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Address:
22, First Floor, ShivLoke Phase-IV,
Khajuri Kala, BHEL-Piplani, Bhopal (M.P.)-462021, India
Website: www.blueeyesintelligence.org
Email: director@blueeyesintelligence.org, blueeyes@gmail.com
Cell #: +91-9669981618, **WhatsApp #:** +91-9669981618, **Viber #:** +91-9669981618
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1.

Authors: Moinuddin Sarker, Mohammad Mamunor Rashid

Paper Title: Waste Tyre and Polypropylene Mixture into Petroleum Fuel using ZnO

Abstract: Waste tyre and polypropylene waste plastic into petroleum fuel production process with laboratory batch process in present of ZnO catalyst at temperature range 250-430 ºC. In this experiment Pyrex glass reactor was use and sample was using total 75 gm. Waste tyre was 25 gm by weight and polypropylene was 50 gm by weight. 5% Zinc Oxide catalyst was use in this experiment to accelerate the reaction. Product fuel density is 0.75gm/ml and fuel color is light yellow. Waste tyre and polypropylene waste plastic to fuel conversion percentage was 63.47 %, light gas percentage was 12.27 %, and solid black residue percentage was 24.26%. Product fuel was analysis by using Perkin Elmer GC/MS and GC/MS chromatogram showed carbon chain range C3 to C21. GC/MS analysis result indicate that product fuel has aliphatic hydrocarbon including alkane, alkene and alkyl group, aromatic group, halogenated group, alcoholic group, nitrogen content and oxygen content compounds. Aromatic group compounds are Toluene, 1-ethyl-3-methyl-Benzene, propyl-Benzene, 1,3,5-trimethyl-Benzene, Limonene and so on. Product fuel can use internal combustion engine and feed for refinery process.

Keywords: Scrap tire, polypropylene, waste plastic, synthetic fuel, conversion.

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2.

Authors: **Utpal Jyoti Bora, Majidul Ahmed**

Paper Title: **E-Learning using Cloud Computing**

Abstract: Cloud computing is becoming an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. Cloud computing is growing rapidly, with applications in almost any area, including education. Now a day, e-learning is also becoming very popular and powerful trend, which is also broad. E-learning systems usually require many hardware and software resources. This paper presents the benefits of using cloud computing for e-learning. There are many educational institutions that cannot afford such investments, and cloud computing is the best solution, especially in the universities where the use of computers are more intensive and what can be done to increase the benefits of common applications for students and teachers.

Keywords: Cloud Computing, E-learning, ICT, SaaS, PaaS, IaaS.

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3.

Authors: **Mohammadreza Ghorbaniparvar, Fatemeh Ghorbaniparvar**

Paper Title: **Portfolio Optimization Applied For Wholesale Electricity Spot Market (WESM) Based On Markowitz Theory**

Abstract: With the introduction of deregulation, the electricity market has turned from a monopoly market to a free market, while electric power distributor companies are facing a problem of designing the optimal portfolio in a competitive electricity market. Notionally, the portfolio selection problem can be solved by assigning requirement capacities to the spot market and bilateral contracts. This paper objective is to introduce a novel approach in order to address the electric power distributor companies' portfolio selection problem. Since electricity pricing is volatile and there is no ways to store electricity, this portfolio varies from a financial portfolio. The mathematical formulations and forecasted price of different asset returns for both the long term and the spot market portfolio selection have been derived according to Markowitz Modern Portfolio Theory. Moreover, we applied the data which comes from Manila Electric Railroad And Light Company (MERALCO) for different assets in this paper. Multiple Linear Regression Considering Explanatory Variables is employed to forecast the price of the spot market which is Wholesale Electricity Spot Market (WESM) in this paper. The portfolio selection problem for MERALCO is finally formulated as optimization problem, which can be solved by Genetic Algorithm (GA) in MATLAB and Microsoft Office Excel.

Keywords: Portfolio Selection, Spot Electricity Market, Forward Contract, Futures Contract, GA.

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4.

Authors: **K. Sahitya Yadav, K. Sumanth**

Paper Title: **Analyzing Transformer Core Faults by Using Real-Rational Polynomial Function Model From FRA Data**

Abstract: The paper presents the results of the experimental investigation carried out on a transformer to obtain frequency response data under core faults. These core faults were physically simulated to study and identify the various parameters that influence the frequency responses. Transfer Function using real-rational polynomial function model was computed from the frequency response data. Various transfer function parameters were computed for reference and simulated faulty frequency response data. These parameters are then analyzed to relate changes to characterize the defects. The analysis presented based on the transfer function characteristic parameter changes will help in diagnosing transformer core faults.

Keywords: Frequency Response Analysis; Real-rational polynomial; Transfer Function; core faults.

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Authors: **Gopal Pandey, Swati Patel, Vidhu Singhal, Akshay Kansara**

Paper Title: **A Process Oriented Perception of Personalization Techniques in Web Mining**

Abstract: Web personalization is an approach, a marketing tool and a fine art. With the rapid development of Deep Web, a large number of web information often lead to "information overload" and "information disorientated ", yet, personalized techniques can solve this problem. Personalized techniques are one such software tool used to help users obtain recommendations for unseen items based on their preferences. The commonly used personalized techniques are content based filtering, collaborative filtering and rule based filtering. In this paper, we present a survey on a personalized collaborative filtering method combining the association rule mining focusing on the problems that have been identifying and the solution that have been proposed.

Keywords: Association rule mining, collaborative filtering, personalization, web mining, web usage mining.

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6.

Authors: **Utpal Bhattacharjee**

Paper Title: **Environment and Sensor Robustness in Automatic Speech Recognition**

Abstract: Most of the presently available speech recognition systems work efficiently only in some ideal conditions. This is due to the fact that these systems are based on some assumptions related to the operating conditions. The system works efficiently if the actual working environment is identical with the environment for which the system is built. Performance of the speech recognition system considerably degrades if mismatch between the training and the testing environment occurs. In the present study, mismatch due to sensor variability and environment has been considered and Cepstral Mean Normalization (CMN) and Spectral subtraction methods have been investigated as front-end methods for the reduction of noise. A Hidden Markov Model (HMM) based speech recognition system has been built with Mel-Frequency Cepstral Coefficient (MFCC) as feature vector. It has been observed that there is a 15% enhancement of system performance in channel and environment mismatched condition compared to baseline performance when CMN and spectral subtraction methods have been applied for noise reduction.

Keywords: Robust Speech Recognition, MFCC, CMN, Spectral Subtraction.

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Authors: **Miteshkumar Shaileshbhai Parmar, Arvind D. Meniya**

Paper Title: **Imperatives and Issues of IPSEC Based VPN**

Abstract: VPN is Virtually connected networks. It is widely accepted technology for corporate world for enhancing their business. IPSEC is standard for securing packet transmission over public networks. IPSEC private network layer security and more suitable for VPN technology. In VPN network which are mainly using public network(internet) required more secure mechanism for data transmission between to node or host(Gatewayes). This article extensively and exclusively studies the issues involved in IPSEC base VPN network. and possible solution for application base protocol implementation which can be exploded as further research purpose.

Keywords: Authentication Header (AH), Encapsulating Security Payload(ESP), IP Security (IPSec), Tunnel, Transport, Virtual PrivateNetworks (VPN), Quality of Service (QoS).

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8.	**Authors:** **Hemanshu A. Patel, Arvind D. Meniya** **Paper Title:** **A Survey on Commercial and Open Source Cloud Monitoring** **Abstract:** Cloud Monitoring plays a crucial role in providing application guarantees like performance, availability, and security. We can understand cloud computing as technologies that rely on the Internet to satisfy the computing needs of users, who do not generally own the physical infrastructure. All services are often provided by a third party with several common business applications online. Users can choose the services they want and access them from a web browser, while the software and data are stored on third party's company. Cloud Monitoring is an Integral part of maintenance. Requirement for a monitoring solution for cloud are totally different from legacy and virtualized Monitoring Environment .There are many third party solutions are available for cloud monitoring. But there is lack of standard model which covers all required parameter needed to be covered in solution so that an exhaustive report can be produced for service provider. This paper is intend to provide a brief introduction of cloud computing with cloud monitoring fundamental and its requirement including EUCALYPTUS an open source software framework and other related framework needed to implement cloud solution. **Keywords:** AmzoneEC2, Eucalyptus, GoGrid, Microsoft Azure, Monitoring,OpenNebula, RackSpace. **References:** 1. A Survey on Open-source Cloud Computing Solutions Patrícia Takako Endo , Glauco Estácio Gonçalves, Judith Kelner, Djamel Sadok.Universidade Federal de Pernambuco – UFPE 2. OpenNebula Tutorial, Constantino Vázquez Blanco Borja Sotomayor , DSA-Research.org Distributed Systems Architecture Research Group ,Universidad Complutense de Madrid 3. Cloud Computing with Nimbus. XtreemOS Summer School 2009. Oxford, September 2009. Kate Keahey keahey@mcs.anl.gov,www.nimbusproject.org/files/nimbusxtreemOS_Sept2009.pdf 4. The Eucalyptus Open-source Cloud-computing System Daniel Nurmi, Rich Wolski, Chris Grzegorczyk Graziano Obertelli, Sunil Soman, Lamia Youseff, Dmitrii Zagorodnov Computer Science Department University of California, Santa Barbara Santa Barbara, California93106 open.eucalyptus.com/documents/ccgrid2009.pdf 5. A Performance Guarantee Approach for Cloud Applications Based on Monitoring Jin Shao, Qianxiang Wang School of Electronics Engineering and Computer Science Peking University Beijing, China. 6. Amazon Elastic Compute Cloud: User Guide Amazon Web Services Copyright © 2012 Amazon Web Services, Inc. and/or its affiliates 7. Windows Azure™ Security Overview By Charlie Kaufman and Ramanathan Venkatapathy 8. Cloud Infrastructure Service Management – A Review Department of Computer Science and Engineering, SCT Institute of Technology, Visvesvaraya Technological University Bangalore, Karnataka, India 9. RACKSPACE LAUNCHES CLOUD MONITORING TO HELP COMPANIES PROACTIVELY TRACK THE HEALTH OF THEIR CLOUD AND WEB INFRASTRUCTURE HOSTED POSTED AUGUST 22ND, 2012 BY RACKSPACE.HTTP://WWW.PRESSRELEASEPOINT.COM/RACKSPACE-LAUNCHES-CLOUD-MONITORING-HELP-COMPANIES-PROACTIVELY-TRACK-HEALTH-THEIR-CLOUD-AND-WEB-INFR	**42-44**
9.	**Authors:** **Shervan Fekri-Ershad, Hadi Tajalizadeh, Shahram Jafari** **Paper Title:** **Design and Development of an Expert System to Help Head of University Departments** **Abstract:** One of the basic tasks which is responded for head of each university department, is employing lecturers based on some default factors such as experience, evidences, qualifies and etc. In this respect, to help the heads, some automatic systems have been proposed until now using machine learning methods, decision support systems (DSS) and etc. According to advantages and disadvantages of the previous methods, a full automatic system is designed in this paper using expert systems. The proposed system is included two main steps. In the first one, the human expert's knowledge is designed as decision trees. The second step is included an expert system which is evaluated using extracted rules of these decision trees. Also, to improve the quality of the proposed system, a majority voting algorithm is proposed as post processing step to choose the best lecturer which satisfied more experts' decision trees for each course. The results are shown that the designed system average accuracy is 78.88. Low computational complexity, simplicity to program and are some of other advantages of the proposed system.	**45-48**

Keywords: Expert system, Rule based system, Decision tree, Head of University Department.

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