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Seoul, South Korea

19th- 20th July' 18

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IFERP-Explore

Editorial:

We cordially invite you to attend the ***5th International Conference on Recent Challenges in Engineering and Technology (ICRCET-18)*** which will be held at ***Grand Hilton, Seoul, South Korea*** on ***July 19th-20th, 2018***. The main objective of ***ICRCET*** is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Science, Engineering and Technology. 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 May 2018, the Organizing Committees have received more than 40 manuscript papers, and the papers cover all the aspects in Electronics, Computer Science, Information Technology, Science Engineering and Technology. Finally, after review, about 24 papers were included to the proceedings of ***ICRCET - 2018***.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of ***ICRCET 2018*** 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.

Editor-In-Chief
Dr. Nalini Chidambaram
Professor
Bharth University

Acknowledgement

IFERP is hosting the ***5th International Conference on Recent Challenges in Engineering and Technology*** this year in month of July. The main objective of ICRCET 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 travel such a long distance to attain this conference.

Mr. R. B. Satpathy
Director
Institute for Engineering Research and Publication (IFERP)

ICRCET-18

5th International Conference on Recent Challenges in Engineering and Technology

Seoul, South Korea, July 19th – 20th, 2018

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ABSTRACTS

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5th International Conference on Recent Challenges in Engineering and Technology - 18

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Agent based modeling of the power consumption as a supporting approach of the low carbon society development

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Abstract

This work is devoted to the one of crucial problems of the disaster recovery management and of the renewable energy supply system development, the problem of evaluation of the electricity consumption by the urban area. In this work we propose an agent based approach that is constructed on the combination of the engineering technique, statistical information and numerical modeling. This approach enables us to evaluate the current demand in the urban area to develop the new low carbon society and to increase the resiliency of it. Using the data collected from the town Shinchi we demonstrate the capability of the developed approach to evaluate the electric power demand in the urban area. The obtained data are analyzed through the perspective of usage the photonic generation and the as a result it will be shown that the partial shift to the renewable energy enables to increase the stability of the system against the disaster aftermath. The same result demonstrates that in perspective this partial shift to the renewable energy helps no only to decrease the living cost for local households but it leads to the significant decrease of the environmental pollution by the reduction of the CO2 emission related to the electricity usage. This reduction is abundant to cover the threat to the environment caused by the increase of the population in the correspondent area.

The given research presents the theoretical studies on the base of the validated data collected in the real town of Japan.

Keywords:

Agent based modeling, energy demand, low carbon society, renewable energy.

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Enabling Business Transformation through Enterprise Architecture and the Knowing Cycle

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Abstract

Business transformation in organizations is imperative due to the rapid and complex nature of the changes in business environments. Organizations are required to consider new strategies, innovative products and services, and adapt to disruptive and different ways of doing business to remain competitive. The nature of these changes requires holistic and strategic approaches, such as enterprise architecture, to be efficiently managed. Furthermore, the knowledge that exists in the organization, in any way that it is available, is required to develop an enterprise architecture. Knowledge management, and in particular the knowing cycle, guides the sense making capacity of an organization to understand the change that is taking place, the creation of new knowledge to address the change and informs decision making. Therefore, the purpose of this paper is to consider how enterprise architecture in association with the knowing cycle enables business transformation. Based on the findings of this study, we present a business transformation framework grounded in the alignment of the sense making processes to the establishment of an architecture vision to bracket the change situation. By applying such a framework, organizations may be guided to the best possible initiatives in order to enable business transformation and articulate the development of a future state architecture.

Index Terms

Business transformation, Enterprise architecture, Knowing cycle, Knowledge.

Nullpest: A Mobile Application of Agricultural Pest Locator Using Sonar Sensor Set-Up

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Abstract

Philippines have already achieved its highest peak when it comes to substantive agricultural activities. The country has been one of the most leading distributors of agricultural crops most especially the rice commodity all throughout the world. With this, it can be concluded that agriculture is one important factor that affects the Philippines' economy, thus, it must be given thorough attention and importance not only by the country's government but also its constituents. There are inevitable factors that affects agricultural yield which results to rapid decrease of crop activities resulting to a devastating loss to the Philippine farmers, one of which is the existence of agricultural pest. These destructive pest gives fatal damage to agricultural crops by thriving its nutrients resulting to agricultural loss. Considering this, the aim of the study is to aid and help farmers locate such agricultural pest particularly on the rice commodity, give pesticide monitoring in order to limit pesticide usage that gives possible health risk to consumers, and lastly give pest information to its user particularly on farmers. With the combination of a Mobile Application and Arduino device all of this will become possible.

ISBN: 978-81-932966-5-3

Using the Gamification Concept to Reduce the Turnover

Dr.Ricardo Pateiro Marcao
gamification Expert

Abstract

Regardless of the positivity of the results presented by a particular company, it is necessary to ensure that these translate into gradually higher values. However, this can be boosted if the costs of talent acquisition and passing of knowledge are being reduced. For this reason, turnover is a major concern today in companies in the professional services sector. Not being an easy task, its combat, it becomes urgent the need to use models and concepts that allow us to retain talent, as is the case of the concept of Gamification.

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Ecosystem Engineering across Environmental Gradients: Implications for Conservation and Management

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Abstract

Ecosystem engineers are organisms whose presence or activity alters their physical surroundings or changes the flow of resources, thereby creating or modifying habitats. Because ecosystem engineers affect communities through environmentally mediated interactions, their impact and importance are likely to shift across environmental stress gradients. We hypothesize that in extreme physical environments, ecosystem engineers that ameliorate physical stress are essential for ecosystem function, whereas in physically benign environments where competitor and consumer pressure is typically high, engineers support ecosystem processes by providing competitor- or predator-free space. Important ecosystem engineers alleviate limiting abiotic and biotic stresses, expanding distributional limits for numerous species, and often form the foundation for community development. Because managing important engineers can protect numerous associated species and functions, we advocate using these organisms as conservation targets, harnessing the benefits of ecosystem engineers in various environments. Developing a predictive understanding of engineering across environmental gradients is important for furthering our conceptual understanding of ecosystem structure and function, and could aid in directing limited management resources to critical ecosystem engineers.

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Robo Therapist: A Sustainable Approach to Teach Basic Expressions for Special Needs Children

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Abstract

Social interaction is an essential component for development of both normal and special needs children. However, many special needs children suffer from a lack of social interaction because they are unable to interpret social cues as well as a failure in social gaze when communicating. One of the ways to cope with these problems is to improve their social cognitive skill by teaching basic emotions through facial expressions. This paper describes the development of a new and sustainable teaching and learning approach using robotics to promote social interaction among special needs children of aged 4-6 years old. The robotic tool can teach basic facial expressions such as happy, sad and angry to increase emotion recognition skill among special needs children. The growing demand for technological innovation to enable empowerment of developing communities requires new and creative educational initiatives. Malaysia has also address it concerns on sustainable education for all spectrum of communities. RoboTherapist is a new teaching and learning method in Malaysia's special education which targeting the special needs children. The special needs children are children with Autism, children with Down Syndrome, children with ADHD and slow learners. The aim of this research is to make teaching and learning session more attentive for special needs children and hence to improve their social interaction in daily's life and gain confidence to communicate with the people around them.

Index Terms

Robotics, Special Needs, Sustainable, Emotions

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19th-20th, July 2018 at Seoul, South Korea.

The effect of shear wall location on the response of a multi-story building under seismic load

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Abstract

A nonlinear time-history analysis of a multi-story concrete building under the action of earthquake is conducted to examine their performance for various locations of shear wall. Five cases of number of stories and seven orientations of shear walls locations are investigated. The parameters considered in this study are story displacement, base shear, story drift, roof displacement and fundamental time period. The ground motion record of El Centro, California in 1940 and the general purpose FEM code SAP 2000 are adopted in the analysis.

The results show that, the addition of shear walls is more useful in some locations than the others. The base shear increases when shear walls are added, irrespective of their locations. The full time response of the structure must be taken rather than maximum roof displacement to give a clear indication of the behavior of the structure. When the stiffens of structure increases due to adding shear walls, this may not leads to decrease the values of the roof displacement under the action of seismic loads. It is also found that installing shear walls at core and corners of the buildings results in minimum floor displacement and minimum story drift for all considered number of stories, and maximum base shear for building of 10 and more stories.

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Security and Privacy in Data Networks.

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Abstract

This article has as a purpose to deal with security and privacy of the data handled daily worldwide. It describes and analyzes the ways of violating private communications that make in various ways such as (Internet Activities, Smart Phones, Viruses, Hacking, Social Media, Cloud Computing, Bots, Mobile Applications, Internet of Things, Metadata, and Tracking / Surveillance). It analyzes the above mentioned and also trying to find countermeasures to protect the confidentiality and integrity of data. The collection and analysis of information nowadays is becoming more easily in different ways and from different sources to join all of them the information to create a virtual human profile becoming very easy. The freedoms of individuals have been reduced significantly in this contributed automated system in most cases without the consent of the users that record, store and process personal data including files unknowingly. This article aims to highlight the major problem of violation of the electronic data and privacy, to present countermeasures enriching knowledge from simple user until the advanced professional for the going on around and how it can defend itself.

Keywords:-

Internet Activities; Smart Phones; Viruses; Hacking; Social Media; Cloud Computing; Bots; Mobile Applications; Internet of Things; Metadata; Tracking; Surveillance; Privacy; Cyber Security

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Active Noise Control

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Abstract

In the current simulation-based research work using MATLAB, a filter length of 0.1 seconds was generated for secondary propagation path by using a loudspeaker-to-error microphone impulse response having band limit range from 160 - 2000 Hz. A sampling frequency of 8000 Hz was used for this active noise control task. To estimate the secondary propagation path, 3.75 seconds of random noise as well as the measured signal at the error microphone was activated. To design the secondary propagation path, a secondary path filter length of 250 taps, corresponding to an impulse response length of 31 msec was used. The normalized LMS algorithm was used due to its simplicity and robustness. Plots of the output and error signals show that the algorithm converges after about 10,000 iterations. For the primary propagation path, a filter length of 0.1 seconds was generated using an input-to-error microphone impulse response that is band limited to the range 200 - 800 Hz. In our research work, a typical active noise control application has been applied by synthetically generating 7.5 seconds of an ambient noise as a process of active noise control.

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Smart Grid and IoT

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Abstract

In the modern era, traditional power grids have been transferred into the latest smart grids which cater the recent on-going problems of power consumption, uni-directional information flows, energy demand on the growing level, wastage of energy and so on so forth. However, Smart Grid creates the bi-directional flows for all the above-mentioned problems and incorporates a wide range of solutions for them. In this regard, some means of connectivity and communication is required for these devices. IoT – Internet of Things is the measure for the same in order to cater its monitoring, tracking, control and encapsulation which are deployed over the power plants and distribution centers. Therefore, in this paper we have presented the means of incorporation of the above-mentioned scheme in our modern day live; but especially in our native country Pakistan. In this paper, we will start with the background analysis of the Smart Grids and IoTs. Afterwards, we will be moving towards the fundamental technologies required for it; following up with the latest developments in this area around the world and applications in Pakistan. In last we will be providing the means of its implementation and conclude our research for it.

Key words

About four key words or phrases in alphabetical order, separated by commas.

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Automated Teller Machines Location's Information Retrieval Search Engine Using Suffix Tree Clustering Technique

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Abstract

In this paper, the researcher presented the Automated Teller Machines Location's Information Retrieval Search Engine using Suffix Tree Clustering Technique which is used to provide more efficient, accurate and precise Automated Teller Machines Location's search results than the current bank existing system. This claim is reinforced by 100% average effectiveness of precision, recall and F-measure experimental results on bank ATM locations data set. Within the fast-paced era of modernization of technology that excels at people's expectations in the field of information retrieval, this study aims to convey innovation to the bank online services which can exploit the provisions of Online or Offline ATM status transparency to the bank customers and avoid the bank customers to other banks high transactions fees.

Index Terms

Automated Teller Machine, ATM Failure, ATM locator, Suffix Tree Clustering and Precision, Recall, F-measure.

5th International Conference on Recent Challenges in Engineering and Technology - 18

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Influence of E-service Quality on Customer Satisfaction from E-commerce portal

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Abstract

Over the past two decades, outstanding attempts are made on providing best practices for e-service quality measurement and e-marketing strategy. However, it is always necessary to measure the performance quality of web services using a different technologies such as E-SERVQUAL model. The customer satisfaction gets enhanced after knowing the E-service quality of a service based company. The proposed study uses E-SERVQUAL model for measuring the service quality of an E-commerce Company. The standard questionnaire method is used to collect responses from customers of the company via email and newsletters. The results indicate that factors: efficiency, reliability, assurance and security in the e-service system are in favourable condition and factor: responsibility is not in the favourable condition that affects the customer satisfaction level of the company. Managerial implications is proposed with the help of theoretical study of e-marketing strategy 2P+2C+3S to enhance customer satisfaction of the company.

Keywords:

E-SERVQUAL model; customer satisfaction; customer experience; e-service quality; e-marketing strategy

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Information Technology, Its Impact on Society and Its Future

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Abstract

Information technology (IT) has become a vital and integral part of every business plan. From multi-national corporations who maintain mainframe systems and databases to small businesses that own a single computer, IT plays a role. The reasons for the omnipresent use of computer technology in business can best be determine.

As we are aware of Information Technology had its modern existence from late sixties of the last century when the Arpanet was introduced, funded by the department of defence of USA. After that the IT industry has come a long way to its current shape where it is playing a very dominant role in our every sphere of life. It has made revolutionary changes in information gathering and dissemination as well as in global communication. It is creating a virtually paperless work environment. Also we can now send a message very easily to anywhere in the world in seconds. From education point of view we can have a virtual class where the instructor could sit in any part of the world and his students scattered in all different parts of the world through video conference with presentation of study materials as well as question and answer sessions. A doctor now sitting in any part of the world could perform a surgery where the patient is lying in another part of the world. These simple examples show where we stand today compared to what it was half a century back. But as we know nothing in this world is purely good as everything has a dark side. In this paper we would discuss the merits and demerits of implementing IT globally and where we are heading to in future.

Keywords:

Information technology, Impact, Society, Future

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Determining the production of Hydrocarbon Compounds by Saprophytic Fungi Rhizopus oryzae using Corn Cobs as Cellulose Media

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Abstract

Saprophytic fungi belonging to the genus Rhizopus are able to degrade cellulosic biomass from corn cobs and synthesize volatile hydrocarbon compounds. This study sought to determine the production of hydrocarbon compounds by saprophytic fungi Rhizopus oryzae.These fungi could be used to produce biofuel from cellulosics without using heavy processes and large reserves that are considered to be environmental hazards. To do this, corn cobs were ground and mixed with yeast peptone glucose (YPG) broth in a 1:1 ratio. Rhizopus oryzae was cultured in the corn cob-YPG media for 14 days. The separated liquid sample was acquired using Buchner vacuum filtration and divided into Media Broth Phase and Ethyl Acetate Phase. The polar and non-polar components were separated using a separatory funnel using hexane and isobutanol/methanol as solvent. Results obtained from bomb calorimetry of polar and non-polar components of samples ranged from 26, 563 kJ/kg to 44, 521 kJ/kg with 38, 823 kJ/kg as average. The gas chromatography of compounds from Rhizopus cultures demonstrated the production of C10 to C32 hydrocarbons including n-tetradecane, n-hexadecane, and n-heptadecane. The hydrocarbon profile of R. oryzae contained a number of compounds normally associated with diesel fuel, kerosene, and heating oils. Therefore, this fungus could potentially be developed into a renewable biocatalyst for viable production of biofuel.

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Design optimization of non-overflow section of a concrete gravity dam

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Abstract

The ever increasing demand to lower the production costs due to increasing competition has prompted engineers to look for different methods of decision making such as Optimization. In this paper the design optimization of a non overflow section of a concrete gravity dam has been studied. In structural engineering an optimal design solution can be achieved by rigorous iterative process which requires huge computational efforts to obtain the best solution while satisfying the design constraints. To carry out the design optimization, the modeling and analysis of the dam has been carried out in FEM package ANSYS along with appropriate algorithms. An algorithmic optimization of the typical dam section model has been carried out parametrically considering the geometrical properties of dam as design variables (for fixed height and free board) to minimize the volume of concrete without compromising on loading and factor of safety requirements subjected to codal provisions. Reducing the weight of the dam is necessary both from the economical point of view and design point of view. The present work is concentrated on optimizing the non-overflow section of a concrete gravity dam by reducing its volume which is in direct proportion to its weight. All effective load combinations (as per IS: 6512-1984) where the dam is subjected to maximum loads under ideal operating conditions are considered for stress analysis and optimization. The volume of the dam section is reduced from 6342.59 m3 to 5711.50 m3 for the worst state of stresses occurring in the most effective load condition keeping the induced stresses within permissible limits. The optimization process reduced the weight of the dam by 9.95% with very low computational effort. The results of the optimization are presented and discussed in this paper. The optimization studies carried clearly indicates that the reduction in weight of the non-overflow section of a concrete gravity dam is possible without compromising on the factor of safety associated with its functioning under normal operating conditions.

Index Terms

Concrete gravity dam, Design optimization, Non-overflow section.

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Knowledge Discovery using Fuzzy Associative Subspace Ensemble Classification

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Abstract

An organization's most challenging professional quality is to manage workforce talents and to ensure right person for right jobs. This paper introduces a classifier algorithm called Fuzzy Associative Subspace Ensemble Classification (FASEC) for Workforce Leadership Prediction based on Fuzzy associative classification using ensemble technique. The conventional knowledge mining measures support and confidence is amplified with a new measure called skill utility factor (SUF) which plays a significant role in Workforce Leadership Prediction. Various approaches like association rule mining, fuzzy logic, utility mining, ensemble and high order sampling has been handled in the algorithm for increased prediction accuracy. Some of the distinct qualities of the algorithm FASEC are a) it mines more number of hidden but interesting frequent set than other existing algorithms which makes a great impact on decision making b) The attributes weight scheme has been used perceptively c) It uses Ensemble classification which has best accuracy and cost effectiveness compared to other traditional classifiers. The complete system has rightly used the appropriateness of the random subspace ensemble method, for fuzzy mining with enhanced high order sampling, by reducing the model process time and algorithmic cost. The system works well on real time data with increased attribute set. The comparative results show the algorithm's accuracy and durability.

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Implementation of Reconfigurable Transceiver Using of GNU Radio and HackRF One

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Abstract

As relaying on the past technology radio reception through hardware needs front end tuning which in turn internally changes the frequency of the capacitor. Thus the conventional radio can capture the required frequency by tuning manually. As the technology advances the wireless technology shown the light of cognition through which real time data transmission and reception are implemented using reconfigurable radio i,e Software Defined Radio (SDR) whose physical layer functions are mainly or fully defined by software. HackRFOne which is a software defined radio is tuned to the required radio frequency by employing GNU Radio Companion (GRC) and Gqrx (spectrum viewer) have been presented in this paper, where both GNU Radio and Gqrx are an open ended software. However, the Cognitive Radio have revealed that by varying the software, the hardware adjustment is possible only within a fraction of the time. However, this requires more knowledge on signal processing blocks, so that adjusting certain parameters like gain and frequency of filter can be made in the receiver side. The goal of this paper is to focus on the signal processing blocks which plays vital role in implementing Transmitter/Receiver for a reconfigurable wireless communication system.

Keywords

Cognitive Radio (CR),GNU Radio Companion (GRC), Gqrx(Spectrum Viewer) HackRFOne, Software Defined Radio .

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Predictive Analytics on the Performance in Prc Licensure Examinations per Region of State Universities and Colleges

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Abstract

The study is about deriving good pattern/trend output data from the obtained data set that can be used by decision makers and most especially by the government in addressing the problem of correct appropriation of funds in higher education of the Filipino people. The model being used was the Multilayer perceptron (mlp) in a supervised machine learning that created patterns for analysis. The predictive pattern produced will be the key foundation in decision making.

Keywords

Mlp, predictive pattern, good output data, model, foundation

Survey on Opportunistic Vehicular Routing Protocols

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Abstract

Vehicular ad-hoc network (VANET) is a subpart of mobile ad-hoc networks (MANET). In which there is a constrained of predefine roads. Vehicular communication is mostly used for safety and security purposes to avoid the traffic related issues and road accidents. It has a wide number of applications in automobile industries like Intelligent Transport System (ITS). This paper describes the survey on opportunistic routing (OR) techniques for delivering the message in communication very fast and overcome the end to end delay in message delivery.

Keywords

VANET, MANET, OR;

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Performance Evaluation of Algorithms for Increasing Coverage with Efficiency in WSN

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Abstract

In recent years, wireless sensor network (WSN) has been used for various purposes such as calamity reservation, farming, eco-friendly surveillance, and prediction. Coverage preservation and energy exhaustion are two most significant difficulties in wireless sensor networks. In this survey, a standard methodological examination technique is used based on the entire accumulation count of study papers out of a substantial gathering of study papers distributed in workshops, conferences, interviews, and journals. Our main aim is the examination of algorithms which gives a maximum range as well as performance in WSN.

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Applications of High Temperature Superconductors in Various Fields

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Abstract

The high-temperature copper oxide superconductors are of fundamental and enduring interest. They not only manifest superconducting transition temperatures inconceivable 15 years ago, but also exhibit many other properties apparently incompatible with conventional metal physics. The materials expand our notions of what is possible, and compel us to develop new experimental techniques and theoretical concepts. This article provides a perspective on recent developments and their implications for our understanding of interacting electrons in metals A short account is given of the characteristic properties of superconductors and the reasons for the importance of superconductivity in science and technology. The occurrence of the phenomenon in metals, alloys and chemical compounds is briefly discussed, with particular reference to those materials having the highest critical temperatures. The major part of the article is concerned with the applications of superconductivity in engineering, and attention is particularly devoted to materials for magnet construction, the various uses of superconducting magnets, and the other applications of superconductors such as power transmission cables, and transformers. Some forecasts are made regarding the probable developments in superconductivity in the next few years. The purpose of this paper is to assess the significance of high-temperature superconductors (HTS) accordingly, it examines the major present and potential applications of superconductors in seven different sectors: highenergy physics, electric power, transportation, industrial equipment, medicine, electronics/communications, and defense/space. OTA has made no attempt to carry out an independent analysis of the feasibility of using superconductors in various applications. Rather, this paper draws on numerous reviews published over the past several years. Nor is this discussion exhaustive; instead, the intent is to survey some of the noteworthy factors that will determine the potential for HTS in the different economic sectors cited above. In most applications, HTS competes with low-temperature superconductors (LTS) as well as with steadily improving no superconducting technologies; therefore, the prospects for LTS—a far more mature technology—are considered in parallel with those of HTS.Following the discussion of applications is a section on the paper for HTS that can be gleaned from nearly 80 years' experience with LTS. The paper concludes with a discussion of the significance of a higher critical transition temperature (TC) in the context of the broader requirements that must be met by any viable commercial technology.

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Survey on Various Techniques used in Building Intrusion Detection System

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Abstract
The most challenging issue facing network operators today is cyber-attacks identification due to an extensive quantity of susceptibilities in computer systems and creativity of attackers. NIDSs play a crucial role in defending computer networks. However, there are concerns regarding the feasibility and sustainability of current approaches when faced with the demands of modern networks. More particularly, these concerns relate to the expanding levels of required human interaction and the decreasing levels of disclosure conviction. In the research, a standard methodological analysis technique is used based on the entire accumulation of 15 research papers out of a substantial gathering of research papers distributed in workshops, symposiums, meetings, and journals.

Index Terms
deep learning, KDD, neural networks, network security, unsupervised learning etc.

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Packet streaming in Enhanced Software Defined Networking Architecture

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Abstract

A central controlling authority in the proposed framework is the Software Defined Networking (SDN) controller. The problems encountered in the Long Term Evolution (LTE) Architecture i.e., coupling of control and data planes is avoided with the application of SDN principles using OF mechanisms. Trivial signaling messages which are to be processed by the Mobility Management Entity (MoME), are avoided to traverse in the network. The OpenFlow mechanisms are employed in the architecture which is a control protocol and a concrete execution of SDN. It is a majorly used mechanism as one of the Southbound interfaces.

SDN controller is mainly responsible for granular controlling of the overall network by policy setting of the Internet Protocol (IP), flow control and local routing controller. Evolved Packet Core (EPC), which is situated with the SDN switches, avoids the data traffic usage. EPC is Mobile Internet Protocol (MIP) incepted for LTE core network, which supports a new requirement of networks to produce QoS for wireless broadband networks. It is very important for end-end IP access services, which can perform delivery of service among LTE. The SDN controller frames rules for data forwarding completely established on the basis of OpenFlow control protocol rules and managing the mobility and coordination amongst the different radio access technologies present in the Unified Radio Access Network (U-RAN).

The MoME, a core function of the control plane as labeled manages the mobility features of the users' availing the network. SDN controller solely manages all the OpenFlow switches that are connected to the CDN controller and the EPC. Two types of Gateway networks are realized in LTE core networks, which are termed as Serving Gateway (GW-S) and the Packet Data Network Gateway (GW-P) that act as intra and internetwork access solutions respectively. They are responsible for establishing the terminals of the tunnels which lays a tunnel between the end points for packet transfer (within and outside of the network). The IP allocation for the UE and establishing the sessions are also dealt by the gateway servers. The control modules of the two gateway networks are deliberated as OF switches which are utilized to process the GTP packets. The eNodeB's are programmable and are under the regulation of SDN Server.

Different types of Handover schemes are discussed and the uplink and downlink packet streaming between the network entities in the proposed framework is detailed in five different phases, User Registration, User Initiated Service Request, Network Initiated Service Request, Handover with X2 support (Intra-Switch handover), Handover with S1 support (Inter-Switch handover). A comparative analysis of Signaling load and Signaling cost between the conventional LTE and the proposed framework is performed and the enhanced SDN architecture proves to be more efficient.

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On ψ-Public Tripled Coincidence Fixed Point Theorems without continuity of Mappings having Public Mixed Monotone Property

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Abstract

In this paper, we introduce the pubic fixed point, coincidence point pubic mixed monotone property and public commute. Also, we proved the existence and uniqueness of public coincidence fixed point and public fixed point for mappings having public mixed monotone property in partially ordered metric space without the conditions of continuity and public commute.

Index Terms

Tripled fixed point, tripled coincidence point , mixed g- monotone property