



ICACA-18

International Conference on Advances in Computing Applications

26TH - 27TH February 2018

SRINAGAR,
UTTARAKHAND

Organized by

National Institute of Technology (NIT), Uttarakhand
and

Institute For Engineering Research and Publication (IFERP)

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Srinagar(Garhwal), Uttarakhand

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Director Message



Prof. Shyam Lal Soni
Director
National Institute of Technology, Uttarakhand
Email: shyamlalsoni@gmail.com

Message:

It is a great pleasure and privilege that **International Conference on Advances in Computing applications (ICACA-2018)** is organized by **Department of Computer Science and Engineering, National Institute of Technology, Uttarakhand, India** in association with **Institute For Engineering research Publication** during Feb. 26 – 27, 2018 to support latest research happenings in artificial intelligence and computing systems.

Biography:

Prof. S. L. Soni has been a Professor in Department of Mechanical Engineering at Malviya National Institute of Technology, Jaipur for more than 37 years as a faculty. He has recently joined National Institute of Technology, Uttarakhand as Director on 07-11-2017. Before his current assignment, he was Dean (Research and Consultancy) at MNIT, Jaipur in which he was involved in (i) Framing rules for industrial research and consultancy (ii) Facilitating the project investigators in procuring equipments necessary for their projects (iii) Providing guidance for project submission to the funding agencies (iv) Brand building of the Institute and (v) Handling research and consultancy projects worth ₹58.18 crores and projects ₹25.94 crores in pipe line.

He was also the Faculty Coordinator for Training and Placement at MNIT Jaipur. During his tenure, highest placement was recorded and with highest package. He was also involved in framing the policies for Training/Internship and placements of the students within and outside India, coordinating and organizing practical training of students inviting various reputed Organizations to the Campus for internship and recruitment of the students and for collaborative projects/research. Arranging various soft skill development workshops, career counseling sessions/programmers, lectures and maintaining the database of the students.

He also headed the Mechanical Engineering Department for more than three and half years. It involved strategic planning, financial management of the department, good coordination among the faculty members, technical and non-procurement of equipment, conduction of experiments etc.

Besides these, Prof. Soni has also served as Registrar, Chief Vigilance Officer of MNIT Jaipur. He has also served as the Chairperson of Golden Jubilee Year Celebrations of MNIT Jaipur where he organized 700 different activities during the year. He also prepared a unique calendar for the events. Hon'ble president of India, Minister of HRM (GOI), Minister of Renewable Energy (GOI), Governor of Rajasthan, and chief Minister of Rajasthan were some of the dignitaries to visit the institute during the yearlong celebrations.

He has guided 6 researchers leading to award of PhD and 10 more are under progress. He has published more than 63 research papers in Journals and conferences, completed projects of Rs. 54 lakhs and one DST project recently awarded for Rs. 37.8 Lacs. He has written 3 books and 4 chapters.

Prof. Shyam Lal Soni
Patron & Director.

From Director's Desk



Rudra Bhanu Satpathy.,

Director,

Institute For Engineering Research and Publication.

On behalf of *Institute For Engineering Research and Publications (IFERP)* and in association with *National Institute of Technology Uttarakhand, Srinagar(Garhwal), Uttarakhand*. I am delighted to welcome all the delegates and participants around the globe to *National Institute of Technology Uttarakhand* for the “*International Conference on Advances in Computing Applications (ICACA-18)*” Which will take place from *26th -27th February '18*

Transforming the importance of Engineering, the theme of this conference is “*International Conference on Advances in Computing Applications (ICACA-18)*”

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator (**IFERP & NIT**) and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at *Srinagar(Garhwal), Uttarakhand*.

Sincerely,



Rudra Bhanu Satpathy,

Preface

The “*International Conference on Advances in Computing Applications*” is being organized by *National Institute of Technology Uttarakhand*, Srinagar(Garhwal), Uttarakhand in association with *IFERP-Institute for Engineering Research and Publications* on the 26th - 27th February, 2018.

National Institute of Technology Uttarakhand has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the Historical city of pauni garhwal in Uttarakhand.

The “*International Conference on Advances in Computing Applications*” was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of “*Advances in Computing Applications*” which were given international values by *Institute for Engineering Research and Publication (IFERP)*.

The International Conference attracted over 110 submissions. Through rigorous peer reviews 60 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

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

ICACA-18

*International Conference on
Advances in Computing
Applications*

Keynote
Speakers



Prof. Lalit Kumar Awasthi.,

Director
Dr B R Ambedkar National Institute of Technology
Jalandhar (Punjab), India

Founder Director

Responsible for overall planning, organizing, and execution of all functions related to establishment of a new Government Engineering College, Atal Bihari Vajpayee Govt. Institute of Engineering and Technology, Pragtinagar, INDIA. This includes recruitment of Faculty and Staff, Planning of construction work and its execution, Planning and establishment of laboratories and mentoring of new faculty. Also, I am engaged in designing and setting up of workshop, play facilities, hostels, auditorium, etc. for students. Founder Faculty of Computer Science and Engineering, NIT Hamirpur I was the first faculty member to join Computer Science and Engineering Department at Regional Engineering College (Now National Institute of Engineering and Technology) Hamirpur, Himachal Pradesh, India. I have been an active faculty member at CSED, NIT Hamirpur and have contributed in various positions for 25 years.

I had planned, designed and implemented the B. Tech. CSE programme at NIT, Hamirpur alongwith laboratories, buildings of CSED and Computer Centre. I am happy the way the department has progressed over the years and the alumni of the department are at good positions in India & abroad. I had worked as Head of CSE Department & Computer Centre and Dean (Students and Alumni) for quite good number of years and the experience of interacting with students, faculty members and the various academic and administrative heads of the institution has been wonderful. The only key to success is hard work, positive attitude and exploring your potential to the fullest.

I have been lucky to get good mentors in my life who has trained me to get best out of the life. I would definitely like to contribute for the betterment of student community directly or indirectly. I would definitely like to guide, mentor and help them. My interests are Academic Administration, Faculty mentoring, Research guidance in Mobile computing or Sensor Networks and consultancy in related areas.

Research in Computer Engineering, Educational Management and Educational Leadership. Their most recent publication is 'A critical survey of live virtual machine migration techniques.'

Skills and Expertise

- Information and Communication Technology
- Computer Networking
- Information Technology
- Cloud Computing
- Network Security
- Security
- Information Security
- Routing

- IT Security
- Wireless Sensor Network
- Wireless Computing
- Cryptography
- Network Administration
- Encryption
- IT Infrastructure
- Computer Technology

Experience

➤ **Director**

October 2016 - Present
 Dr B R Ambedkar National Institute of Technology
 Jalandhar (Punjab), India
 Academic and Administrative Head of the Institute

➤ **Director**

April 2016 - October 2016 (7 months)
 Founder Director
 Responsible for planning and execution of all functions related to establishment of new Govt.
 Engineering College at Jeori, Rampur

➤ **Director/Principal**

June 2012 - April 2016 (3 years 11 months)
 Principal academic and executive officer of the Institute
 Administration of the Institute

➤ **Professor and Head, Computer Centre**

February 2009 - May 2012 (3 years 4 months)
 -Teaching
 -Research
 -Consultancy
 -Expert for selections in Computer Science and Engineering
 -Expert for NBA
 -Consultant for Automation of Academic Institutions

➤ **Dean (Students & Alumni Affairs)**

February 2008 - February 2011 (3 years 1 month)
 Teaching and Research

➤ **Professor**

July 2003 - August 2010 (7 years 2 months)
 Teaching and Research in Computer Science and Engineering field

Education

Indian Institute of Technology, Roorkee: Ph. D., Computer Technology, 1999 - 2002

Indian Institute of Technology, Delhi: M. Tech., Computer Science and Technology, 1992 - 1993



Dr. Narendra S. Chaudhari.,

Director - VNIT, Nagpur
Mentor Director - IIIT, Nagpur

BIOGRAPHY

Dr. Narendra S. Chaudhari is currently Director of Visvesvaraya National Institute of Technology (VNIT) Nagpur (M.S.) since June 2013. He had been working with Maulana Azad National Institute of Technology (MANIT), Bhopal as a Director from March, 2016 to May, 2017 and he has also been with Indian Institute of Technology, Indore since Aug 2009 as a Professor of Computer Science and Engineering. Since Sept 2010 to June 2013, he was Dean - Research and Development (Dean - R&D), IIT Indore. Since 2001 to July 2009, he was with the School of Computer Engineering, Nanyang Technological University (NTU), Singapore. From 1990 to 2001, he was Professor of Computer Science in M.Sc. DRDO Program, Ministry of Defense (Govt. of India) at Devi Ahilya University, Indore and from 1988 to 1990, he was a *Reader* in M.Sc. DRDO Program, Ministry of Defense (Govt. of India) at Devi Ahilya University, Indore. Before 1988, he was with Department of Computer Science and Engineering, IIT, Mumbai, as a Senior Software Engineer.

Narendra was part of six-member academic delegation of State Visit of Honorable President of India to Sweden and Belarus for the duration of 31 May-04th June 2015. Further, He was also part of academic delegation of State Visit of Honorable President of India to People's Republic of China for the duration of 24 May-27 May 2016. He was part of FICCI's higher education delegation to Germany, France and Netherlands for the duration of 22-27 June 2015. He represented VNIT, Nagpur in the first BRICS-Network University (NU) Conference at Yekaterinberg, Russia held on 06-09 April, 2016, where he signed *Protocol Agreement* on behalf of VNIT, Nagpur for being part of BRICS-NU.

Narendra has shouldered many senior level administrative positions in universities in India as well as abroad. A few notable assignments include:

- i. **Director, Visvesvaraya National Institute of Technology (VNIT) Nagpur (M.S.) (current) since June 2013 till date**
- ii. **Director, Maulana Azad National Institute of Technology (MANIT), Bhopal since March, 2016 to May, 2017**
- iii. **Chairman – Central Regional Committee, All India Council for Technical Education (AICTE), MHRD, Govt of India, since March 2017 till date**
- iv. **Chairman – Board of Governors, Government Engineering College, Chandrapur (M.S.) India (current) since Jan. 2016 till date**
- v. **Mentor Director, Indian Institute of Information Technology (IIIT), Nagpur (current) since March, 2016 till date**
- vi. **Mentor Director, Government Engineering College (GEC), Nagpur (current) since June, 2016 till date**
- vii. **Co-Convenor and Secretary, Standing Committee of Council of NITs: 14th July 2016 – till date**
- viii. **Member - Board of Governors of IIT Indore**
- ix. **Member - Executive Council, Devi Ahilya University, Indore**
- x. **Coordinator - International Exchange Program, Nanyang Technological University, Singapore**
- xi. **Deputy Director - GameLAB, Nanyang Technological University, Singapore**
- xii. **Dean - Faculty of Engineering Sciences, Devi Ahilya University, Indore**
- xiii. **Dean - Research and Development, Indian Institute of Technology (IIT) Indore**

Narendra completed his undergraduate, graduate, and doctoral studies at Indian Institute of Technology (IIT), Mumbai, India, in 1981, 1983, and 1988 respectively. After his Bachelor's (B.Tech.) degree (First Class with distinction) in Electrical Engg., he had the exposure to industrial experience in the areas of electronics controllers (in Larson and Toubro, Mumbai) as well as software development (in Tata Consultancy Services, Mumbai). Since 1988, he was involved in graduate level training for the defense scientists (Ministry of Defense, Govt. of India) in the area of Computer Science till 1999. Subsequently, he was a visiting faculty member in Southern Cross University, NSW (Australia), and on another visiting assignment with Freie Universitat, Berlin (Germany) in 2000.

Narendra is an established researcher in Computer Science and Engineering, with significant contributions in engineering education as institute developer, and to professional societies. As a Dean, Faculty of Engineering Sciences, Devi Ahilya Vishwavidyalaya (DAVV), Indore, in 1995-1998, he initiated Institute of Engineering and Technology that is now leading Engineering institute in central India. In VNIT Nagpur, he promoted institute-wide research with multi-disciplinary projects, student mentorship program, and involvement of alumni for entrepreneurship amongst students. He initiated innovation centre at VNIT Nagpur and provided leadership for product development that resulted in patents and technology transfer for engineering products. He successfully revived Computer Society of India's Indore chapter in 2010. He is currently providing leadership as *Chairman* to (i) CSI Nagpur chapter and (ii) IEEE M.P. Subsection.

His significant research work contributions are in the areas of network security and mobile computing, game AI, novel neural network models like binary neural nets and bidirectional nets, context free grammar parsing, optimization, parallel algorithms, and graph isomorphism problem. Some of his important contributions are: (i) Authentication Protocols and Security Mechanisms for Cellular Networks, (ii) generalization of notion of alignment in bioinformatics sequences to fuzzy similarity and its usage for identification of Context Free structure in languages, (iii) rerouting strategies in Multi-Protocol Label Switching (MPLS) networks, (iv) applications of soft-computing techniques like genetic algorithms for cutting stock problems, and for credit risk estimation. He has delivered invited talks and presented his research results in several countries like America, Australia, Canada, Germany, Hungary, Japan, United Kingdom, etc.

He has supervised more than twenty-five doctoral and eighty masters students. Narendra has successfully completed 08 R&D Projects funded by DST, UGC, AICTE, MHRD, etc. He has been a reviewer for DST and UGC projects. He has also contributed collaborative Research Work on other pilot projects on Computing techniques and Industry Interaction funded by ST-Engg, DSTA and A*STAR, etc. in Singapore.

Narendra has been keynote speaker in many conferences in the areas of Soft-Computing, Game-AI, Data Management, and Information Technology. A few institutes where he has given talks on his research includes Massachusetts Institute of Technology (MIT) USA, Nagoya Institute of Technology (NIT), Nagoya, Japan, Manchester Metropolitan University (MMU), Manchester (U.K.), Beijing Normal University (BNU), Beijing (P.R. China), etc. He has more than 300 publications in top quality international journals and conferences. He has delivered prestigious M.S. Ramanujam memorial lecture organised by *The Institution of Engineers, India* in the area of Computer Engineering. He has been referee and reviewer for a number of premier conferences and journals including IEEE Transactions, Neurocomputing, etc.

Narendra is *Fellow* and recipient of *Eminent Engineer award* (Computer Engineering) the Institution of Engineers, India (IE-India), recipient of *Amity Academic Excellence Award* (27 Feb. 2015), *Bharat Vidya Shiromani Award* (with gold medal) (18 Dec. 2015). Narendra is felicitated as *Best Teacher in Engineering* in National Education Leadership Awards (instituted by Lokmat Group) ceremony at Mumbai on 24th July, 2015. Narendra is recipient of *Lifetime Achievement Award* by National Institute of Cleanliness Education and Research (NICER) (A division of Afro-Asian-American Chamber of Commerce, Occupational Research and Development – ACCORD), New Delhi on 21st March, 2016. Narendra is *Fellow* of the Institution of Electronics and Telecommunication Engineers (IETE) (India), *Senior member* of Computer Society of India, *Senior Member* of IEEE, USA, *Member* of Indian Mathematical Society (IMS), *Member* of Cryptology Research Society of India (CRSI), and member of many other professional societies. Narendra is currently *Chairman*, IEEE-MP Subsection, and Computer Society of India Nagpur Chapter.



Prof. Ramesh Kumar Agrawal.,

Professor
School of Computer & Systems Sciences
Jawaharlal Nehru University. New Mehrauli Road,
New Delhi 11006

BIOGRAPHY

Qualifications:

M. Tech, Indian Institute of Technology, Delhi
Ph. D, University of Delhi, Delhi

Areas of Interest/Specialization:

Data Mining, Pattern Recognition and Security

Experience:

20 years

Best Peer Reviewed Publications (upto 5):

- 1) Manju Bala, R. K. Agrawal, Optimal Decision Tree Based Multi-class Support Vector Machine, Informatica 35,197-209 (2011)
- 2) R. K. Agrawal, Rajni Bala, Incremental Bayesian classification for multivariate normal distribution data, Pattern Recognition Letters 29(13): 1873-1876 (2008)
- 3) R. K. Agrawal, Karmeshu, Perturbation scheme for online learning of features: Incremental principal component analysis, Pattern Recognition 41(5): 1452-1460 (2008)
- 4) R. K. Agrawal, V. S. Varma, Improved Hill determinant method for the solution of quantum anharmonic oscillator, Physical Review A 49, 5089 (1994)
- 5) R. K. Agrawal, V. S. Varma, Rational potential using a modified Hill determinant, Physical Review A 48 1921 (1993)

Recent Peer Reviewed Journals/Books (upto 3):

- 1) Ratnadip Adhikari, R. K. Agrawal, Forecasting Strong Seasonal Time Series with Artificial Neural Networks, Journal of scientific and industrial research, 71(10), 657-666 (2012)
- 2) Gaurav Rajput, R. K. Agrawal, Namita Aggarwal, Performance Evaluation of Exponential Discriminant Analysis with Feature Selection for Steganalysis, Defence Science Journal, Vol. 62, No. 1,19-24, (2012)
- 2 3) Rajni Bala, R. K. Agrawal, Clustering in conjunction with wrapper approach to select discriminatory genes for microarray dataset classification, Computing and Informatics, Computing and Informatics 31(5): 921-938 (2012)



Prof. Mahesh Chandra Govil .,

Director - NIT Sikkim

Research Supervised:

Namita Mittal on **Personalised Information Retrieval using User Profile and Collaborative Filtering** Year - 2012 (Completed)

Dinesh Goplani on **Aspect Calculi: Formal Theory Of Aspect-Oriented Programming Languages** Year - 2012 (Completed)

Mukesh Gupta on **Vulnerability Analysis** Year - 2013 (Ongoing)

Vimal Kumar Soni on **Distributed Representation of Words through Deep Learning** Year - 2014 (Ongoing)

Anita Chaudhary on **Cloud Computing** Year - 2014 (Ongoing)

Kunwar Pal on **Computer Networks & Live Streaming** Year - 2014 (Ongoing)

Rajat Goel on **Secuirty & SDLC** Year - 2013 (Ongoing)

Mohit Kumar Gokhroo on **Fault Tolerance in Cloud** Year - 2013 (Ongoing)

Vinesh Jain on **IoT** Year - 2015 (Ongoing)

Ved Mitra on **Embedded Systems** Year - 2014 (Ongoing)

Ritu Sharma on **A Topic in Natural Language Processing** Year - 2015 (Ongoing)

Anand Kumar Mishra on **Cloud Forensics** Year - 2013 (Ongoing)

Gajendra Singh on **Under Water Acoustic Sensor Network** Year - 2014 (Ongoing)

Journal Publication Details:

M. C. Govil, M. M. Sharma, J. K. Deegwal, A. Kumar , "Compact planar monopole UWB antenna with quadruple band-notched characteristics" , **Progress In Electromagnetics Research C** Volume :47 / 29-36 / 2014

M. M. Agarwal, M. C. Govil and A. K. Jhankal , "Analysis of energy consumption in mobile ad-hoc routing protocols through route recovery and maintenance mechanisms" , **International Transactions in Mathematical Sciences and Computers**, Volume :5 / 121-130 / 2012

P. Dadhich and M. C. Govil , "Decentralized reputation system for mobile agent security" , **Journal of Rajasthan Academy of Physical Sciences** Volume :11 / 19-27 / 2012

R. Rastogi, D. S. Chauhan, and M. C. Govil , "Disjoint paths multi-stage interconnection networks stability problem" , **International Journal of Computer Science Issues (IJCSI)** Volume :8 / 260-271 / 2011

R. Rastogi, D. S. Chauhan and M. C. Govil , "On stability problems of Omega and 3-disjoint paths Omega multi-stage interconnection networks" , **International Journal of Computer Science Issues (IJCSI)** Volume :8 / 66-76 / 2011

N. Mittal, R. Nayak, M. C. Govil and K. C. Jain , "Personalised search- a hybrid approach for web information retrieval and its evaluation" , **International Journal of Knowledge and Web Intelligence** Volume :2 / 119-137 / 2011

P. Dadhich, K. Dutta and M. Govil , "Trust enhanced authorization for distributed systems" , **International Journal of Scientific and Engineering Research** Volume :2 / 40 / 2011

P. Gupta, P. Bari and M. Govil , "Spring Web MVC Framework for rapid open source J2EE application development: a case study" , **International Journal of Engineering Science and Technology (IJEST)** Volume :2 / 1684-1689 / 2010

P. Dadhich, K. Dutta and M. Govil , "Security issues in mobile agents" , **International Journal of Computer Applications** Volume :11 / 1-7 / 2010

P. Gupta and M. Govil , "MVC design pattern for the multi framework distributed applications using XML, spring and struts framework" , **International Journal of Computer Science & Engineering** Volume :2 / 1047-1051 / 2010

G. Singh, M. C. Govil, and M. Kejriwal , "Real time communicative acts: Introduction and implementation" , **PCTE Journal of Computer Sciences** Volume :2 / 60-66 / 2008

M. C. Govil, U. Pandel, A. Bose and V. Shashank , "Design of route planner for i-Garbage system" , **International Journal of Information and Computing Science** Volume :1 / - / 2006

K. Sundrani, L. K. Awasthi and M. C. Govil , "A novel scheme for location management in ad-hoc networks" , **ACCST Research Journal** Volume :3 / 199-204 / 2005

P. Sharma, L. K. Awasthi, R. K. Sharma and M. C. Govil , "Region growing approach for image segmentation" , **International Journal of Information and Computing Science** Volume :8 / 1-7 / 2005

M. Govil, U. Pandel, A. Bose and V. Shashank , "Design of ecofriendly waste management system" , **Nature, Environment and Pollution Technology** Volume :4 / 551-554 / 2005

M. C. Govil, L. Kumar, A. Bose and V. Shashank , "Design of online garbage management system" **ACCST Research Journal** , **ACCST Research Journal** Volume :3 / 56-60 / 2005

M. C. Govil , "A new schedulability test algorithm for real-time systems" , **ACCST Research Journal** Volume :2 / 216-220 / 2004

ICACA-18

International Conference on Advances in Computing Applications

Srinagar (Garhwal), Uttarakhand, 26th-27th February, 2018

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NIT Uttarakhand

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Prof. L. K. Awasthi
Director, NIT Jalandhar

Prof. N. S. Chaudhary
Director, VNIT Nagpur

Prof. R. K. Agrawal
JNU, New Delhi

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Professor & Head, Computer Science and Engineering, Jaypee Institute of Information Technology.

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26th - 27th February, 2018

ABSTRACTS

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International Conference on Advances in Computing Applications

Srinagar(Garhwal), Uttarakhand, 26th - 27th February, 2018

Placement of FACTS Device Using Soft Computing Technique: A Review

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Abstract:--

In recent year, power demand has increased substantially and hence expansion of power generation and transmission system has been severally limited due to limited resources and environmental restriction. From the secure operation point of view, power system stability has been recognized as an important role. After physical disturbances the system regain a state of operating equilibrium is called as steady state stability. This problem can overcome by use of Flexible AC Transmission System (FACTS) device. Thyristor Controlled Series Capacitor (TCSC) and Static VAR Compensator (SVC) FACTS device will be use here. But proper placement of FACTS device is big challenge, this challenge can be overcome by use of sensitivity indices analysis method and the priority is decided with the help of soft computing technique. The soft computing technique use here is Fuzzy logic to decide priority. All the study will be carried out on electrical IEEE-14 bus system and software used is MATLAB.

Keywords:--

soft computing technique, TCSC, SVC, FACTS, Power system, sensitivity indices, fuzzy logic.

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A Review on Load Flow Analysis of Ring Main System

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Abstract:--

Load flow analysis of the complex power system is very much essential for operation, planning and sharing of power to the electrical power utilities and power engineers. In an interconnected Ring mains system, the bus voltages and complex power comprising of active and reactive components have to be assessed. Various methods are available to evaluate the system under normal and abnormal conditions. In this paper, a review of various methods available and the recent advancements in the techniques of load flow analysis has been made and presented. In particular iterative methods has been proposed to be applied to 132 KV Nagpur Ring Main System with the data of seven bus system. The overview of the performance of said system to be tested in MATLAB Simulink environment for all the proposed methods of load flow in normal and abnormal conditions shall be presented in further work.

Keywords:--

Load Flow Studies, Newton-Raphson method, Gauss-Seidal method, Fast Decoupled method, Fuzzy logic, Artificial Neural Network.

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Using Api's to display information in AR headsets.

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Abstract:--

Augmented Reality is a new and emerging technology and many research and development is undergoing on it. Recent advancements in recognition of objects and characters present in an image or video have also come to an accuracy level which can be classified as reliable[1]. In this paper I propose an idea of implementation of different API's to gather details about object present in the view. These objects may be a vehicle, buildings, book or a person. Whole process is broken down into 3 steps, pre-processing, object recognition and information gathering. Preprocessing is done to manipulate the image to help in object recognition such as changing the perspective or crop ,object recognition is sending the image to API servers to recognise the object present in the view, and information gathering is to use the details about an object to find more details about it. For example if there is a car in the view, pre-processing will modify the image, object recognition process will gather few details about it like make and model and then this information can be sent to another API to gather complete details about it[2].

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A model based scheduling approach for selection of Real Time Scheduling Algorithm on basis of Different Parameters

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Abstract:--

In Modern days, real time system plays an important role in our modern and digital society. The success of any real time application is totally depend upon the selection of optimal scheduling algorithm. In real time application every task should have the nature of deadlines and time when they arrived, on the basis of these parameters we observe the response time of different scheduling algorithm then we select the optimal algorithm for a particular application. So in this paper our aim is to reduce the complexity of real time system researcher for selection of scheduling algorithm for a particular application. This model based approach is an extent the state of any real time system in the area of scheduling. This approach works in any uniprocessor system.

Keywords:--

Hard RTS, Deadline, WCET.

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Virtual Machine Live Migration Procedures in Cloud Computing Environment

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Abstract:--

Cloud computing is where information stockpiling, figuring assets got to and driven by virtualization innovation. Late advancements in virtualization and correspondence innovations have changed the way server farms are outlined and worked by giving new devices to better sharing and control of server farm assets. Virtual machine (VM) relocation is a strategy that backings cloud specialist organizations to effectively oversee cloud assets and in this way killing the need of human supervision all things considered. VM is additionally an intense administration strategy that enables server farm administrators to adjust the arrangement of VMs with a specific end goal to better fulfill execution targets, enhance asset use and correspondence area, accomplish adaptation to internal failure, and encourage framework upkeep exercises. In spite of these potential advantages, VM relocation additionally postures new necessities on the outline of the hidden correspondence framework, for example, tending to and transfer speed prerequisites to help VM portability. Further, with a specific end goal to devise productive VM movement conspire, considering relocation costs, including correspondence cost, benefit interruption, and administration overhead are the principle challenges and vital to legitimize the advantages of the VM movement. This paper displays a determined review on relocation of Virtual machines (VM) in cloud computing and proposes a productive calculation for live relocation in virtual machine. Aforesaid challenges have also been analyzed in the data centre environment.

Keywords:--

Cloud Computing, Virtual Machine, Virtual Machine Migration, Virtualization

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A measure of Temporal Contextual Information on Trust based Recommender Systems

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Abstract:--

In an era of information age, recommender system helps users to make effective decision. Collaborative filtering is one of the techniques to provide personalized recommendation to users. Collaborative filtering based recommender technique provide recommendation by aggregating ratings from similar users to predict ratings for an active user (who wants recommendation). Similarity have a greater impact because it act as a criterion to Identify a group of similar users whose ratings will be merged to generate recommendation for new item for an active user. However, there are a lot of issues in Collaborative filtering for e.g. data sparsity and cold start, which can be removed by incorporating trust information. We propose a methodology to include temporal context information in providing accurate rating prediction along with Trust matrix and also propose a framework to analyze the performance of Trust based recommender algorithms on FilmTrust dataset which include temporal context information.

Keywords:--

Collaborative filtering, Recommender Systems.

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Automation of Building Extraction from Satellite Imagery Using Line Segment Detector

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Akhileshwar Pandey., Assistant Professor ,Govt. Engg college Bharatpur Rajasthan.

Abstract:--

This paper focuses on an automatic algorithm for fast building boundary extraction from satellite imagery and It presents an experimental comparison of bilateral filter (BF) and adaptive bilateral filter (ABF) . The study and experimental result proves that outcomes of ABF is much better than outcomes of BF. ABF produce more promising result than BF.Old and conventional building boundary extraction models are very complex and time-consuming. The proposed procedure of building boundary extraction consists of three main stages: (1)edge-preserving and smoothing by using adaptive bilateral filter, (2)detection of line segment using ED Line algorithm, (3)identification of polygonal building boundary by using perceptual grouping technique .Our proposed algorithm is tested on HR(high resolution) QuickBird satellite images and obtained results are promising and nearly real-time. Hence the experimental results are useful enough with overall accuracy of 88.24%, which is accurate enough for further image understanding building boundary detection and identification of target in real time environment and can contribute to solve the problem of identification of unauthorized and illegal building construction on its early stage.

Keywords ::--

QuickBird satellite imagery, Adaptive bilateral filter(ABF) , bilateral filter , high resolution satellite image, Histogram equalization, ED Line Detector algorithm, Building boundary extraction.

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DGA Based Incipient Fault Diagnosis of Transformer Using AI Technique

Ms. Ashwini D. Vajirabadkar., Student M-tech (IPS), DMIETR, Wardha, India.

Prof. Sandip M. Apte., Assistant Professor, DMIETR, Wardha, India.

Abstract:--

In this paper we focus on a Smart Fault Diagnostic Approach (SFDA) based on the integration among the output results of recognized dissolved gas analysis (DGA) techniques. These techniques are Dornenburg method, Electro-technical Commission standard (IEC) Code, the Central Electricity Generating Board (CEGB) Code based on Rogers' four ratios, Rogers method given in IEEE-C57 standard, and the Duval triangle. The artificial intelligence model will be constructed to monitor the transformer fault conditions .

The fault decision of AI model will supply the proposed integrated SFDA. The integration between these DGA approaches will not only improve the fault condition monitoring of the transformers but also overcome the individual weakness and the differences between the above methods. Toward a better diagnostic scheme, a new SFDA will be developed based on the integration of the most three appropriate DGA methods.

Key words:--

DGA(dissolved gas analysis)

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Advancement of BLE Supported Healthcare System With Cloudlet

Atrayee Gupta., Department of Computer Science and Engineering, Jadavpur University, Kolkata, India.

Nandini Mukherjee ., Department of Computer Science and Engineering, Jadavpur University, Kolkata, India.

Abstract:--

Previously, we defined Predictor virtual sensor as a precognitive sensor that can be utilized to track events in priority, which is otherwise impossible for resource constrained physical sensor. In this paper, we explain how to embed intelligence with Bluetooth Low Energy supported health sensors, such as smart bands, using a PaaS based cloudlet architecture and Predictor virtual sensor. Here, we provide results using graphical analysis and mathematical models on case studies for precognition, which can be used for other kinds of sensors as well.

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A New Approach to Fuzzy Bitopological Space via γ -Open Sets

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Baby Bhattacharya., Assistant Professor, Department of Mathematics, NIT Agartala, Agartala, Tripura

Abstract:--

B. C. Tripathy and S. Debnath [B. C. Tripathy, S. Debnath, γ -Open Sets and γ -Continuous Mappings in Fuzzy Bitopological Spaces, J. of Intelligence and Fuzzy Systems, 24, 631-635 (2013)] first introduced the concept of (i,j) fuzzy γ -open set in a fuzzy bitopological space to show that the collection of all these sets forms a fuzzy topology and also studied fuzzy pairwise γ -continuity. In this present treatise, we redefine this set as fuzzy (i,j) γ -open set with the help of fuzzy (i,j) preopen set to show that it is completely independent from fuzzy (i,j) open set. Moreover, we introduce fuzzy (i,j) γ -generalized closed set as a generalization of fuzzy (i,j) closed set and then we establish various properties and characterizations along with interrelationship among them. Also, we show an important result which states that though every fuzzy (i,j) closed set is a fuzzy (i,j) generalized closed set and fuzzy (i,j) γ -generalized closed set but fuzzy (i,j) generalized closed set and fuzzy (i,j) γ -generalized closed set are totally independent of each other. Furthermore, we introduce the notion of (i,j) fuzzy continuous function, (i,j) γ -continuous function, (i,j) γ -gf continuous function and (i,j) γ -gf continuous function in a fuzzy bitopological space and study those functions with various properties and interrelationships. Lastly, we define a new type of closure operator and prove certain results based on this conception.

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Scope of Artificial Intelligence Techniques for Exhaust Emission Prediction of CI Engines and Renewable Energy Applications

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Abstract:--

Increasing demand for limited natural resources is leading to a situation of global energy crisis. Energy consumption patterns have to be changed in order to face the energy crisis and more focus has to be brought on utilizing the renewable energy resources. Major challenges faced in the implementation of renewable energy resources include development of technology with ensured commercial viability and awareness on environmental concerns. Exhaust emissions from the diesel engines are found to be toxic and carcinogenic in nature. Artificial intelligence techniques can be applied as an effective method for attaining the future goals of renewable energy and also for the prediction of exhaust emission characteristics from compression ignition engines. Artificial neural Network is a proven technique in modelling of nitrate and soot emissions from the diesel engines and acts as an alternative for real time experimentation which is time consuming and expensive. In this paper a detailed study has been carried out on the application of single and hybrid artificial intelligence approaches in the research and development of renewable energy resources. Also the effectiveness of Artificial Neural Network (ANN) technique in the prediction of diesel engine exhaust emissions has been reviewed.

Keywords:--

Artificial Intelligence, Emission, Renewable Energy, Soot

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Sentiment Analysis on Twitter Data Using Machine Learning Algorithms in Python

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R. Darsini., M.Sc. Software Systems, Department of Computing, Coimbatore Institute of Technology, Coimbatore .

Dr. M. Sujithra., Assistant Professor, Department of Computing, Coimbatore Institute of Technology, Coimbatore.

Abstract:--

With the rise of social networking epoch and its growth, Internet has become a promising platform for online learning, exchanging ideas and sharing opinions. Social media contain huge amount of the sentiment data in the form of tweets, blogs, and updates on the status, posts, etc. In this paper, the most popular microblogging platform twitter is used. Twitter sentiment analysis is an application of sentiment analysis on data from Twitter (tweets), to extract user's opinions and sentiments. The main goal is to explore how text analysis techniques can be used to dig into some of the data in a series of posts focusing on different trends of tweets languages, tweets volumes on twitter. Experimental evaluations show that the proposed machine learning classifiers are efficient and performs better in terms of accuracy and time. The proposed algorithm is implemented in python.

Keywords:--

Machine Learning, Sentiment Analysis, Data preprocessing, classifiers, Python

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Performance Analysis of First Level Cache Memory Replacement Policies in Multicore Systems

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Sanjay Kumar., School of Study in Computer science & IT

Abstract:--

Nowadays, processing speed is one of the most important performance criteria of modern multicore processors. For achieving higher processing speed of processor various components are used, in which cache is one of them. As modern processors include multiple levels of caches and as cache associativity increases, it is important to revisit the effectiveness of common cache replacement policies. In this paper we have analysed the impact of different replacement policies such as LRU (Least Recently Used), FIFO (First In First Out), RANDOM, DIP (Dynamic Insertion Policy), PLRU-t (Pseudo Least Recently Used tree-based). We have used SimpleScalar as a simulation tool. We have taken the problem of matrix multiplication of different size 10 x 10, 100 x 100, 500 x 500.

Keywords:--

Cache memory; Multicore system; replacement policies.

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Parts of Speech Tagging for Konkani Language

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Sufola Chagas., Asst Prof, Department of Information Technology, PCCE, Verna, India.

Abstract:--

It is remarkable to note that the scope of Natural Language Processing (NLP) is developing and increasing in the area of text mining. Natural Language Processing is a field that covers computer understanding and deals with manipulation of human language. Human language is an unstructured source of information, and hence to use it, as an input to a computer program, it has to be, first, converted into a structured format [3]. Parts of Speech (POS) tagging is one of the steps which assigns a particular part of speech to a respective word. POS is difficult because most words tend to have more than one parts of speech in different cases and some parts of speech are complex or unspoken. This paper aims at developing part of speech tagging model for Konkani language, using the Konkani corpus.

Keywords: -

Part of Speech, Konkani, NLP.

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A Comprehensive Review on Recent Development of Islanding Detection Method

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Prof. R. S. Somalwar, Department of Electrical Engineering, Assistant Professor, DMIETR, Wardha, India.

Abstract:--

Incredible growth in demand of electricity with efficient, reliable and eco-friendly power has motivated progress of distributed generation (DG). This is located at distribution system and now a day renewable energy sources used as a DG. But problem of using DG is unintentional islanding, which has perspective to make voltage and frequency out of synchronism and can damage equipment along with thoughtful issue of worker safety. Hence system should identify islanding and avoid its adverse effect. There are many islanding detection methods (IDM) but there is no such technique by which all the problems related to islanding being solved. In this paper new islanding detection technique is proposed on the basis of voltage ripple at inverter side of micro-grid base system. Its performance will be verified under wide range of operating condition in MATLAB/Simulink software.

Keywords:--

Distributed Generation (DG), Islanding Detection Method (IDM), Non-detection Zone (NDZ), Unintentional Islanding.

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A Study of New Horizon on Emerging IoT Technology

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Abstract:--

Nowadays, IoT (internet of thing) has great impact on emerging technology with internet. There are number of IoT applications which used to make human's life easier. IoT can be defined as an electrical or electronic device. IoT devices have capability to exchange the information between IoT devices as well as communicate with global world. Generally, IoT devices are considered as wireless device. Therefore the reliability, security and accuracy are the new area of research on IoT Technology. In this paper we have studies the various IoT communication technologies and compare their features.

Index Terms:--

IoT applications, wireless technology.

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A Recent Survey on Multiclass Object Recognition and Classification based on Machine learning methods

Harpreet Singh., Department of Computer Science and Engineering, I.K.G.PTU, Kapurthala, Punjab, INDIA.

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Abstract:--

Multiclass object recognition and classification from video stream is active research topic in computer vision due to its wide range of application in many emerging areas such as surveillance, medical, safety, vehicle detection. Object recognition and classification task is far more challenging because of image and video data is of heavy and highly variable in nature and harsh nature of real-world recognition and classification scenarios. The processing of image and video data is required to be in real-time. The objective of this paper is presents a comprehensive qualitative and quantitative comparative study of several state-of-the-art object recognition and classification methods. We have also examined merits, demerits efficiency of pioneering machine learning methods being used for object recognition and classification.

Keywords:--

Machine learning, image, video, surveillance, vehicle detection

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Machine Learning Based Approaches for Natural Language Processing

Himanshu Sharma., GLA University Mathura.

Rohit Agrawal., GLA University Mathura.

Abstract:--

Machine Learning can play a vital role in a many applications such as data mining, natural language processing, image recognition and expert systems. In the development of natural language system, the corpus based machine learning techniques are widely applied. In this paper, machine learning methods such as classifiers, structured models and unsupervised learning methods are discussed that are applied to natural language processing tasks such as document classification, disambiguation, parsing ,tagging, extraction etc. This paper also covers different levels of linguistic analysis: Lexical Analysis, Parsing, Semantic Analysis, Part-of –Speech Tagging and Discourse Knowledge. The aim of this is to provide valuable information for further research.

Index Terms:--

Machine Learning, Corpus, Tagging, Parsing, Discourse.

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A Review on Image Forgery Detection Techniques on Passive attacks

Jitesh Kumar Bhatia., GLA University, Mathura, India.

Anand Singh Jalal., GLA University, Mathura, India.

Abstract:--

In the today's era, nearly all of us rely on the images for the memories of our lives and loved ones. The images are useful in proving anything in the court of law by showing them as an evidence of the event, getting insurance of a mishappening, getting appreciation, or for conveying personal lifestyle to their friends through social media. However, various Image editing tools like Adobe Photoshop, Picasa, and Light room, etc. can produce forged images, thus changing the perspective of the viewer about the event. Image Forgery has become much prominent nowadays and is being done either for fun or for an intention. Many researchers have worked in finding techniques that can classify the forged and authentic images. This objective of this paper is to provide a glimpse of work done so far in the field of Image Forgery detection.

Keywords :—

Image Forensics, Image Forgery Detection Techniques, Passive Techniques, Blind Techniques.

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Real Time Attendance system based on video surveillance system

K. Susheel Kumar., Department of Computer Engineering & Application, GLA UNIVERSITY MATHURA, INDIA.

Maneet Singh., Department of Computer Engineering & Application, GLA UNIVERSITY MATHURA, INDIA.

Abstract:--

This paper present real time system for students attendance for a large amount of made dataset for whole class face. the real time attendance system task is very difficult to evaluate the attendance by recognizes the face in different the environment. human face image in term of challenges of pose and expression to identify the person is huge variation of the system. and this is used to avoid the proxy in attendance. the proposed system is used to detect the face using Adaboost with haar cascades and identification for PCA with LDA. and the is used to build the real time face recognition system in multiple faces. the system is used to avoid the man power to take attendance

Keywords:--

Principal Component Analysis(PCA), Linear Discriminate Analysis (LDA), Haar Cascade Classifier.

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A Body Wearable Antenna for Online Real-Time Health Monitoring System

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Zeeshan Ali Haq., Jamia Hamdard, (Deemed to be University), New Delhi, India

Abstract:--

Health care system in India is very fragile in a sense that that ratio between doctors and patients is very poor. Also the medical cost is very high. In such situation there arises a purpose of online health monitoring which would reduce the ratio and cut down on the medical cost. A textile antenna for online health monitoring is proposed in this paper. The antenna is designed to operate at 2.54 GHz frequency in ISM band. It will enable the patient to easily wear the system and transmit the real time health monitoring data to the nearby hospital system. The ISM band ensures the licence free data transmission over the channel. The designed antenna is a rectangular patch of wearable textile material.

Keyword:--

Health monitoring, real time monitoring, textile antenna

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Impact of Security and Privacy in Consumer adoption of Immediate Payment Services (IMPS) in M-Commerce (With special reference to Banking Industry)

Gaurav Sharma., Assistant Professor, Department of Computer Engineering and Applications, Institute of Engineering and Technology, GLA University, Mathura.

Kavita Sharma., Assistant Professor, Department of Computer Engineering and Applications, Institute of Engineering and Technology, GLA University, Mathura.

Abstract:--

The continuous growth in banking technologies has made consumers more adaptive to better ways of using banking for their ease and comfort. How fast the customers may adopt (or reject) a new technology in banking and what are the factors/dimensions which are responsible for that adoption/rejection is what makes this study prudent. Hence, this research aims to investigate factors that influence the behavioral intention to use the newly launched Immediate Payment Services (IMPS) in the banking sector in India keeping security and privacy in concern. Technology Acceptance Model (TAM) is used to identify the adoption of IMPS as a technology by customers considering Security in mind. The findings verified and confirmed that Security & Privacy is one of the main factor which impact attitude towards the intention of adopting IMPS along with Easy accessibility, Convenience, Reliability, Usefulness and Time saving.

Keywords:--

Immediate Payment Services, Banking, Adoption, Security, Privacy, Technology acceptance model, Mobile Users

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A Pattern Prediction on Electricity Consumption using Hidden Markov Model

Dr. Kishore Kumar Senapati., Department of Computer Science & Engineering, Birla Institute of technology Ranchi, India.

Abstract:--

Present era is the digital era and digital technologies are much impact on human life as well as societies. Starting from Smart city design to social networking peoples are now using digital technologies. As the use of technologies grows the demand for its source that is electricity grows. Predication of electricity demand is a crucial problem and providing solution through statistical rules is a big challenge. Present day Electricity demand pattern is considered to play a crucial role in the modernization of community. So, forecasting of household energy consumption precisely is essential due to the fluctuating demand –response of energy. It is also considered very significant for energy planning, development mechanism and economic success. In this paper, Statistical technique model is used to predict future consumption demand of electrical consumption rate. The prediction with output likely sequence works significantly by the implementation of Hidden Markov Model (HMM) using the Viterbi Algorithm with emphasis is given to forecast future energy consumption demand where data pattern changes monthly and shows non-linear trends. This paper uses an extensive data sample of author's working university database. The final forecasted outcome is tested and compared with actual data. Experimental results show an aggregate of 0.0366 error rate showing non-linear trends of household electricity consumption with respect to factors concerning such as population, climatic conditions and financial strength. The prediction model based on small-scale fraction of households summarizing for most likely aggregate consumption response. The proposed model helps in recognizing future electricity consumption pattern which will be useful in smart city design and provide a solution for electrification of urban and rural as well as any planning in government and non-government organizations for electricity consumption.

Keywords:--

Electricity, Consumption, pattern, Hidden markov model, Viterbi algorithm, Design, forecast, Demand ,Smart city.

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Solution of the Verhulst Model in Mathematical Biology Using Natural Decomposition Method (NDM)

Lakmalla Shiva Kumar., Department of Mathematics, National Institute of Technology, Agartala, Tripura, India 799046.

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Abstract:--

In this research paper we apply a novel method called the Natural Decomposition Method (NDM) to the non-linear ordinary differential equation called the Verhulst model or the Logistic growth model. Natural Decomposition Method (NDM) is based on the Natural Transform Method (NTM) and Adomian Decomposition Method (ADM). We try to give an approximate solution to the Verhulst model using natural decomposition method and we also observe the behaviour of the solution obtained. NDM makes it very easy to solve linear and non-linear ordinary differential equations and gives exact solutions in the form of rapid convergence series.

Keywords:--

Adomian decomposition method, Laplace transform, Natural transform, Natural Decomposition Method, Ordinary differential equations, Verhulst Model.

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A Novel Study on Pre-copy Method for Classification of Live Migration of Virtual Machines in Cloud Computing

Minal Patel., Assistant Professor, A.D. Patel Institute of Technology, Karamsad, Anand, Gujarat, India.

Abstract:--

Cloud computing is the framework of recent technology and it can set the vision of computing utilities into a reality. The most promising part of cloud computing is that it provides dynamic provisioning and delivers facility for computation, networking, storage etc using datacenters. The working of cloud resources provided through the Internet and it gives services on a pay-per-use basis from different cloud vendors. IaaS services used to develop background processing, PaaS provides programming platforms for developing applications and SaaS provides benefit to cloud users from the elastic scalability without making processes such as software development, installation, configuration, maintenance etc. The migration of a virtual machine has advantages such as increasing energy efficiency, resource sharing and load balancing, fault resilience etc. The pre-copy algorithm of Xen hypervisor is very well known and it is also used in real applications to run migration activities. The migration is categorized into three major types to improve pre-copy: i) compressing memory pages ii) predicting dirty pages iii) reducing dirty pages (performance modeling). Each category has its own importance for the live migration. In first, the compression model is proposed to achieve efficient virtual machine migration. Time series based techniques are developed using historical analysis of past data in second category. The time series is generated with consecutive iterations of memory pages. Here, two different regression based models of time series are proposed. In third category, the performance modeling of live migration is proposed by vMeasure approach. These models are evaluated for measuring the computation of virtual machine (VM) downtime, total number of pages transferred and total migration time.

Keywords:--

cloud, virtualization, infrastructure service, datacenter

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Improved Real-Time Scheduling algorithm for mixed task Set with Constraint of Harvesting Energy

Mona Kumari., GLA University Mathura.

Ajitesh Kumar ., GLA University Mathura.

Abstract:--

In mobile system devices, every system must be having own resources for power and cannot depend on the power from the outside, apart from feasibly scheduled the task set, managing the power is the main concern for all type of real time systems. The consumption of the energy depends upon the power management of the mobile devices. In this paper we propose an extended and improved real time scheduling algorithm for a mix task set with constraint of harvesting energy which have flexible speed assignment for a set of periodic and aperiodic tasks and ensure the feasibility schedule within their deadlines. This proposed article having some experimental results that shows this algorithm is best for performance in terms of available energy after task execution, average ratio of the task set at lower periodic load and deadline miss ratio.

Index Terms:--

RTS, Embedded System, Harvesting energy, DVS, Mix Task Set.

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Internet of Things based Earth Tremors Warning and Notification System using ESP8266 nodeMCU

Navaldeep Harne., GHRCEM Wagholi Pune

Vaibhav Hendre., GHRCEM Wagholi Pune

Pankaj Dhakate., GHRCEM Wagholi Pune

Abstract:--

Natural disaster is a phenomenon by which the living as well as nonliving things belong to the environment is suffering regularly. Human being does not have the power to totally eradicate the natural calamity but the only thing Human can do is, it can prior sense natural calamity & take major steps to minimize losses due to it. The main reason behind development of earthquake alert system is the intimation of earthquake in advance so that human losses can be minimized by evacuation of people to open places. There are many technologies available to predict and prevent the natural calamity. This paper is employing Internet of Things (IoT) technology for sensing earth-quake condition. Sensor node ESP8266 is preferred due to its cost effectiveness, easy configuration for earthquake detection and sending the alert for the same. The sensor is equipped with ESP8266 module for communication which directly connects to an internet. The Message Queuing Telemetry Transport (MQTT) protocol is used for message passing. The software used here is Arduino IDE where the three signals from each sensor corresponding X-Y-Z axis of the sensor is sensed and monitored in real-time.

Keywords:--

Arduino IDE, Internet of Things (IoT), ESP8266 NodeMCU, Vibration sensor ADXL335, Message Queuing Telemetry Transport (MQTT)

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A Resource Allocation Strategy using PSO in Heterogeneous Cloud

Neeraj Kumar Pandey., GLA University, Mathura, Uttar Pradesh.

N.K.Joshi., GLA University, Mathura, Uttar Pradesh.

Abstract:--

The most important problem in the cloud service provider is to maintain the elastic property of the cloud in such a way that user will pretend the cloud as limitless. So the challenge is how to make the limited sources unlimited. Every task must be granted what it requires by any mean otherwise it will degrade the performance of cloud. So resource allocation has a lot of solution. Resource allocation is a NP hard problem so no particular solution can perform well always. But these kinds of problems are solved by nature in many ways such that such as ant colony optimization (ACO) algorithm, particle swarm optimization (PSO) algorithm and firefly algorithm. In this paper a particle swarm optimization technique have been used to resolve the most critical problem of the cloud service provider at cloud data centre. This technique is basically taken from the collective and collaborative nature of the nature swarm. This technique can be used to allocate the resource to the task request by minimizing the makespan, flow time and task execution cost. The simulation and test results show the better efficiency than the other similar existing technique.

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A Novel Text Detection Technique Based On Corner Response

Nishant Singh., CEA Department GLA University Mathura(UP).

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Abstract:--

Data about the text incorporated in pictures and videos has a cardinal role in semantic assessments. In this paper, Novel text Detection and Localization (NTDL) algorithm is presented for text detection and localization in background that incorporates noise in it. This algorithm is constituted on corner response. In contrast to the portions that do not contain text, there are some edges that are dense and corners in portions having text. So, some related strong reactions from regions of text and minimal reactions from portions that do not have text. These reactions furnish some cues that are highly useful for text detection and localization of pictures. By employing a basic schema constituted on the threshold, we obtain regions of candidates for text. These portions are evaluated by interlinking several characteristics like size and color of linked devices. Lastly, the text line is identified exactly by the projection of response from corners. The outcomes from illustrations present exactness, speed and recalling for suggested methodology and we have obtained the recall of 93.25%, accuracy 97.96% and speed of 98.14% that greatly enhanced the performance of the system.

Key words:--

edge detection; corner detection; connected component; textual approach.

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Classification of Emotion using Different No. of MFCCs

Pramod Mehra., UTU, Dehradun.

Parag Jain., UTU, Dehradun.

Abstract:--

In this paper, the spectral features are separated from speech and used to perceive the feelings from speech. As Speech has been utilized as a vital method of correspondence since the time immemorial. Feelings are a basic piece of normal speech correspondence. The vast majority of the present speech frameworks can process studio recorded nonpartisan speech with more prominent precision. Hence, a need is felt to refresh speech preparing frameworks with the ability to process feelings. The part of feeling handling makes the current speech frameworks more practical and significant. In this work, spectral highlights are extricated from speech to perform feeling grouping. mel recurrence cepstral coefficients and their subsidiaries (speed and increasing speed coefficients) are investigated as highlights. Gaussian blend models are proposed as classifiers. The feelings considered in this examination are outrage, satisfaction, unbiased, pity and astonishment. The speech feeling database utilized as a part of this work is semi-common in nature, which has been gathered from the exchanges of performing artists/on-screen characters.

Index Term:--

Feeling grouping, GMM, MFCC, Spectral highlights, Text dependent emotion recognition, Text independent emotion recognition.

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Modelling of Dc Motor Analysis by Microcontroller through PV

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Prof. Shradha.Aasti., Department of C.S.E Engineering, SSPACE,Wardha, Nagpur University, India.

Prof. Ravi Ganpatrao Deshbhratar., Department of Electrical Engineering, RKNEC, Nagpur University, India

Abstract:--

Now a days its very Difficult for electrical aspects by controlling speed of DC Motor by technology PV. In this we use A PIC microcontroller based closed loop speed control scheme has been developed for the speed control of a separately excited DC motor fed from PV array. Without power electronic devices interface is not completed that An IGBT based boost converter is used as an interface between PV array and the DC motor. That also used to give the command and easily controlled speed by the microcontroller has been programmed to automatically vary the duty cycle of the boost converter depending upon the set/required speed of the motor. Modeling of the DC motor has been developed it speed with is controlled by manually and soft ware. It studies and experimental investigations have been carried out on a laboratory size prototype separately excited DC motor fed from a PV array and the results are presented. Its case study by comparing of experimental shows very close agreement between the two thus validating the controller proposed

Key words: --

Microcontroller,PV,Devices

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Deep Neural Networks for Big Image Data Classification

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Dr.R. Seshadri., Research Scholar, SV University, Tirupati

Abstract:--

With big data development in biomedical and medical industries, accurate examination of medical data benefits early disease discovery, patient care and group administrations. In any case, the examination accuracy is lessened when the nature of therapeutic information is deficient. Medical imaging plays a vital role in diagnostic healthcare and deals with high volume of data collection and processing. In this paper, we streamline machine learning algorithms for classification and prediction of chronic disease outbreak in disease-frequent groups. Deep Learning has emerged as another era in machine learning and is applied to various image processing applications. The fundamental motivation behind the work exhibited in this paper, is to apply the idea of a Deep Learning algorithms to be specific, Convolutional neural networks (CNN) in image classification. This paper presents classification of images using deep learning algorithms through spark. Classified different types of skin cancers using Convolutional neural networks in distributed environment achieved in less time with more accuracy.

Key Words:--

Big Data, Convolutional neural networks, Deep learning, Machine learning, Spark.

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Search Engine Optimization

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Abstract:--

Search Engine Optimization (SEO) is the process of restructuring a website to raise its ranking among search result for particular queries. This paper contains the Introduction to SEO and potential it has. This paper will also provide best practices that approved by most of search engines and compilation of practices discuss by practitioners of SEO.

Keywords:--

SEO, Crawler.

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Delay Analysis Wireless Sensor Networks Considering Energy Costs of Sensing and Transmission in Energy Harvesting Nature

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Mr. Sandeep Santosh, Asst. professor: Electronics & Communication Engineering, National Institute of Technology, Kurukshetra, Haryana, INDIA

Abstract:--

Wireless sensor nodes lifetime can be enhanced by a means of Energy harvesting (EH). However, the randomness characteristic in the EH process for performing sensing operations and transmitting sensed information to the sink may cause significant delay. We consider the energy costs of both sensing and transmission unlike most existing studies on the delay performance of EH sensor networks, where only the energy consumption of transmission is considered. Specifically, we consider EH sensor that monitors some status property and adopts a harvest-then-use protocol to perform sensing and transmission. To study the delay performance, we consider two complementary metrics and derive their statistics analytically: 1) update age—how timely the updated information at the sink by measuring the time taken from when information is obtained by the sensor to when the sensed information is successfully transmitted to the sink and 2) update cycle—how frequently the information at the sink is updated by measuring the time duration between two consecutive successful transmissions. Our results show that the consideration of sensing energy cost leads to an important trade-off between the two metrics: more frequent updates result in less timely information available at the sink.

Keywords: --

Energy harvesting, wirelessly powered communications, delay analysis, energy costs of sensing and transmission.

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AODV with Reliable and Energy Efficient Route Maintenance Phase

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Manas Kumar Mishra., GLA University, Mathura, India.

Abstract:--

AODV is much popular reactive protocol for Mobile Ad hoc Network. But the performance of AODV is comparable in highly mobile network due to frequent route breaks. In this paper we proposed a modified AODV protocol with reliable and energy efficient route maintenance phase. So that in case of link failure a reliable and energy efficient backup route is selected for data packet transmission. It overall increases the packet delivery ration in highly mobile network as well as increase the throughput and network life time. We simulate our proposal on discrete network simulator NS2. Result shows that our proposed approach improves the performance of AODV in terms of packet delivery ratio and network life time. Our approach also provides the good QoS parameters when primary route fails.

Keywords:--

Ad-hoc networks; AODV; Route Discovery; Route Maintenance; Reverse route; Network lifetime.

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Random Hexi Code Based Public Key Encryption (RHCE) Scheme for Code-Based Cryptography

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Abstract:--

Nowadays security on network is major challenge. For security the information on network various public key Encryption schemes are used. In this paper, we introduced a new scheme called Random Hexi Code Encryption Scheme. In this encryption scheme, Binary Goppa Code is changed via Hexi Code which is more secure against attacks executed on the present variations of McEliece PKC and RLCE scheme. This new scheme has better error correcting ability and lesser time complexity making it more feasible to apply.

Keywords:--

McEliece Encryption scheme, Hexi codes, Hexi polynomial Codes, Hexi McEliece public key cryptosystem, RLCE scheme

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Efficient Document Classification using Phrases Generated by Semi Supervised Hierarchical Latent Dirichlet Allocation

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A.S. Jalal., Prof. GLA University, Madhura.

S.C. Agarwal., Prof. GLA University, Madhura.

Himanshu Sharma., Prof. GLA University, Madhura...

Abstract:--

There are many models available for document classification like Support vector machine, neural networks and Naive Bayes classifier. These models are based on the Bag of words model. Word's semantic meaning is not contained by such models. Meanings of the words are better represented by their occurrences and proximity of words in particular document. So, to maintain the proximity of the words, we use a "Bag of Phrases" model. Bag of phrase model is capable to differentiate the power of phrases for document classification. We proposed a novel method to separate phrases from the corpus utilizing the outstanding theme show, Semi-Supervised Hierarchical Latent Dirichlet Allocation (SSHLDA). SSHLDA integrates the phrases in vector space model for document classification. Experiment represents an efficient performance of classifiers with this Bag of Phrases model. The experimental results also show that SSHLDA is better than other related representation models

KeyWords:--

Text classification, Latent Dirichlet Allocation, Semi Supervised Hierarchical Latent Dirichlet Allocation, Bag of word model, Bag of phrase model.

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A Study of Major Secure SDLC Processes in Web Based Applications

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Dr. Srikanta Patnaik., Professor: Department of CSE, Siksha O Anusandhan University, Bhubaneswar, India

Abstract:--

Web applications have become important but there are different types of security problems which could lead to tampering with details. The most common are cookies poisoning, structured query language, cross-site scripting and parameter tempering. This is the reason why most of the web companies today are verifying the type of content they receive and most importantly, from where the contents are originated. It has been thus noted from the above deduction that the major security threat has nothing to do with the Secure Socket Layer rather other layers in the web development program. In order to avoid such threats and other vulnerabilities, initial stages of the web development cycle need to be taken care of. Thus, the main focus of this research paper is to come up with a framework that would help to strengthen the security of the various stages in the web development cycle. For the same, various modules and life cycles have been used.

Keywords:-

Framework, Threats, Web Applications, Web Development Cycle

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Simulated Performance of a Photovoltaic Module: A Comparison of ANN and Regression Based Models

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E. Fernandez., Associate Professor, Electrical Engineering Department, IIT Roorkee, Roorkee, Uttarakhand.

Abstract:--

In this paper we attempt to compare the output prediction accuracy of two models – the ANN model and the Linear Regression model as applied to the case of the simulated performance of the PV module. The input variables for each model are: Voc, Isc, Insolation level, Temperature while the output variable is Pmax. ANN models after trial show that the model with 4-10-1-1 configuration is suitable. The linear regression model is a multiple regression model involving the same variables. The data base for this study is derived from various available manufacturers' data, together with some experimental outputs from a few research reports. The results of this analysis appear to indicate that the ANN model is superior in prediction performance.

Key Words:--

ANN, Comparative analysis, PV module, Regression.

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Indeed A Big Technology: The Kernel methods

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Varsha Kumari., GLA University Mathura.

M. Q. Rafiq., JPU ,Anoopshahar.

Abstract:--

Presently there has been good interest in computing similarity for data mining and machine learning particularly. In this paper we are discussing Kernel methods . Kernel methods are used pervasively mainly because of its large number of applications and scientific challenges. It has capability to model real world data and give efficient solutions to real world problems.

Such solutions given are one of its kind the most accurate and efficient as compared to the other existing ones. Along with the popular applications of kernel this paper mainly gives basic understanding of fundamental aspects of kernel methods their underlying principles and formulas used. Various aspects of kernel approach are discussed. Some simulation results are shown of the discussed kernel methods and compared with new proposed kernel design.

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An Efficient Steganographic Approach for H.264/AVC Compressed Videos

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Abstract:--

Steganography is the art and science of communication which hides the presence of secret information. In this paper a novel approach to hide the secret information in videos has been proposed for H.264/AVC compressed videos. H.264/AVC is known to be highly efficient and network friendly coding technique. In the proposed approach, we have utilize the F5 algorithm for preventing statistical attacks and improving embedding efficiency. Perceptual quality has been taken into consideration while using the Steganographic technique as well as after the compression by H.264 method. Firstly, the videos are compressed and then Steganographic method is applied. Fom the results it is evident that F5 method gives the better PSNR values as far as perceptual quality is concerned.

Keywords:-

Steganography, H.264/AVC, PSNR, Perceptual Quality, F5

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A Comparison of general Programming Languages used in Bioinformatics

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Abstract:--

Bioinformatics analyses involve a range of tasks and processes. Different types of programs have been written for various bioinformatics applications using every available language. In this paper I compared the memory usage and speed of execution for three standard bioinformatics methods, implemented in programs using one of eight different programming languages under two different operating systems Windows and Linux. Programs for the Sellers algorithm, the Neighbor-Joining tree construction algorithm and an algorithm for parsing BLAST file outputs is implemented in C, C++, C#, Java, Bash, Ruby, Perl and Python. The languages selected for this study on the basis that they are the most popular and frequently used for biological applications.

Keywords:--

BLAST, Bash, Ruby, Perl, Python, Neighbor-Joining tree.

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Detection of Compromised Accounts in Online Social Network

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Abstract:--

Compromised accounts are of a severe risk to the social network users. People now a days are mostly dependent on Online Social Networks. While some persistent spams feat the relationship between the users by spreading spams. Therefore time to time detection of the compromised accounts is a necessity. In this paper, we will study different social user behaviour and detect the compromised accounts and spam users. Spam behaviour in social networks has a wide range of illegal activities. Such activities need to be evaluated and effect of spam users needs to be reduced. To reduce such effects, we require proper detection strategy. We validate the effectiveness of these behaviour by collecting the clickstream data on a social network website. Social behaviour reflects the users behaviour online. While an legitimate user coordinates its social behaviour carefully, it is hard for the fake users to pretend to be affected. Different studies are performed in spam behaviour analysis and define a structure for spam account detection.

Keywords:--

Clickstream, compromised accounts, social networks.

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Application of Metaheuristic Algorithms for Optimal Allocation of DGs in Radial Distribution System

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Abstract:--

Metaheuristic algorithms form important part of area of Artificial Intelligence (AI). These algorithms are being used to find optimal solutions to a variety of problems in electrical engineering such as allocation of Distributed Generation (DG), coordination of relays, unit commitment etc. This paper presents application of AI based optimization algorithms to find the optimal location and sizing of DG in radial distribution system (RDS). The problem is formulated to minimize real power loss and improve voltage stability in RDS and it is solved using metaheuristic algorithms viz. Particle Swarm Optimization algorithm (PSO), Modified teaching learning based optimization algorithm (MTLBO) and Jaya algorithm. The results obtained using these algorithms are also compared with those obtained with conventional analytical method. IEEE 33-bus RDS is considered as a test system. Simulation studies were carried out using MATLAB software. The novel feature of the paper is the application of recent Jaya algorithm to the optimization problem.

Index Terms:--

Artificial Intelligence, DG, Jaya algorithm, Metaheuristic algorithm, MTLBO, Optimization, PSO, RDS.

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Stabilization of Clay Soil with Gypsum Hemihydrate (Plaster Of Paris) And Cement

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Abstract:--

Among various types of soil (according to particle size) clay soil has tendency to show problems like swelling and shrinking when moisture variation occurs. This property of CLAY soil is because of presence of minerals like montmorillonite. These minerals have hydrogen bonds in between their particles. The swelling and shrinking property of this soil results damages to the structures. So it's a major concern for Geotechnical engineers to improve this property of expansive soil and make soil durable and strong for long run. Gypsum has been used as a conditioner in agriculture, it makes soil workable. In this paper gypsum hemihydrate POP ($\text{Ca}_2\text{So}_4 \cdot 1.5\text{H}_2\text{O}$) has been taken as a stabilizer to improve the property of swelling and cement to improve the strength of the soil and improve the durability of gypsum hemihydrate in wet environment. Different quantities of gypsum hemihydrate like 3%, 5%, 7% and 10% and a small amount of cement 1% by dry weight of soil added to CLAY soil and compacted to optimum moisture content obtained by test. Atterberg limits, swell Index, strength tests are performed on treated and untreated samples. Changes in plasticity index, free swell index and strength with varying percentages of POP and cement has shown that both stabilizers can be used as an effective admixture. Various other test like sieve analysis and hydrometer test to classify the soil has also done. Unconfined compression test to find out the strength of soil with admixture has also been performed. CBR test has also been performed to find out soil as a subgrade suitable in soaked and un-soaked condition for 4 days.

Keywords: --

Gypsum Hemihydrate, Cement, CLAY Soil, Expansive property, Durability, Strength

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Spatial Interpolation and Mapping of Soil Geotechnical Properties of Udham Singh Nagar District using GIS

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Sanjeev Suman., Assistant Professor, Department of Civil Engineering, College of Technology, Gobind Ballabh Pant University of Agriculture and Technology

Abstract:--

Mapping of Geotechnical properties like specific gravity, Maximum Dry Density, Optimum Moisture Content of soil of an area can be spatially interpolated for its ready use in Civil Engineering construction using Geographical Information System (GIS).GIS provides an easy to use atmosphere for geospatial analysis of different soil properties. The main aim of the study is to predict the spatial variability of geotechnical properties of soil using well known spatial interpolation methods like Inverse Distance Weighted (IDW).The map of study area of Udham Singh Nagar district of Uttarakhand state, was digitized up to tehsils and village level and then divided into rectangular grids having known latitudes and longitudes of sampling points. The hand held Global Positioning System (GPS) was used to reach the known latitudes and longitudes of known sampling points of grid and soil samples were collected. IDW method of spatial interpolation was applied for preparation of thematic maps of soil properties. The accuracy of predicted maps was determined using Root Mean Square (RMS) Error and Goodness of prediction (GOP) values by comparing predicted values with the actual values.Small to medium RMS values for most of the properties showed more accuracy in predicted values of soil properties and positive values for G indicated that most of the predictions are reliable.The methodology presented in this study can be used to create thematic maps of soil properties at a much larger scale.Different methods of spatial Interpolation like IDW, Kriging, Splines etc. can be used and predicted surfaces from different methods can be compared for more accurate prediction. Since most of the methods of interpolation are based on different assumptions and these methods are used to provide estimates of the values of un-sampled locations on the basis of known values, hence these methods always have some inaccuracy in their output results.

Keywords:--

Spatial Interpolation, Inverse Distance Weighted, Kriging, Geographical Information System, Root Mean Square, Soil Mapping.

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Back Propagation Algorithm Based Approach to Recognize and Categorize the DC Fault in PV Module

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Vikramaditya Dave., Department of Electrical Engineering, College of Technology and Engineering, Udaipur, India.

Abstract:--

In the present era, role of solar photovoltaic (PV) in distribution generation has become inevitable and it is also the need of the hour. Addition of distributed generations (DGs) in the utility grid demand for decent power quality, secure operation and islanding protection of the grid interconnection. In order to maintain the quality of the power, one need to accelerate the procedure of finding the fault, reduce the downtime and bring the system back to normal condition. Many diagnostic approaches were proposed in the past to identify the PV faults but they are old school methods and sometimes become unmanageable particularly in case of multiple faults and critical PV system. In this paper recognition and categorization of all possible DC faults of a grid connected PV system using artificial neural network (ANN), an artificial intelligence technique is presented. The simulation of ANN was done over 100 kW solar PV system connected to a 11 kV grid. Five inputs were fed to the ANN namely, PV voltage (V_{pv}), current (I_{pv}) and power (P) (PV array parameters) and irradiance (G) and module temperature (T) (environmental data). Also, there were 5 output nodes as a DC fault indicators namely, Short-Circuit; Open-Circuit, Degradation, Shading and Charging Module. The optimized neural network architecture comprised of 5 neurons in the input layer, 20 neurons in the hidden layer and 5 neurons in the output layer. The hyperbolic tangent sigmoid transfer function was used as an activation function for the hidden as well as output layers. The ANN network was trained with over 1000 samples using back propagation algorithm with the accuracy of 0.01. To achieve the set error goal of 0.01 the ANN performance converges within the 1000 epochs. The neural network was tested for additional 1040 samples which were not included in the training data. The results of the tested data were obtained with the accuracy of 99%. It is found that the proposed system has proved its goodness with the accuracy of 99% for the practical applications when compared with the other artificial intelligence techniques like fuzzy system, expert knowledge, etc..

Keywords:-

Artificial Neural Network (ANN), DC side Faults, Grid connected PV system.

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Audio/Video Compression Using Transformation Techniques

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Abstract:--

Audio compression is designed to reduce the transmission bandwidth requirement of digital audio streams and storage size of audio files. Audio compression has become one of the basic technologies of the multimedia age to achieve transparent coding of audio and speech signals at the lowest possible data rates. Similarly Digital Surveillance Systems are becoming increasingly important to commercial and residential security

Keywords:-

Compression, signal processing, transformation techniques, audio, video, graphical representation, security.

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Compendious and Optimized Succinct Data Structures for Big Data Store

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Sunil Kumar., Assistant Professor, Vardhman College, Bijnor

Dr. Sunil Kumar., Assistant Professor, IIMT University, Meerut.

Abstract:--

Data Representation in memory is a one of task in Big Data. Data structures includes several types of tree data structures through system can access accurate and efficiently data in Big Data. Succinct data structures can play important role in data representation while data is processed in RAM memory for Big Data. Choosing a data structure for Data representation is very difficult problem in Big Data. We proposed some solution of problems of data representation in Big Data. Data mining in Big Data can be utilized to take decision by Data processing. We know the functions and rules for query processing. We have to either change method of data processing or we can change way of data representation in memory. In this paper, different kind of tree data structures are presented for data representation in RAM of computer system for Big Data by using succinct data structures. Data mining is often required in Big Data. Data must be processed in parallel or steaming manner. In this paper we first compare all data structures by table and then we proposed succinct data structures those are very popular now. Each tree presented for Data representation has different time and space complexities.

Keywords:--

SDS (Succinct data structures), Trees, Big Data, CDS (concurrent data structures).

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Patent protection through Patent Insurance in India: A research framework

Dr. Surabhi Goyal., Faculty, Army Institute of Management & Technology, Greater Noida

Abstract:--

In today's world of competitiveness and innovation, leading the world technologically is very important. Many economies have identified that patent protection is a very crucial strategic decision to lead in a technological industry. Patent insurance is one of the tools to support this thought. In this conceptual research paper, a trail has been to find the possibility of acceptance of patent insurance as a financial tool of securing the patents from infringements in India. Also, a conceptual framework is also framed in the form of suggestive measures to support the importance of such concept in Indian context.

Keywords:--

Patent insurance, litigation, competitiveness, technology, patent protection, infringement

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General De Novo Programming Problem with Interval Type-2 Fuzzy Parameters

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Debasish Bhattacharya., Department of Mathematics, NIT Agartala

Abstract:--

De Novo programming technique is used to design an optimal system when the objectives and constraints are linear. It was initially introduced with crisp parameters. Later De Novo programming with fuzzy parameters has been studied to make it more flexible. But fuzzy set has its limitations too. Thus to make De Novo programming further effective and realistic in practical applications, General De Novo programming problem with interval type-2 fuzzy parameters has been introduced and studied here. The solution procedure of the proposed problem has been illustrated by a numerical example...

Keywords:--

De Novo Programming, Interval Type-2 Fuzzy Set, Min-max Goal programming, KM Algorithm.

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Accuracy of speech emotion recognition through deep neural network and k-nearest.

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Abstract:--

Continuous flow synthesis of unstable chemicals in a continuous flow microstructured reactor is one of growing research area. The performic acid has versatile oxidizing properties due to the presence of peroxy group (i.e., excess oxygen (-O-)) so that it is widely used in the various industries like oil, food, chemical industries etc. In this article, synthesis of performic acid in a continuous flow helical capillary microreactor without and with homogeneous catalyst (sulfuric acid) has done. The effect of concentration of hydrogen peroxide and catalyst, radius of curvature of the microreactor and temperature for synthesis of performic acid was studied. The equilibrium conversion of formic acid was obtained at flow rate 10 mL/h, 30 oC and 4 mol % catalyst based on formic acid. The maximum performic acid was obtained (5.20 mol /L), when the reaction was carried out in helical capillary microreactor having 13.25 mm radius of curvature where as 3.11 mol/L of performic acid was obtained in 23.25 mm radius of curvature of the helical capillary microreactor at flow rate of 6.6 mL/h (540 s) at 30 oC and 4 mol % catalyst.

Keywords : --

emotion, recognition, palliative, utterance level, analysis , deep neural network.

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Optimized Approach for Parallel OMR sheet Analysis

Varsha Kumari., Assistant Professor, GLA University.

Dr. Aprna Tripathi., Assistant Professor, GLA University.

Abstract:--

Recently there has been considerable increase in competition examination and academic examination. Most of these examinations are using Optical Mark Recognition (OMR) sheet for filling the right choice of Objective type questions commonly known as Multiple Choice Questions (MCQs). In this examination process every question consists of four different choices and the candidate has to mark the right choice. OMR system is used to avoid counting mistake and it reduces manual work of evaluation. In this paper we are discussing different techniques used in OMR based evaluation. This paper proposes an efficient OMR evaluation technique to reduce the time of evaluation of OMR sheet. The main focus of the paper is on parallel processing in capturing the image and evaluation. The work is divided into two phases. First one is the processing phase in which OMR sheet is captured and data of every question is taken into matrix form. The second phase is the evaluation phase in which the result is calculated on multi-core processor architecture using the proposed algorithm. Also comparative analysis of sequential and parallel OMR processing has been shown. It is expected to get optimized utilization of processors and processing time.

Index Terms:--

Grading system, parallel image processing, MCQ, OMR.

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USE OF A.I. TECHNOLOGIES FOR V.I.C.T.O.R

Gurminder Kaur., Assistant professor B.M. Institute of Engg. & Tech., Sonapat.

Ishan Anand., B.Tech final year student, BMIET Sonapat

Abstract:--

For increasing workloads and pressure, a smart assistant is the thing everyone wants from the field of technology. The need for an intelligence that can help us in developing new platforms for development and carrying out a massive amount of work is felt commonly by many individuals. So in order to come over with this problem and to take the technology to the very next level, we innovate the idea of building a computer based AI that can fulfill all desires. In order to deliver what is desired in V.I.C.T.O.R., a development of Human Intelligence is to be done with clear and logical reasonings to the problems by undertaking every exception and error which can ever occur. To do those kind of function and exception handling, several types of Artificial technologies will be used to deliver different types of tasks and work-types. So, in order to implement every types of tasks like Producing text from computer data, Speech Recognition, efficiently run AI-oriented computational, Decision Management, etc., various kinds of technologies will be used are described and have been classified for the better study.

Keywords:--

Artificial Intelligence, Super-Intelligence, Humanoid computer Intelligence, real-time decision system.

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Implementation of Logic Circuits with Low Energy Charge Recovery Logic

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Anjan Kumar., Institute of Engineering and Technology, Electronics and Communication Department, GLA University, Mathura Uttar Pradesh, India

Abstract:--

Various energy recovery circuits have been proposed for reducing the power dissipation in CMOS logic circuits. This paper presents three Logic Circuits implemented using charge recovery logic. They are completely unique charge-recovery logic known as pseudo-NMOS boost logic (PNBL), to get efficient-speed low energy consumption as compare to CMOS binary logic. PNBL is faster and compact charge recovery logic and it related to boost logic family. These logic circuits have less operating energy dissipation due to charge recovery logic. To exhibit the performance of Logic circuits are implemented with PNBL and compared with CMOS 180nm technology. Simulation results shows that logic circuits with PNBL recover the charge 57.14nJ at the frequency of 1GHZ that is approximately 10^5 times conserve energy as compared to conventional CMOS technology. Charge recovery logic also has one more advantage that it provided complemented and non-complemented both output at a time with small area trade off.

Keywords:--

Pseudo N-MOS Boost Logic, Low Energy Consumption, Charge recovery logic, Adiabatic Logic.

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Segmentation of Periapical Dental X-Ray Images by applying Morphological Operations

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Abstract:--

Segmentation of Dental X ray images is done using various image processing techniques which are useful in medical diagnosis, clinical purposes and real time applications. These methods aims to define the segmentation of different tooth structures present in the Dental X ray images which will be used for the early detection of caries, tooth fractures, root canal treatment and periodontal diseases etc. which plays a key role in identification of diseases. Manual segmentation of Dental X rays images for the medical diagnosis, from the large databases in clinical routine is very complex and time consuming process. In this paper, we propose a three step procedure for the segmentation of each individual tooth, firstly preprocessing is done using top hat and bottom hat filtering then Otsu's thresholding with morphological operations are employed to separate the tooth structures from the Dental X ray images. Performance evaluation is done using 10 periapical X ray images and the accuracy of method is measured as 97% approximately.

Keywords:--

Dental X ray images, Morphological operations, Top hat and Bottom hat filtering.

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Securing Cloud Resource Allocation Requests with Tls Connections Mandate and Improving DH Key Exchange with Additional Security Factor

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Dr. Ajit Singh, Department of Computer Science, BTKIT, Dwarhat, Uttrakhand, India.

Abstract:--

Today cloud computing is seen as the feature of IT industry. Use of IAAS, PAAS and SAAS is transforming capital expenses (CapEx) into operational expenses (OpEx) without sacrificing performance of communication and without compromising security and even streamlines workload with maximum profits.

As organization look to build up modern IT architecture that scales rapidly and globally while supporting numerous digital channels and a variety of devices, the cloud is nothing less than critical. This paper on one hand exaggerate cloud feature like SSO with its underlying implementation details using SAML, improves communication security at TLS level and uses improved DH as "DH with an ASCII digit " to secure (handshake) public and private key shared on the network, on the other hand. These two additional security factors make cloud users more immune & secure and cloud security invincible for eavesdroppers/ attackers.

Keywords:--

DH, SSO, SAML, LDAP, TLS, SSL, IAM, CSP

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Effect of Varying Training Images on Performance of Face Recognition: A Study

Nitin Kumar., Department of Computer Science and Engineering, National Institute of Technology, Uttarakhand, India

Ajay Jaiswal., Shaheed Sukhdev College of Business Studies, University of Delhi, New Delhi, India

Abstract:--

One of the problem in face recognition is limited number of images per person available for training. In this paper we investigate the performance of popular feature extraction methods such as Gabor wavelets, Discrete wavelet transform, Multi-view canonical correlation analysis, Linear discriminant analysis, Generalized uncorrelated linear discriminant analysis and Supervised canonical correlation analysis for face recognition with variation in number of training images per person. The performance is measured in terms of classification accuracy. Experimental results on four publicly available datasets viz., AR, ORL, CMU-PIE and YALE demonstrate that the classification accuracy in general increases with increase in number of training images per person with few exceptions.

Keywords:--

discriminant, correlation, wavelet, accuracy, comparison.

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Weather Forecasting Using Data Mining

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Shaba Desai., Department of Information Technology Padre Conciecao College of Engineering Verna, Goa ,Goa University

Abstract:--

Changing Climatic conditions are leading to alternate weather patterns. Accurately predicting weather patterns is important as they have wide social and economical impact. This paper proposes and analyzes a predictive model which analyse a wide range of data points with the aim of predicting likelihood and pattern of location specific rainfall at high degree of confidence.

We extract knowledge from historical weather data collected from NOAA(National Oceanic Atmospheric Administration)[10]. From the collected weather data comprising of 15 attributes, only 5 attributes are most relevant to rainfall prediction. Data preprocessing and data transformation on raw weather data set is performed, so that it shall be possible to work on Bayesian and K-NN the data mining, prediction model used for rainfall prediction. The model is trained using training dataset and tested on test data for accuracy. We have used comparative approach of Bayesian and K-NN models and found Bayesian approach to be more accurate.

Keywords:--

Rainfall prediction, Naive Bayes, K-Nearest Neighbor, Climate change, Weather patterns.

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Estimation of Software Complexity in Agile Software Development

Palak Makhija., GLA University, Mathura.

Ashish Sharma., GLA University, Mathura.

Abstract:--

In Agile Software Development ,solution of problem or requirement comes from combined effort of developers through planning, development, improvement and adaptation of changes. Software complexity measure is an adequate way for observing progress, an indication for precise estimation of software development activities that contains minimal rework thus enhancing its quality. Complexity measures play a significant role to analyze shortcomings of the development process. Therefore, this paper attempts to estimate complexity of agile software development, which shall be early indicator, can further serve as basis for effort, duration and cost estimation for Agile Software Development. Estimation is very crucial and imperative segment of Software Development Life Cycle (SDLC). Unlike in traditional Software Life cycle Models, estimation is based either on Lines of Code(LOC), Function Point Analysis or Complexity, but in Agile Software Development process, it is reckon speculative processes like Planning poker and Expert Opinion. Further, there is very limited well established method to find out complexity of Agile Software Development Process. Therefore, this paper proposes an algorithmic procedure to compute the complexity of Agile Software Development (ASD) process. Result established validates the claim that the proposed complexity measure compares well with other measures proposed in past.

Keywords:--

Agile Software Development, Complexity measure, Functional Requirement, User Stories

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I am very thankful to all the individuals who took the initiative to be a part of this prodigious conference. ICACA-18 is a knowledge meet where experience will guide the emerging talents. Coordinating each individual was a good memory where I can still remember each name. ICACA-18 is a beautiful journey and will surely be a platform for all the students to showcase their skills towards the advancements in the technologies.

- Conference Coordinator

***"From ICACA-18 Clouds are not only meant for raining water,
They are also for raining data" ...!!!***

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