



Virtual Conference

**International Conference on
Advances in Engineering,
Science and Management**

ICAESM-2021

28th - 29th November, 2021

Bangalore, India

Organized By

Institute For Engineering Research and Publication (IFERP)



International Conference on Advances in Engineering, Science and Management

(ICAESM-21)

Virtual Conference

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Publisher: IFERP Explore

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IFERP-Explore

Editorial

We cordially invite you to attend the **International Conference on Advances in Engineering, Science and Management (ICAESM-2021) - Virtual Conference** which will be held at **Bangalore, India** on **28th-29th October, 2021**. The main objective of **ICAESM** is to provide a platform for researchers, students, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Engineering, Science and Management. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and to the authors for contributing their research result to the conference.

Since September 2021, the Organizing Committees have received more than 110 manuscript papers, and the papers cover all the aspects in Engineering, Science and Management. Finally, after review, about 40 papers were included to the proceedings of **ICAESM -2021**.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of **ICAESM -2021**. We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

Acknowledgement

IFERP is hosting the **International Conference on Advances in Engineering, Science and Management (ICAESM-2021)** this year in month of November. The main objective of ICAESM-2021 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my Colleagues, staffs, Professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.



Er. R. B. Satpathy
Chief Executive Officer
Institute for Engineering Research and Publication (IFERP)

Keynote Speaker



Prof. Dr. Munaz Ahmed Noor

Chancellor,
University of Information Technology and Communications,
Iraq.

Message

I am honoured to be invited as a Keynote Speaker in the “International Conference on Advances in Engineering, Science and Management (ICAESM-2021)”, which is jointly organized by the Institute for Engineering Research and Publication (IFERP) and Scopus in a beautiful city of Bangalore, India. It reminds me of the beautiful days I spent Indian Institute of Science (IIS) back in 2004. I would also like to thank them for bringing us together to this beautiful city to discuss Engineering, Science and Management. We cannot imagine a life without these. These have become an integral part of our life. Such conference allows bringing those hidden ideas to the table. I appreciate your effort in publishing papers.

The whole world is talking about the 4th Industrial revolution, its challenges and opportunities. Educating our future generation for this unknown complex world is very challenging for our academic institutions. So we need to talk about what will be the future shape of our Education. What will society and economy be like in 4IR? Without having a good understanding of these, everything will be challenging to implement. We engineers, scientists and managers discuss these fundamental issues in this gathering.

I want to thank the organizer for arranging such a time befitting conference and extend my gratitude to all participants who have joined the ICAESM-2021 forum to better our future with disruptive ideas. I wish you all success.

Thanks and Regards,

Prof Dr Munaz Ahmed Noor

Keynote Speaker



Prof. Dr. M. Amr Sadik

Principal,
Vignan's Institute of Engineering for Women,
Visakhapatnam, India.

Message

Good Day, Ladies and Gentlemen,

It is my great pleasure and honor to welcome you all today to the International Conference on Advances in Engineering, Science and Management, and thank you for the opportunity to address such distinguished audience.

As we are all aware that we are in the middle of a crisis. The pandemic has sent shockwaves through the global economy. People are worried about their lives and livelihoods. Many businesses are either closed or waiting for customers to return.

Governments are stretching their spending capacity, and the stability of financial systems is threatened. Policymakers all over the world are looking for ways to contain the spread of the virus while limiting the economic fallout.

This is a truly global crisis. The COVID-19 virus does not stop at borders. For this reason, coordinated, international strategies to fight the virus and its economic impact are more effective than going it alone.

Therefore, the objective of this conference is to present the latest research and results of scientists related to Mechanical Engineering, Civil Engineering, Electrical, Electronics & Communication Engineering, Computer Science & Engineering, Applied Sciences and Management.

I believe that all the speakers and panel members will provide up-to-date information, fresh ideas, and foresighted perspectives on the given topics.

Thanks to their input, this conference will enrich us with more useful methods for tackling the complicated issues that we are facing.

Let me wrap up by saying that we can survive this crisis by working together. We will need to innovate. If we can pull together and generate renewed momentum in all, we can reignite enthusiasm and be back to our normal life.

Thank you very much, and I wish you all a very fruitful conference.

Prof. Dr. M. Amr Sadik

Keynote Speaker



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**International Conference on Advances in
Engineering, Science and Management**

ICAESM-2021

28th-29th November, 2021

Bangalore, India

(Virtual Conference)

ABSTRACTS

Organized by
Institute For Engineering Research and Publication (IFERP)



Imprinting Online Video Timeline based on a User Keyword Concernment

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Abstract

Online video content generation and the habit of watching online videos have been increased exponentially over the last few decades. In the scenario of lengthier videos, the user has to spend a lot of time over unnecessary content. Until now, we have not had any feature in online video platforms to identify the user portion of interest in the video timeline. To overcome the issue faced by online users, we put forward our innovative model for imprinting online videos based on a user keyword of interest. The user-concerned keyword is used to mark hotspots on the online video timeline. In this model, we are going to detach the audio line from the video. After separation, we are going to find the number of keyword occurrences along with their timestamps in the audio timeline. These timestamps are used to imprint hotspot points within the video. This feature enables and encourages online users to watch many videos in less time.

Keywords

hotspot, cloud, transcribe, video, audio



Classification Facial Skin and Treatment Suggestions for Good Skin Using Deep Learning with Region of Interest (ROI) Patches

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Abstract

Skin is the outermost layer of the human body. It serves as a protective layer for the internal organs of the human body. We should keep that healthy by knowing the respective skin type of ourselves rather than using different skin type products for skin without knowing our skin type can lead to damage to skin cells and maybe be responsible for epidermal diseases. There are four different skin types: Normal skin, Oily skin, dry skin, combination skin. We have taken two skin types: Normal skin, Oily skin of faces. The main objective of this paper is to classify facial skin as normal skin or oily skin. After classification, this paper suggests treatment for respective skin. For this task we used deep learning and open CV. In order to enhance performance, we exploit knowledge related to the human face structure. We train our model by employing automatically created facial regions of interest (ROI) to this end. By jointly learning the network parameters and optimized network output combination weights, each facial region appropriately contributes to the final classification result.



Study of Plastic Waste Mix Bitumen

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Abstract

All the Plastic material is environmentally unacceptable, so alternative ways have been typically required to properly dispose these desperate things. Therefore, there is the very necessary to unanimously adopt effective methods to properly utilize these plastics wastes from the social environment. Gradually increasing in local population, urbanization and profound changes in life styles the huge amount use of polythene. In collaboratively developing developed country like India, the proper disposal of waste plastic has typically presented a significant problem. Polythene is non-biodegradable and environmentally unacceptable. A Central Pollution Control Board (CPCB) report (2018-19) carefully puts the total annual plastic waste generation in India at a humungous 3.3 million metric tons per odd year. India naturally generates 9.46 million countless tons of plastic waste annually; only 9% of the total plastic waste in the social world is properly recycled. This present study in the creative common correctly is an academic research conducted to properly investigate the specific behavior of Modified Bituminous concrete (BC) mix with plastic waste. In this social study various significant percentages of modern plastic are typically ingested for necessary preparation of unique mixes with a selected aggregate grading as assigning to IRC Code.

Keywords

Bituminous Concrete (BC), Marshall Stability, Voids filled Bitumen, Waste plastic



Labor Status in Japan and Analysis of WMN Model to Procure External Human Resource from Overseas

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Abstract

Deficiency of labor is one of prominent issue in Deficiency of labour is one of prominent issue in Japan from last several years. To handle the situation and provide the solution of this shortage of labour issue, Japanese government has set several facilities and services for employee and employer. Although there are several facilities that are helpful for people engaging in work activity in Japan, still the country faces some shorts of labour shortage.

This article focusses on study of economic growth in Japan during 20th century and early of 21st century and obtains the cause of this long term 'Labour shortage issue' by analyze the past economy of Japan. Later, we have also introduced a model called 'Watasi-Mo-Nihonjin model' abbreviation is WMN model, for filling the deficiency of the this labour shortage issue in future. The approach, presented in this model, is enforced by Japanese Government and Government would encourage semi-government and private bodies to join the implementation of the model for nullifying 'Labour shortage issue' throughout Japan.

Keywords

Labour shortage issue, Japanese economy, Japanese economy growth, WMN model, Labour status in Japan, External human resource



Effect of Area Ratio on Galvanic Corrosion between Galvanised Steel and Mild Steel in Bolted Joint: Experimental Measurement and Computer Simulation

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Abstract

Galvanized steel bolts are widely used to join with a base metal of mild steel in various structural joints. Galvanic corrosion is one of the severe problems faced in various types of joints. In this study area effect of the anode to cathode in galvanic corrosion occurring between the bolted joints of galvanized steel bolts and mild steel, endplate was investigated with the help of TAFEL polarization for different bolt sizes of M10, M12, and M14 in a buffer solution of pH 7. The corrosion parameters obtained from experiments for the joint components were used to solve the problem numerically with the help of Finite Element Method-based software COMSOL® Multiphysics. It was found that the corrosion rate at the interface of the joint was maximum for the lower size of an anodic metal in a bolted joint. Thus, it is important to consider the size of the anodic metal to the cathodic metal to reduce galvanic corrosion in a bolted joint.

Keywords

Galvanic Corrosion, Galvanized Steel, Mild Steel, TAFEL Polarization, COMSOL® Multiphysics



A Review on Adoption of Telemedicine & TOE Framework

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Abstract

Telemedicine is an application which is connected through web based platform and where the patients can consult with doctors and other medical professionals regarding their symptoms in a virtual environment. Telemedicine do not require any physical presence of the patient at the time of assessment. This is true if the disease does not require any physical presence and is not any serious condition. The adoption of telemedicine by hospitals can increase the clientele to the hospital especially from rural areas in developed countries and in developing countries like India too. The hospitals can increase the revenue as well as can serve the patients living in unfavorable conditions. The current study focuses on identifying the factors that impacts the adoption of telemedicine by hospitals. Those factors are identified with the Technology-Organization-Environment framework. The existing literature showcases scarce studies which examined the impact of technological, organizational and environmental contexts on the adoption of telemedicine by hospitals. In this paper the extant literature review of telemedicine is presented. A theoretical framework is developed and propositions are formulated and presented with future research directions.

Keywords

Telemedicine, TOE framework, adoption



A Systematic Literature Review and Bibliometric Analysis on Determinants of Foreign Direct Investment

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Abstract

Purpose: After years of academic debate on the variables that determine Foreign Direct Investment (FDI), the discussion still remains open. The objective of this research is to find out the gap area of research in FDI. This research intends to do a systematic review and bibliometric analysis of the factors that determines FDI. It presents the most important papers about the influence of factors that determine flow of FDI and addressing the significant gaps in the current literature on the subject.

Methodology: The study uses systematic review of literature and bibliometric analysis based on papers published between 2001 and 2021 from the database of Scopus, using the tools provided by the aforementioned database.

Findings: The results suggest that economic growth, agglomeration effects, institutions, investment incentives, corruption, market size & infrastructure appear to be important determinants of FDI. It has also been noticed that there have been researches that have reported opposite results using the similar variables. The possible reasons for these differences can be the inconsistency among the choice of models, samples and estimative methods.

Originality: To the best of author's information, this is the first bibliometric study, identifying what is lacking in the literature on determinants of FDI, while identifying the gaps for future research.

Keywords

Bibliometric, determinants, foreign direct investment, systematic review



The Impact of Examination Malpractices among Higher Secondary Students in Kerala- A Case Study

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Abstract

The goal of this study is to look into the malpractice relationship among Kerala high school students. One hundred and ninety-three (193) interviews, including thirty-eight (38) students and one hundred and fifty-five (155) teachers, were chosen at random for this study. These students were selected from various high schools in Kerala, using the Random sampling method. Data is collected by the use of regular interview methods and open-ended questionnaires are prepared. Data is analyzed qualitatively and used the latest version of Statistical Package for the Social Sciences software (SPSS) for analyzing the data. Descriptive statistics, testing the assumption regarding the data F test, Analysis of variance procedures are used to establish the influence of factors that leads to establishing the result. The results: The interpretation of the data showed that fear and pressure significantly predicted student's attitudes toward examination malpractice. The data analysis suggests that counselling can reduce the impact of peer pressure on student's attitudes toward the attempt of malpractice.

Keywords

Cheating invigilators, Examinations, Loss of trust in the educational system, Malpractices



A Comparative Study of Patient's Satisfaction Level in Government and Private Hospitals in Kerala

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Abstract

The purpose of this research is to look into the nature of public and private sector hospital services. The current study looked at the value of quality, customer satisfaction, and patient loyalty in government and private hospitals. The study found that the quality of service provided by private and public healthcare differed. When the mean score on all of the aspects under research was compared, it was discovered that patients rated private hospitals more in terms of service quality. The entire well-being of the public is determined by a State's health-care structure. The goal of the research was to compare and contrast customer satisfaction, service quality, perceived value, and customer loyalty. According to the findings, there was a considerable gap between private and government healthcare in terms of service quality. In terms of consumer satisfaction and loyalty, there was difference in opinion between public and private hospitals. For this study, the researcher created a well-defined questionnaire and collected data from 134 respondents from various districts of Kerala, who were chosen at random. To evaluate the data and develop conclusions, statistical methods are applied, and the current version of SPSS is used to analyze the acquired data.

Keywords

Hospital, Service, Customer satisfaction, Customer Loyalty



IN-SPACe: A Case for India's Eureka Moment in Space Antitrust?

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Abstract

Commercial space age led global innovation has promoted competitiveness in diverse space technologies ranging from spacecraft to supporting infrastructure. Established private corporations like SpaceX specialize in independent space explorations. However, in India, space privatization has confined itself to supporting infrastructure, due to lack of space regulatory architecture and minimal private sector participation in the primary space industry. This is compounded because of conflicting dynamic competition jurisprudence in India's high technology sectors and competition laws, heavily influenced by US antitrust laws. Antitrust law is industry agnostic and the Indian space industry is no exception. After creation of Indian National Space Promotion and Authorization Center (IN-SPACe), this industry will undergo a paradigm shift as the authority has licensing, sanctioning powers and responsibility to streamline space commercialization. The authors contend that while this can generate competitiveness, India's space commercialization ailments can improve through responsive ex ante antitrust regulation. Therefore, firstly the paper explores India's space industry integration with antitrust law, the stakeholders and diverse commercialization strategies; secondly, incumbent legal framework from an Indian-US perspective and thirdly, the aforesaid challenges from antitrust and space law perspective. Lastly, suitable suggestions shall be provided.

Keywords

Commercial space age, dynamic competition, ex ante antitrust regulation, space commercialization



Briquetting Characterization of Coconut Leaves and Areca Biomass Briquettes-A Step toward Green Energy

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Abstract

In this work, investigations were carried out to analyze the briquetting characteristics of briquettes produced from areca sheets and coconut leaves; with a view to find out which of them would make the best biomass fuel, when compared with the commercial available sawdust briquette. To determine the composition of biomass briquettes ultimate and proximate analyses were carried out. A simple prototype briquetting machine was fabricated to facilitate compaction of this biomass into briquettes. Areca sheets and coconut leaves were collected from a farm, dried, reduced and sieved into sizes of 850 μ . These biomass materials were mixed with paper, sawdust and coconut coir, which acted as binders, in 1:2 ratios, and densified using a piston type briquette machine. Results after analysis showed that, briquettes made from coconut leaves using sawdust as a binder had a calorific value of 3672.45KCal/ gm, which was higher than other briquettes made from areca sheets, using paper, sawdust and coconut coir as binders, though less than the commercially available sawdust briquette (4451.37KCal/ gm). But there was a decrease in percentage of moisture content, ash content and increase in percentage of volatile matter, when compared with the commercial sawdust briquette, which is of significant importance. Other properties like percentage of fixed carbon, hydrogen, nitrogen, sulphur and oxygen were approximately same as that of commercial sawdust briquette. For the two biomass material used, coconut leaves with sawdust as binder exhibited most positive attribute.



Energy Efficiency Optimization in Small Cell Massive MIMO System

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Abstract

The research and exploration of massive Multiple-Input Multiple-Output (mMIMO) wireless access technology have been inspired by the worldwide bandwidth scarcity in the wireless communication sector (MIMO). In order to achieve excellent spectrum and energy efficiency with minimal processing, Massive MIMO is a key enabler technology for next-generation networks. For example, we'll look at how "massive" MIMO base stations and small-cell access points work together to increase network density. When employing non-coherent multi-flow beam-forming, a spatial soft-cell approach may be utilized to serve consumers with a large number of transmitters. While fulfilling QoS requirements, we minimize overall power consumption, including both dynamic radiated power and static device power consumption. The presence of hidden convexity in this problem is demonstrated, allowing for efficient solution strategies. Surprisingly, the best solution encourages exclusive assignment of a number of users to radio transmitters. Additional encouraging modeling results show how overall power consumption may be significantly lowered by combining massive MIMO with small cells, where efficiency is enhanced. It is feasible to construct a beam that is both optimal and low-complexity.

Keywords

Massive MIMO, small cells, Beam-forming, RZF, TDD



Simulation of Successive Interference cancellation of NOMA

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Abstract

Today's wireless networks allocate radio resources to users based on the orthogonal multiple access (OMA) principle. However, as the number of users increases, OMA-based approaches may not meet the stringent emerging requirements including very high spectral efficiency, very low latency, and massive device connectivity. Non-orthogonal multiple access (NOMA) principles emerge as a solution to improve spectral efficiency while allowing some degree of multiple access interference at receivers.

Non-Orthogonal Multiple Access (NOMA) is a candidate for multiple access technologies for 5G. The fact that NOMA allows multiple users to transmit and receive simultaneously using the same frequency. The two key operations that make NOMA possible are superposition coding which must be done at the transmitter side and successive interference cancellation (also known as SIC) at the receiver side. NOMA uses power domain multiplexing of users sharing the same time and frequency resource. In this paper, we are going to simulate the successive interference cancellation and calculate bit error rate, capacity, and outage probability and analyze these performance parameters.



Semiconducting Behavior of ZnO/NiO Composite Based Paint Coating on Low Carbon Steel

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Abstract

ZnO / NiO composite were synthesized by solid state reaction method at 600 °C. The product was characterized by impedance spectroscopy and transmission electron microscopy. Epoxy based paint containing ZnO/NiO composite as a pigment was applied on low carbon steel. The Mott-Schottky technique was used to investigate semiconducting behavior of coated sample. It was found that the composite works as a p-n junction.

Keywords

ZnO/NiO composite, Mott-Schottky, Semiconducting Behaviour



Technology Transformation and Sustainable Innovation in India

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Abstract

Technology and innovation is the most important ingredient for the development of any economy, especially the developing ones. India is one the developing economies of the world, standing at the cusp of the new era in economic growth. Last decade has been a milestone for India's information technology development. India is different from the rest of the world because of a slightly different socio- economic structure. Technology and innovation in India is being more urban- centric and has aided only the elite in the high-skilled occupations. World has gone through different phases of technological development where the developed nation has captured most of it , while developing nations are still behind in the race. This paper highlights different phases of technological developments. Next phase of technology enabled transformation of businesses and the economy will be assessed, in the coming decades, by its ability to provide solutions for sustainable development. The subject of rapid growth and developments is becoming more crucial for india. Developing sustainably is the great concern of present times. The 2030 Agenda for Sustainable development adopted by all United Nations Member States in 2015 including India, so the moral responsibility of sustainable growth lies also on India.

This paper highlights the strengths, challenges and opportunities in technological development and sustainable innovation in india. Also discuss the possible innovative ideas and solutions, technologies and programmes which help India develop sustainably. Sustainable innovation is the only solution India can have for taking the edge in the globally competitive market.

Keywords

Technology, India, Sustainable innovation, Sustainable development, countries



Improvement in corrosion resistance of AISI 4140 steel by Plasma Nitriding

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Abstract

Medium carbon AISI 4140 steel samples were Plasma nitrided in a vacuum chamber. The treated samples were characterized using scanning electron microscopy, micro hardness tester, X- ray diffraction, X- ray photoelectron spectroscopy and electrochemical polarization. The thickness of the compound layer was found in the range of 2-3 microns and total case depth ~ 328 microns. Surface Hardness was found to be ~ 576 HV1 . XRD investigations revealed the formation of nitrogen richer ϵ - Fe₂₋₃(N) at the surface and γ' - Fe₄N . The corrosion rate was found to be 1.37 mpy which is lower than that of untreated steel. Microscopic , XRD and XPS investigations pointed out and confirmed the formation of nitride-white layer at the surface . The mechanism of corrosion protection is explained through Pourbaix diagram for AISI 4140 steel in which iron preferentially dissolves slowly through the porous channels of a nitride layer. As this occurs, the dissolved nitrogen may transform into NH₄⁺ and then increase the pH in the channels.

Keywords

alloy steel, gas nitrocarburizing, post oxidation, corrosion resistance, magnetite



Development of an Automated Ammonia Concentration Monitoring System for Poultry Farm

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Abstract

Increase in ammonia concentration at poultry farms causes health hazards to chickens, which reduces the production. At many poultry farms even today the traditional method of manually raking technique is followed to reduce ammonia concentration, which is time-consuming and disturbing the routines of chicks. In the present work, a semi-autonomous ammonia monitoring system (robot) for a poultry farm is developed. The development of the system is initiated through QFD by interacting with poultry farm owners. Based on the discussion six different conceptual designs were developed. Out of which a flexible raking mechanism is selected and the hardware implementation is done. The developed ammonia monitoring system is tested at the field and the performance was found to be satisfactory. The developed system is capable of monitoring ammonia for less than 250 ppm and can operate for more than one hour. By employing the developed monitoring system, it helps to reduce the manpower required for the raking process.

Keywords

Ammonia Concentration, Raking Mechanism, Arduino, Infrared Sensor



An Empirical Study of Detection of Distributed Denial of Service Attacks in Multiple Mobile Networks in 5G Networks

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Abstract

The fifth-generation (5G) network targets the new cases that include an enormous measure of heterogeneous gadgets associated with a similar framework. This brings new security dangers, and one of the most basic for the accessibility of network is a Distributed Denial of Service (DDoS) violation. A billion of gadgets can be utilized as a botnet to trigger an extensive DDoS flooding that can overthrow the essential services. Customary security frameworks against DDoS are commonly intended to work in foundations with a specific topology. The versatility of numerous gadgets bought in to the organization when designing for defense systems. This is particularly applicable when security should be essential for the network prototypes related to the 5G establishment. This paper presents a novel way to deal with conquer the restriction of conventional detection frameworks. An epic sensor gives the necessary data to follow back an attacker regardless of whether it is moving among various areas. The proposed approach is reasonable to be sent in practically all 5G network segments. Building configuration is depicted and exact examinations have approved the proposed approach.

Keywords

DDoS, botnet, 5G, framework, NIDs



Automated Glaucoma Detection with Image Processing and Deep Learning Techniques using Eye Fundus Image

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Abstract

Glaucoma is a chronic asymptomatic neurological painless ocular disease. The increased fluid pressure in the retina causes glaucoma and damages the optic nerve. It is unnoticeable and painless during its initial stages and further may cause damage to Optic disc if unattended. The fundus image is well suited for large population screening to detect eye diseases. The assessments of retinal fundus images are time consuming and hence there is a need for automated system for human observer. In the proposed system, the cup to disc ratio (CDR) is computed using fundus image. The ratio is calculated using thresholding techniques and the decisions made to indicate fundus is affected by Glaucoma is developed by CNN techniques such as Sequential and VGG19 model deep learning techniques. This provides the automation model for faster diagnosis system in medical screening for large population and thus promoting decision support system. The proposed system clearly indicates precedence over the existing system in terms of accuracy percentage of 94.51 with the loss of 0.220 and high processing speed.



IoT Based Smart Speech with Visual Feedback Navigation Guidance System for Visually Impaired

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Abstract

The technology towards navigation has evolved rigorously from the man using the magnetic compass for north-south directions to digital maps. However, it is still a challenge for visually impaired people to navigate in today's traffic. They require a navigation assistant in everyday life to detect obstacles, send information about traffic signals and navigation support. The proposed system aims at the development of a unique feature towards the travel aid of the visually impaired by providing visual feedback for the visually impaired. The pilot study on electrical stimulation to the brain is carried out successfully which causes flickering in the forming visual feedback. This visual feedback is useful when audio cues fail during any emergencies in the noisy heavy traffic and do not depend on internet technology bandwidth. The other features towards navigation aid for the visually impaired are based on a Raspberry Pi controller with synthetic speech output and ultrasonic sensor for obstruction detection. The Internet of Things (IoT) based system helps in the image to text and text to speech helps in dealing with obstacle and provides voice output along with visual cues by electrical stimulation to the brain.



Segmentation and Detection of Lung Nodules by Implementing iW- Net

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Abstract

Interactive W-Net is type of machine learning model which performs equally user interaction and automatic segmentation of nodules. Interactive W-Net is made up of two blocks primary block which performs the segmentation automatically and second block allows consumer interaction where consumer can introduce two points and which is analyzed by consumer in nodule's bound- ary. Physically inspired weight maps are taken as a consumer input into account and which is projected, the weight maps are considered as both feature map and system's loss function the implementation of these parameters are to collect an enormous public LIDC-IDRI dataset. iWNet allows correcting segmentation of tiny nodules and also improves the challenging seg- mentation of non solid nodules; hence iW-Net is very important in increasing beginning analysis of nodules and iW-Net provides the correct segmentation of tiny nodes.

Keywords

Inter-observer agreement, Segmentation, Image Processing



Landslide Stimuli in Shillong Plateau: Orographic Precipitation, Seismicity and Lithology

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Abstract

This paper presents an integrated review of landslide initiation in the Shillong Plateau within the NER (North Eastern Region) of India. An ensemble of factors forms the hybrid trigger responsible for the earth movements namely, the specific lithology of the region, in alignment with geological and meteorological factors (Cerri et al., 2017). Landslides are one of the most catastrophic and recurring natural disasters, affecting several hilly terrains around the world and impacting key economic sectors such as road transport, agriculture and frequent loss of life and livestock. (Dikshit et al., 2020). The plateau receives the highest orographic rainfall in the world (Mawshynram, Cherapunji) and bears the brunt of rain-bearing southwest monsoon winds. The highland comprises highly crushed Archean granite gneisses (due to intra plate tectonic shearing and exhumation of older strata) with overlying meta sediments (including limestones) and sporadically distributed volcanics. These present a semi consolidated lithology to landslide promoting factors. Porosity of the sedimentary sequences and induced porosity of the gneisses (due to intense shear related fracturing) add to groundwater dependent mobilization of the slopes. Shillong Plateau exists at the junction of three tectonic plates, namely the Indian, Eurasian and the Burmese plates. The resultant intense tectonic forces have created prominent faults and shear zones, movement along which cause Zone V earthquakes in the region. All these factors have a cumulative effect on landslides in this unique geological landscape.



Meta-Heuristic Algorithms for Multi-Objective Subtask Scheduling Problems: Overview

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Abstract

Multi objective scheduling problems are considered NP-complete. Hence, calls for a most appropriate heuristic scheduling algorithm to address the issue. Numerous heuristic algorithms have been proposed by researchers in the past, however choosing a most appropriate algorithm for the problem under a particular nature is a difficult task because the algorithms are advanced under numerous assumptions. Therefore, on this observation in this article we discussed four meta-heuristic algorithms to solve multi-objective subtask scheduling problems.

Keywords

Multi-objective scheduling, Subtask scheduling, NP- complete, meta-heuristic algorithms



Critical Delay Analysis in Execution of Construction Projects

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Abstract

In the development of stable economy of the country, construction industry plays a vital role. It is becoming more complex because of the sophisticated and tedious construction process. Further the involvement of large number of stakeholders in the construction processes i.e., clients, contractors, design engineers, suppliers, and consultants. The objective of the present study is to identify the major causes of construction delays, its effects, and minimizing delays in construction projects. This study is carried out based on literature reviews and questionnaires surveys. For the study, about 69 causes of delay categorized were analyzed as the significant factors with regard to Indian construction industry. Further, it emphasizes on the recommendations to evade delays in the construction projects. Importance of each will be calculated on the basis of cumulative effect of occurrence and impact. Regression analysis with f-test was adopted to evaluate the weather the opinion consensus occurs between different groups of respondents.

Keywords

Construction, causes, delays, factors, regression



Cloud Computing: Network/Security threats & Counter Measures

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Abstract

Pandemic Era has virtualized over 90% of our work, “Cloud Computing” is one of the major platforms providing resources to consumer in less cost and from anywhere. Cloud Computing is based on distributed network so managing data is done on public infrastructure causing third party outsource, which leads to Networking/Security Vulnerabilities. In this research paper we will talk about network and security threats and also throw some light on measures that could be taken to make virtualized platform more secure.

Keywords

Cloud Computing, Networking, Security threats, Vulnerabilities, Counter Measures



Recognition of Handwritten Tigalari Numerals

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Abstract

This project puts forth a framework as a solution in recognition of offline isolated handwritten digits of south Dravidian Tigalari digits. A classic deep learning technique known as Convolution Neural Network (CNN) is used for recognizing and classifying the Tigalari digits. Standard methodology has been applied to solve the problem of Handwritten Character Recognition (HCR) which is data acquisition, preprocessing, and classification. The implementation put forth yielded an accuracy of 97.691%.



Analysis of RFM Customer Segmentation Using K-Means and DB Scan Algorithms

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Abstract

In the fast-emerging world, we discover different scenarios where sellers are worried about finding new customers along with maintaining old ones. So, to make them convenient with the concept of shopping trends, a new kind of analysis based on customers purchasing is introduced, i.e., dividing the customers into different segments based on their similarities and differences within those segments in order to better serve their customers and this analysis is called Customer Segmentation. We used both k-means and DB Scan clustering techniques to train the model, and the program separated the datasets into clusters based on the recency, monetary, and frequency values of the customers in the datasets. After completion of training phase customers data, we perform data visualization for better understanding and we get the recency, frequency and monetary mean values of customers in different segments. In this model they can get the recency, frequency, monetary values of that particular customer by giving customer ID. The fundamental aim of customer segmentation is to improve the advertising and marketing performance of an e-commerce platform and this can be very a good deal.

Keywords

k-Means, DB Scan, Recency, Monetary, Frequency



Audio Transfer Mechanism Using Li-Fi Technology for Smart City Applications

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Abstract

In this paper the concept of audio transfer is implemented by using the Li-Fi technology. The Li-Fi stands for Light Fidelity. This Li-Fi concept uses the light as a medium to deliver high speed data which is faster as compared to Wi-Fi. Li-Fi data is sent in various bit streams, and the message is decoded by an IR detector on the receiving side. The data is transmitted in binary format, with 0 indicating an LED in the "OFF" state and 1 indicating an LED in the "ON" state. In the Li-Fi transmitter, high-intensity LEDs are employed. The light signal created by the Li-Fi transmitter is detected by a photodiode module in the reception part.

Keywords

Light Fidelity(Li-Fi), Wireless Fidelity(Wi-Fi), Light emitting diode(LED)



A Hybrid Machine Learning Model with Feature Selection Approach on Chest X-Ray Images for COVID-19 Detection

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Abstract

The safest method to prevent the loss of human lives through Covid-19 infection is to diagnose it at the earliest. Due to limited tools, it's hard to discover Covid-19 positive patients, necessitating the involvement of clinical personnel in the infection diagnosis process. Current CXR imaging systems do not have an efficient resource management system, lack an effective number of datasets to be used, have misclassification issues, and suffer from overfitting defects. In this paper, a hybrid technique based on Ant Lion Multiclass Support Vector Machine (AL-MSVM) has been introduced for the detection of Covid-19 infection. Ant Lion optimization technique has a high calculation speed and convergence rate. Individuals may or may not be infected with Covid-19 or some other kind of disease, for which, MSVM is used to generate discrimination between two or more classes. The main objective of SVM is to provide a hyperplane and generate different class clusters. The performance of the proposed framework is evaluated on different parameters like accuracy and specificity. The analysis of results indicates that the proposed model performs better in terms of accuracy (by 0.6%), and specificity (by 1.6%) as compared to the existing DeTraC Model.

Keywords

AL-MSVM (Ant Lion- Multi Support Vector Machine) Classification, Chest X-Ray, Covid-19 disease, PCA (Principal Component Analysis)



Different Data Mining Techniques on Different Cloud Providers

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Abstract

Data mining techniques in cloud provider improve the quality of the information services. The mountain of data is growing day by day from KB level to TB level even PB level. The huge data get stored in a cloud, which in the form of logical pool, physical location or server. Cloud storage provider responsibility is to keep the data securely and this data should be available and accessible by people. The term cloud is an image for the internet. Cloud computing overlaps distributed grid and utility computing. The cloud is a virtualization of recourse that manages and maintains itself. Cloud keeps resources like hardware, Operating system, and networking in proper order and the huge volume of business data stored in data centers with low cost. Different data mining techniques on cloud computing provider help a business organization to improve profit and gives different possible ways to extract or predict data.

Keywords

Data mining techniques like Association rule, Classification, and cluster. Cloud providers like Amazon Web Service, Microsoft Azure, and Google search engine.



GSM Based Automated Irrigation System using Arduino Uno

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Abstract

In a developing nation like India, with so much advancement in every field people have turned out to be extremely busy in their work, and because of this hectic lifestyle they often get irritated and feel depressed as they do not have time to relax, and whatever time people get is wasted in this polluted surroundings, they even don't have time to go to parks our other hill stations to enjoy nature, many nature lover in order to feel that hill station vibes often put plants in their garden, balcony extra. As per the reports many people have agreed that being close to the nature often relaxes them and keeps depression curse away, but they have also agreed that when they bring plants and plan decorating their house with plants initially they manage to take care of their plants very nicely timely water the plants, but after some time they get so busy in their work that they are unable to take care of the plants which causes their plants to die which again brings negativity around. This thesis provides an intelligent system for automatically watering plants from anywhere in the world and will display the message on your phone whenever moisture falls to 0 and also when the watering is complete. The project consists of the code which is done on Arduino IDE software and then uploaded on the Arduino Uno, the soil moisture sensor senses the moisture in the soil and sends the value, this value is taken as the input and is checked in the program if the value is less than the desired value the water pump will set to ON position and the message will be sent to your phone with the help of GSM module. We all know the importance of water now a days water is the most important part of life, and India being the 3rd largest populated country has only 4% of the entire water resources. Therefore the need to save water is extremely important, More than 72% of people depend upon farming which is one third of the total population of the country. Agriculture is a source of income to many people many lives are based on it. Average annual rainfall in India is 300–650 mm but is very unreliable, so we can not only rely on rainfall for watering plants Looking at the upcoming water crisis it is very important that we start saving water, and also avoid water wastage at fields, Sometimes it is not always convenient to keep a check on the moisture content of the soil it is not feasible to always stand and see when does plant need water.

Keywords

Arduino Uno, Moisture sensor, moisture sensor, Internet of Things



Low Cost Home Automation Design: A Digitally Controlled perspective

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Abstract

The project is a home mechanization framework that utilizes DTMF association which control the home machines distantly. It conquers the limits of traditional divider switches that must be worked by genuinely going close to then, at that point then switch on the catch.

This framework utilizes DTMF by which one can handle home apparatuses by dialing the assigned number for specific burden. One can work it from home telephone or by settling on a decision to home number from outside. The framework utilizes DTMF innovation that gets orders from telephone and delivers computerized yield which starts transfer driver to turn ON/OFF the heap machines. For this the framework we utilize Demultiplexer, flip lemon IC, DTMF Decoder. This DTMF innovation permits the client to send orders to work the apparatuses by means of a cell phone and keeps away from the utilization of micro-controller. To utilize this framework the client needs to settle on a decision to the cell phone associated with this framework. When the call is gotten by the cell phone associated with the framework, the client would now be able to send orders to work the home apparatuses. For this the framework utilizes lights to show AC stacks and uses 12V transformer to control the framework.

In this paper a remotely worked cell phone controlled home apparatuses framework is proposed. It is a DTMF (Double Tone Multi-recurrence) based framework comprises of two cell phones, DTMF decoder and ATmega8 miniature regulator. One cell phone is utilized as far off which might be situated at a far separation from home which goes about as collector.



A Study on Customers View on Dimension of Service Quality of Educational Consultancy Firm

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Abstract

Service quality has become an important element in every sector especially in service industry. Service quality contributes to the satisfaction of various stakeholders across various service organisations. Today everyone is travelling to various places for education, but finding it difficult in selecting the best college and courses. Here Educational Consultancy plays an important role in helping them to select the best college and course. This research paper seeks to examine the dimensions of quality of service offered by educational consultancy firm. The study is conducted with the help of the primary and secondary data and the primary data was collected through structured questionnaire from the clients of educational consultancy firm. A sample 450 customers was selected using random sampling. ANOVA was used to check the significant influence of independent variables (Type of course and Gender) on various service quality dimensions (Tangibility, Reliability, Responsiveness, Assurance and Empathy). The outcome of the research shows that dimension of service quality like Tangibility, Reliability, Responsiveness, Assurance and Empathy are highly influenced by Gender and Type of course and found that Assurance is the key dimension of service quality.

Keywords

Service Quality, Education, Consultancy Firm



An Efficient Deep Learning Model Fvnet for Fingerprint Verification

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Abstract

Fingerprint which is an impression made by the ridges on a finger is the most widely used biometric trait for human verification in many applications such as forensic investigation, law enforcement, custom access etc., for more than 100 years. Though various machine learning and deep learning approaches have been proposed for fingerprint verification, there is still room for performance improvement. So, in this paper we have proposed an efficient Convolutional Neural Network (CNN) model namely FVNet by fine-tuning the hyper-parameters such as activation function, batch size and dropout of Deep CNN. Performance of FVNet is evaluated by conducting experiments on FVC2000_DB4_B dataset and the effectiveness of the proposed model is demonstrated by comparing its performance with the performance of pre-trained deep CNN models namely ResNet50 and VGG16.



Fly Ash Epoxy Composites with Superior Fire Retardant Properties

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Abstract

Epoxy was loaded with varying concentrations of fly ash and was characterized for its structural properties using XRD and SEM. The XRD results revealed reduction of crystallinity with increase in filler content indicating that the composites are semi crystalline in nature. The SEM images showed that at lower concentration of filler content, fly ash is uniformly distributed within the epoxy and at higher concentrations of fly ash, agglomerates were observed. Mechanical properties such as tensile and compressive properties were estimated and the results showed that, the composites exhibit enhanced tensile strength and compressive strength for epoxy with 20 wt% fly ash. Flammable properties such as heat release rate, peak heat release rate, time to ignition, CO and CO₂ yields are estimated and reported. Decrease in combustion time, peak heat release rate, time to ignition, CO and CO₂ yields with increase in filler content clearly indicates the superior flammability performance of epoxy composites loaded with fly ash.

Keywords

Fly ash, XRD, SEM, Tensile strength, Flammable properties



A Survey on Application of Analytics in Legal Profession

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Abstract

The advancements made in different areas using machine learning, computation, artificial intelligence for the betterment of functionalities is increasing day-by-day. The research topics like Siri, Alexa are now just a commercially available equipments. The application of technology in legal profession is a diligent step as it depends on past cases, judgments, articles, sections etc. As per National Judicial Data Grid and the Supreme Court, at present there are 3.9 crore cases pending in the district and subordinate courts, 58.5 lakh cases in the various high courts, and more than 69,000 cases in the Supreme Court. There are many people who are suffering emotionally and financially as they are completely dependent on advocate's advice which is taking a long time. This paper discusses various methods to improve the services given to the citizens from advocates and also changes the way of practicing legal profession.



Assessing and Overcoming the Challenges Encountered by an English Language Teacher – Teaching English to the Speakers of Other Languages

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Abstract

Today, English has become indispensable. Teaching English to the speakers of other languages could be challenging. Various nations encounter hurdles in teaching English as a foreign or second language in strictly restricted environment to their citizens. This research explores some reasons for the difficulties in English language learning and teaching from the perspectives of teachers and learners. In addition to the pupils, instructional system, examination pattern, EFL teachers training and learning environments have been considered as obstacles in learning and teaching EFL. So English language teaching has been investigated from all perspectives. Learning English as a foreign language has attracted lot of attention. Researchers have been conducting studies to help teachers to address language teaching challenges. The present study highlights the reasons why teachers have troubles teaching English and what could be the possible solution. Pedagogically, this study helps in learning and teaching issues. The efforts in teaching of English language appear to have deficiency considering the demand of time across the globe. The proposed study will result useful solutions for the teachers to solve the problems in terms of English language teaching.

Keywords

Foreign language teacher education, English as a Foreign Language, Problems in teaching English, etc



Student Academic Performance using New Techniques of ETLBO

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Abstract

In this paper, a new variant of Teaching-Learning based Optimization (TLBO), termed as Elitist Teaching-Learning-based Optimization (ETLBO) algorithm has been proposed for teaching and learner phase optimization. The proposed method is empowered with two mechanisms to reach the accurate performance with less time complexity. One of them is elitist, which strengthens the capability of optimization method by retaining the best solution obtained so far, on the other hand Optimization method helps in ameliorating the capability of searching. As ETLBO had an advantage of both Elitism and Optimization based learning, hence it tries to obtain optimum solutions with guaranteed convergence. This paper presents the performance analysis of a newly developed Elitist Teaching-Learning-based Optimization (ETLBO) algorithm applied with an efficient Pi-sigma recurrent neural network (PSRNN) for real-world student data classification.



Power System Distribution on Optimaplaning of Monitoring Meters

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Abstract

In this paper to achieve this goal multiple levels of voltage are used in the transportation and distribution system to minimize losses and improve end-user power quality. By enhancing power system state estimation techniques that mitigate the challenges posed by the integration of VER into the power grid. The western electric rules (WER) will be used in stochastic process control as new triggering criteria to be incorporated in event-triggered state estimation. This segment the state estimation results on the 95-bus UKGDS test system model. The WLS estimation technique will be applied in light of its consistency with DSSE issue. Limits will be determined for the relative errors in voltages and angles to survey the presentation of the estimator under shifting degrees of blunder in the measurements. In light of the errors in genuine and pseudo measurements the accompanying cases will be copied. The fundamental objective of meter placement in distribution systems will become enhancing the gauge load data with continuous measurements to such an extent that the SE with these measurements will fulfill the presentation prerequisites.

Keywords

distribution system state estimation (DSSE); optimal meter placement; state estimation (SE); weighted list square (WLS); pseudo measurements; distribution system; power system state estimation



Design of an Optimization Chatbot Model for Classification Framework

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Abstract

Robotic Process Automation is popular software configuration for performing repetitive tasks intelligently. Special category of bot – a chatbot has drawn much attention in a decade with its drastic applications due to advancements in tools & technologies. Chatbot classification framework study is essential in order to identify bots, compare-contrast bots, identify patterns of change as well as for designing the bots in efficient way. Optimization has a key role in providing best performance by maximizing/minimizing certain characteristics. Further, optimizing chatbot improves overall capabilities & performance of chatbot in terms of how chatbot provide service to its users with plentiful merits manifested in fascinating widespread areas.

The main objective of this study is for optimizing chatbot classification framework by incorporating different resource characteristics. Different resource types, resource characteristics, levels of automation, chatbot intent classification research gaps are focused with the proposal of optimized chatbot model.

This study is aimed to review chatbot classification framework literature and identify potential knowledge gaps. The focus is on deciding the dimensions to be considered for classifying chatbot, why chatbot are popular and which of its characteristics have created a milestone and revolutionary changes in modern applications. Scope of proposed chatbot classification framework model based on 24 distinct factors 76 chatbot to be categorized and also 22 chatbot with 10 platforms compared using our proposed framework. By this framework, it is easy to identify chatbot for development and developers can select right platform which optimizes chatbot hurdles during implementation.

This study also emphasized to identify the significant factors which needs to be resolved to enhance the promising chatbot communications in possible areas where currently it faces challenges. The identified fourteen research issues of chatbot needs to be resolved for supporting users with convenient, reliable, robust and accurate conversations steering to rapid application environments for chatbot.

Keywords

Robotic Process Automation, Optimized chatbot model, Software Robots, Software tools, Chatbot Dimensions, Chatbot classification framework



Measuring Quality of Software Requirements Specification Using Quality Metrics: A New Perspective

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Abstract

In the software industry, requirement stages illustrate the initial process of the software development stage; it uses various types of documentation and index tutorial for various software projects. The achievement of successful projects depends on the specific reliable methodology concerning the software. The requirement engineering with specifications patterns and valuable concepts may have severe effects on software development. Various methods model and approaches are available to makes the Software Requirement Specification document more reliable. Quality issue is most significant parameters of the decidedly highly quality Software Requirement Specification document. Its accurate estimation, continually make informal and progress the software development process. On the other hand, quality has always been an unexplained theory and its correct evaluation is a solid exercise. This paper is about to measure Software Requirement Specification behavior, Software Requirement Specification quality, Operations and low level metrics which measure the Software Requirement Specification quality at the very first stage of software development i.e. the requirement stage of the software. After identifying the objective related to identify Software Requirement Specification issues and quality factors at requirement phase, to established correlation between Software Requirement Specification issues and quality factors, to develop the model and Software Requirement Specification Quality estimation frame work, to validating and verifying the result of proposed approach.

Keywords

Quality and Quantitative Methods, Quality factors, Requirement stage, and Software Requirement Specifications



Object Detection and Automation in Smart Agriculture using IoT and Cloud

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Abstract

The agricultural industry in India is decreasing, which has a negative impact on the ecosystem's ability to produce. We need to fix this issue urgently to revive and enhance the domain's liveliness. E-Agriculture applications can be built using a framework that includes knowledge management and monitoring modules, according to this article. Farmers must have access to comprehensive data across the whole farming process if they are to make profitable decisions. The necessary data is dispersed throughout numerous sources. Manual procedures are being replaced with automated ones, which are more energy-efficient and require less human effort. Using ICT in India's agricultural sector can help rural farmers replace some of their traditional methods, according to a new paper. The proposed model holds two different functionalities. In Proposed work, we first perform detection of an object in the crop field and send alert to cloud for monitoring. Second, to send temperature, humidity and soil moisture value for irrigation scheduling. For the first functionality, ultrasonic sensor is used and for second functionality, DHT11 (temperature and humidity sensor) and soil moisture sensor are used. In parallel, you can monitor all the readings using cloud services. We used thingspeak cloud service for monitoring the data.

Keywords

Smart Agriculture, Ultrasonic Sensor, soil moisture sensor, object Detection, Cloud monitoring



Efficient and Secure Multi-party Computation for Heterogeneous Environment

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Abstract

Multi-Party Computation (MPC) is a cryptographic technique that allows you to do calculations while being anonymous. MPC allows a group of individuals to collaborate on a function without exposing the real input or result of the plaintext. MPC's applications include privacy-preserving polling, arithmetic computation, and massive data processing. From a system standpoint, each MPC party can execute and contribute in computation on a single processing node. The processing nodes of several parties may be homogeneous or heterogeneous, however the distributive workloads of MPC algorithms are always homogeneous. In this research, we analyze at the system performance of a typical MPC approach and a set of MPC's applications. We explain every live computation sequence of a state-of-the-art MPC method on homogeneous and heterogeneous processing nodes, as well as the basic cause of its stall period and efficiency constraint.

Keywords

Anonymous Computation, Distributed Computing, MPC, Secure Computation



The Proposed Pre-Configured Deployment Model for Amazon EC2 Cloud Services

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Abstract

Cloud computing offers several advantages as well as challenges to small, medium, and large businesses. Whether it is a financial, technology, or engineering sector any company may find a helpful cloud component for its needs. Though with its benefits come many challenges, experts believe that cloud computing's advantages outweigh the disadvantages. With more research in the area of cloud computing, the challenges will be dealt with. Several major organizations, including Amazon Web Services, Microsoft Azure, Google Cloud Platform, and others, provide cloud services. Among them, AWS (Amazon Web Services) is one of the fine cloud service providers that comprises several features, including the AWS EC2 (Elastic Compute Cloud) which is one of the widely used by many organizations. Amazon's Elastic Compute Cloud Web service provides highly configurable processing power throughout the cloud, allowing developers to build applications with tremendous scalability. Using EC2 (Elastic Compute Cloud) by using the proposed deployment method can be more effort saver for any IT development and deployment team for any organization. There should be an easy deployment method that auto-configures EC2 Instance. This research paper aims to discuss the cloud environment, AWS EC2 advantages, AWS EC2 Deployment methodologies.

Keywords

Cloud Computing, Cloud Computing using AWS EC2, AWS EC2 Deployment methodologies, Deployment on Amazon AWS EC2 Instance, Cloud Service Provider



Review Paper on Detection of Respiratory Diseases from Chest X-ray Images using Artificial Intelligence

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Abstract

In 2019, the whole world is facing a health emergency (COVID-19). Most of the countries are affected by this deadly disease due to delay of finding the symptoms. For automatic detection of COVID-19 Chest X-ray images are used and several Artificial Intelligence techniques are developed. In this article, we will discuss various methods for detecting COVID-19 and other Respiratory diseases. To prevent the virus from spreading through contact an automatic detection system must be developed.

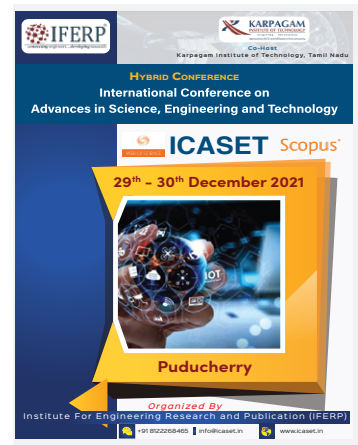
We are going to review different methods their findings and limitations. Several deep learning architectures such as Inception, VGG, ResNet and others are used to detect Covid-19. All of these models are difficult to tell whether the pneumonia is caused by Covid-19 or from another fungal attack, here we are going to review on different classes for better detection of symptoms of Covid-19 and other Respiratory Diseases. The goal of the presented research is to use deep learning approaches based on Convolutional Neural Networks to aid medical experts by offering a complete and rigorous analysis of chest X-ray images.

Keywords

Convolutional Neural Network, Deep Learning, Machine Learning, Artificial Intelligence

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