**

Chandigarh Engineering College, Landran

Abstract

Machine learning (ML) is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence. Machine learning algorithms build a mathematical model based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to perform the task.

Happy Stress

Tanish **Vertika**
Vidhi **Tamanna**
Tanzeel **Vinny**

Chandigarh Engineering College,Landran

Abstract

Good stress," or what psychologists refer to as "eustress," is the type of stress we feel when we feel excited. We feel this type of stress when we ride a roller coaster, compete for a promotion, or go on a first date. There are many triggers for this good stress, and it keeps us feeling alive and excited about life.that particular sites. Where everyone can see it.

Smart Weather Monitoring System

Diksha Sharma **Divyanshi Dixit**
Disha **Anubhav Mahajan**
Devesh
Chandigarh Engineering College,Landran

Abstract

The IOT based Weather Monitoring and Reporting System project is used to get Live reporting of weather conditions. It will Monitor temperature, humidity, moisture and rain level. Suppose Scientists/nature analysts want to monitor changes in a particular environment like volcano or a rain-forest. And these people are from different places in the world. In this case, SMS based weather monitoring system has some limitations. Since it sends SMS to few numbers. And time for sending SMS increases as the number of mobile numbers increases. In Order to know the information about weather of a particular place then they have to visit that particular sites. Where everyone can see it.

Machine Learning

Aranshu Bansal **Deepanker Goyal**
ArshDeep **Farheen**
Deepak Singh
Chandigarh Engineering College, Landran

Abstract

Machine learning is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence. Machine learning algorithms build a mathematically mode based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to perform the task. Machine learning algorithms are used in a wide variety of applications, such as email filtering and computer vision, where it is difficult or infeasible to develop a conventional algorithm for effectively performing the task.

Cyber Crime

Ujjawal Malik **Vikas Marothia**
Ujjwal Pratap **Ujjwal Rana**
Utsav
Chandigarh Engineering College, Landran

Abstract

In today's world, everything has became digital. Being one of the most rapidly expanding sector, internet has became one of themost vital part of our life from work to entertainment there's no other option now but it comes with a price of our privacy. Cyber crimes are attacks made by black hat hackers who break into computer systems or gain unauthorized access to any system in order to steal, change or destroy information. Cybercriminals use the internet and computer technology to hack user's personal computers, smartphone data, personal details from social media, business secrets, national secretsetc. Criminals who perform these illegal activities through the internet are called –Hackers. Cyber Crimes are also on the rapid expansion causing our sensitive data to beused without our permission. Governments are aware of this matter doingeverything they can to secure our networks but many say security is just anillusion. In this whole report we will analyse the strength of the people who are trying tospoil the Cyber Ecosystem and the higher grounds where we can deceive them.

Home Automation

Tejinder Pal **Tapan Sharma**
Vinay Kumar **Gaurav**
Prince
Chandigarh Engineering College,Landran

Abstract

A home automation system is a technological solution that enables automating the bulk of electronic, electrical and technology-based tasks within a home. It uses a combination of hardware and software technologies that enable control and management over appliances and devices within a home.

General Fitness

Amandeep Midha **Ananya Arora**
Abhay Partap **Aman Lakhani**
Akash Bhutani
Chandigarh Engineering College,Landran

Abstract

Daily physical activity is one of the key components in developing and leading a healthy lifestyle. Physical activity improves overall quality of life. It helps to boost energy, assists with weight management and improves self-esteem Most importantly, regular physical activity will increase longevity by directly decreasing the risk of chronic disease such as: heart disease, hypertension, type 2 diabetes, stroke and some cancers.

Clayodor

Kumar Rahul **Loveleen**
Kirti **Khushagra**
Kashish Mittal
Chandigarh Engineering College,Landran

Abstract

Clayodor is a clay-like malleable material that changes smell based on user manipulation of its shape. This work explores the tangibility of shape changing materials to capture smell, an ephemeral and intangible sensory input. We present the design of a proof-of-concept prototype, and discussions on the challenges of navigating smell though form.

Ethical Hacking and Hacking Attacks

Sukhdeep Singh **Simranpreet Singh**
Tushar Vashisht **Vishal Saini**
Vikramdeep
Chandigarh Engineering College, Landran

Abstract

As nowadays all the information is available online, a large number of users are accessing it, some of them use this information for gaining knowledge and some use it to know how to use this information to destroy or steal the data of websites or databases without the knowledge of the owner. The purpose of this paper is to tell what is hacking, who are hackers, what is ethical hacking, what is the code of conduct of ethical hackers and the need of them. A small introduction of Linux Operating System is given in this paper. All the techniques are performed on the Linux operating system named Kali Linux. After this some basic hacking attacks covered in the paper are MiTM Attack (Man in The Middle Attack), Phishing Attack, DoS Attack (Denial of Services Attack). Further what is Wi-Fi, what are the techniques used in the Wi-Fi protection and the methods used by the hackers to hacks Wi-Fi passwords is covered in the poster.

Text Classification using Naive Bayes Algorithm

Ujjawal Dhiman **Udish Jain**
Chandigarh Engineering College, Landran

Abstract

Naïve Bayes classifier is one of the probabilistic classification method based on Bayes' theorem . It assumes the presence or absence of a particular feature of a class unrelated to presence or absence of other feature (called as conditional independence assumptions). Output of the Naïve Bayes classifier include a class label and its corresponding score.

Artificial Intelligence

Varun Awasthi **Vansh Oberoi**
Vasu Sooden
Chandigarh Engineering College, Landran

Abstract

Intelligence is composed of: Reasoning, Learning, Problem Solving, Perception, Linguistic Intelligence Many tools are used in AI, including versions of search and mathematical optimization, logic, methods based on probability and economics. The AI field draws upon computer science, mathematics, psychology, linguistics, philosophy, neuro-science, artificial psychology and many others.

Application of Big Data

Sahil Rana **Santan Saugat**
Akansha Sharma **Sagar Garg**
Rupal Singla
Chandigarh Engineering College,Landran

Abstract

Big Data is a powerful tool that makes things ease in various fields as said above. Big data applications are applied in various fields like banking, agriculture, chemistry, data mining, cloud computing, finance, marketing, stocks, healthcare, etc.

Poster The Life Accorder: Based on Better and Faster Emergency Care During Accidents

Shahin **Manik Setia**
Kunal Kankarwal **Jatin**
Tehrim
Chandigarh Engineering College,Landran

Abstract

Due to the rapid increase in population, accidents are increasing with high parameter. also, human lives are precious & can't be brought back. So, considering all this, we have developed an application named LIFE ACCORDER, which is coded in PYTHON & works on ARTIFICIAL INTELLIGENCE. with help of GOOGLE EARTH we establish our connection to nearby hospitals & ambulance service as soon as possible.

Deep Learning

Saurabh **Rohit Kumar Singh**
Ritik Kaushal **Saransh Kotnala**
Parth Kamboj
Chandigarh Engineering College,Landran

Abstract

In recent years, deep learning has achieved great success in many fields, such as computer vision and natural language processing. Compared to traditional machine learning methods, deep learning has a strong learning ability and can make better use of datasets for feature extraction. Generally speaking, deep learning is a machine learning method that takes in an input X, and uses it to predict an output of Y. As an example, given the stock prices of the past week as input, my deep learning algorithm will try to predict the stock price of the next day.

Chatbox

Vishal **Tijender Kaur**
Yash Patyal
Chandigarh Engineering College, Landran

Abstract

A chatbot is a piece of technology that allows a computer program to communicate with people just like conversing through text messaging using a natural language, say English, to accomplish specific tasks. A chatbot is also known as an artificial conversational entity (ACE), chat robot, talk bot, chatterbot or chatterbox. Chatbots can broadly be classified into two types: Simple Chatbots – These chatbots are built on a code that utilizes simple use cases. If a user asks a question that doesn't match with any of these predefined use cases, the chatbot would be unable to identify the query and a standard response such as "sorry, I am unable to understand" would be given to the user.

Whatsapp

Makinder **Khushboo**
Muskan **Mansi**
Lovepreet
Chandigarh Engineering College,Landran

Abstract

WhatsApp Messenger is a proprietary, cross-platform instant messaging application for smartphones. Moreover, to basic messaging WhatsApp Messenger users can send each other images, video as well as audio media messages. The client software is available for Google Android, BlackBerry OS, Apple iOS, selected Nokia Series 40, Symbian, selectedNokia Asha platform, Microsoft Windows Phone and BlackBerry 10. WhatsApp Inc. was founded in 2009 by Americans Brian Actonand Jan Koum (also the CEO), both former employees of Yahoo!, and is based in Mountain View, California. The company employs 55 people.

Hacking

Jaap Kaur **Ishita Chaudhary**
Geetika **Ishita Thakral**
Chandigarh Engineering College,Landran

Abstract

The explosive growth of the web has brought many goodies like E-commerce-banking, E-mail, Cloud Computing, but there's also a Dark side like Hacking, Backdoors etc. Hacking is that the first big problem faced by Governments, companies, and personal citizens round the world , Hacking includes reading others e-mail, steal their Mastercard number from an on-line shopping site, secretly transmitting secrets to the open Internet. An Ethical Hacker can help the people that are suffered by this Hackings. This Paper Describes about Ethical Hackers, Their Skills, Their Attitudes, and the way they are going About Helping Their Customers Find and Plug up Security Holes. The Information technology is becoming more and more of a hacking industry. Hacking isn't only done by criminals it's also done by government agencies. Now what we've here may be a hacker that's hacking into email addresses and taking all quite information.

IOT

Saideep Sharma **Saksham Bhatla**
Ronak Panwar **Ayush Kakkar**
Anubhav Rana
Chandigarh Engineering College, Landran

Abstract

The main of this paper is to illustrate the technology used for security purpose. This paper presents the development process in security system that uses CCTV for security purpose. This security system is implemented using raspberry pi B. By combining the software's and camera this system is used as an intelligent monitoring system. Total security is provided to owner in a face of image at any instant in which area it is implemented. Image is sent through IOT (on 'Gmail account of owner').

Firewall

Gurpreet **Birinder**
Manpreet **Rishabh**
Pankaj
Chandigarh Engineering College, Landran, Mohali

Abstract

Firewall is a subject in form of hardware or software or both, which is use to protects a network from intrusion by outsiders. It is regulating the traffic that can pass through a router that connecting to the network infrastructure. It is preventing from unauthorized users to access the network whether from outside via the Internet or inside, Local Area Network (LAN) itself. Firewall system has many methods and techniques that imply and describes on each of their types or technologies.

Darren Eats

Lisha **Manish Kumar**
Ketan Sharma **Lovepreet Singh**
Devdarshan
Chandigarh Engineering College, Landran, Mohali

Abstract

When we go to a restraunt while seeing the menu card put us in confusion what to eat so are project that is "DARREN EATS" helps us to make the decision very easy.

Digital Marketing

Gurpreet **Birinder**
Manpreet **Rishabh**
Pankaj
Chandigarh Engineering College,Landran, Mohali

Abstract

Digital marketing encompasses all marketing efforts that use an electronic device or the internet. Businesses leverage digital channels such as search engines, social media, email, and other websites to connect with current and prospective customers.

Call for Life

Kushagar Goel **Piyush Kumar**
Rashi **Tanisha**
Chandigarh Engineering College, Landran

Abstract

We are to provide user with a device that would help them in case of road accident. Call for life increases the possibility of saving a life by avoiding the dependency of someone calling for an ambulance in the case of road accidents. Whenever accident occurs, our software checks for the nearest hospital on the basis of distance and time to that accident location and sends a mail, text message containing the navigation to that location, link where the photos and videos of accident are uploaded and the thing with which the accident took place. User will get the device pre-installed in cars and for older cars they can buy it. After installation the device would be capable of contacting the emergency services when required on its own. Once installed the device would be taken care by the car service centres.

About Chandigarh Group of Colleges

"Building Careers, Transforming Lives"

The heritage campus, Chandigarh Group of Colleges Landran, stretching back to a decade and half is superlative in giving professional education to the students from all corners of the country. The group commenced its journey in the year 2001 with strength of only 100 students and with two programmes. Today, the campus has more than 15000 students across 15 programmes. CGC is committed to maintain the numero Uno position in placements in the north Indian region and ensuring that every CGCian gets the best possible placement opportunities and multiple job offers in hand with hefty pay packages.

About Chandigarh Engineering College

Chandigarh Engineering College (CEC), Landran achieved a milestone by being the only private engineering college to have been accredited by the National Board of Accreditation (NBA) for 5 years. It is now among the top 25 private colleges and top 50 accredited institutes of the country in terms of quality education, research and other state-of-the-art facilities. The college has more than 250 well qualified faculty members looking after the operations, research and teaching in the institution. CGC bagged Rs 4 crore grant from World Bank for raising its academic standards through National Project Implementation Unit (NPIU), New Delhi. CEC has more than 1100 computers in their FCPIT, Communication and Computer Graphics laboratories. The institution feels proud of the students who are already working with acclaimed companies like Microsoft, Infosys, TCS,WIPRO, L & T, Samsung, Capgemini, Tech Mahindra, Cognizant to name a few.The institution has gone miles in establishing a name in the field of technical education.

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