D.N.R. COLLEGE OF ENGINEERING & TECHNOLOGY

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Academic Year 2019-20

Number of Research Papers Published per Teacher in the Journals Notified on UGC Care List

Sl. No.	Name of the Faculty Author	Title of the Paper	Name of the Journal	ISBN / ISSN Number	Volume / Month	URL / DOI
1.	Dr. S. Koteswari	Energy Efficient Low Density Adder For Enhanced DSP Applications	JETIR	2349-5162	6 / June	https://www.jetir.org/papers/JETIR1906O03.pdf
2.	R. Sri Uma Suseela	Performance Analysis Of Cross-Layer Efficient Selfishness Prevention Routing Protocol For The Dynamic Cr Networks	IJITEE	2278-3075	8 / July	https://www.ijitee.org/wp-content/uploads/papers/v8i9S3/I30690789S319.pdf
3.	Y. Srinivas	Real Time Number Plate Recognition System Using Hybrid Models	IJSDR	2455-2631	4 / August	https://www.ijsdr.org/papers/IJSDR1908001.pdf
4.	Dr. A Ramamurthy	Minimizing Energy Consumption Based On Neural Network In Clustered Wireless Sensor Networks	Journal Of Computational and Theoretical Nano Science	2019.775	16 / June	DOI:10.1166/jctn.2019.7757
5.		An Optimized Hybrid Model For Load Balancing In Cloud Using Machine Learning	Journal Of Critical Reviews	2394-5125	6 / June	http://www.jcreview.com/issue.php?volume=Volume%206%20&issue=Issue-6&year=2019
6.	Dr. Buddharaju Venkata Subrahmanya Varma	An Optimized Hybrid Model For Load Balancing In Cloud Using Machine Learning	Journal Of Critical Reviews	2394-5125	9 / May	https://ieeexplore.ieee.org/document/9121263
7.	Mr. Karinki Surya Ram Prasad	A Novel Mechanism To Extract Relevant Files From Document Streams Based On Content Search	IJMTE	2249-7455	9 / May	https://dl.acm.org/doi/10.1145/3494560
8.	Mr. D D D Suri Babu	A Novel Mechanism To Extract Relevant Files From Document Streams Based On Content Search	IJMTE	2249-7455	8 / March	https://dl.acm.org/doi/10.1145/3494560
9.		Design And Analysis Of A Tweet Alert System For Identifing Real Time Traffic Using K-Means Clustring Algorithm	IJMTE	2278-3075	8 / March	https://www.ijitee.org/wp-content/uploads/papers/v8i4s2/D1S0031028419.pdf
10.	K.Shiva Syamala	Extracting Most Frequent Item Sets Over Large Data Sets Using WD-FIM Algorithm	JES	0377-9254	10 / November	https://jespublication.com/upload/2019-V10-I11-67.pdf
11.	E Yohoshva	Dynamic And Advanced Security Approach For Data Storage In Distributed Environment	IOSR Journal Of Engineering	2250-3021	10 / January	http://iosrjen.org/Papers/vol10_issue1/Series-6/A1001060105.pdf
12.	R Ramya Swetha	Experimental Works On Self Compacting Concrete By Partial Replacement Of Rick Husk Ash With Subjected To Acid Attack	International Journal Of Innovative Technology And Exploring Engineering	2278-3075	9 / January	https://www.ijitee.org/portfolio-item/c8334019320/
13.	Dr. U Ranga Raju	Experimental Works On Self Compacting Concrete By Partial Replacement Of Rick Husk Ash With Subjected To Acid Attack	International Journal Of Innovative Technology And Exploring Engineering	2278-3075	9 / January	https://www.ijitee.org/portfolio-item/c8334019320/

14.	Dr. A .Padmanabham	Nano Structured Materials Mechanical Characteristics	Journal Of Science And Technology	2456-5660	5 / June	https://doi.org/10.46243/jst.2020.v5.i3.pp280-286
15.	Dr. I. Harish	A Fuzzy Modelling For Selection Of Machining Parameters In Wire Electrical Discharge Machining Of D2 Steel	International Journal Of Recent Technology And Engineering	2277-3878	8 / January	https://www.ijrte.org/wp-content/uploads/papers/v8i5/E6282018520.pdf
16.	K Venkanna Naidu	High Throughput And More Reliable Hybrid Cryptographic System	International Journal Of Engineering In Advanced Research	2278-2566	2 / November	https://www.ijarset.com/volume-9-issue-2.html

ENERGY EFFICIENT LOW DENSITY ADDER FOR ENHANCED DSP APPLICATIONS

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ABSTRACT:

In this paper, a reverse carry propagate adder (RCPA) is presented. In the RCPA structure, the carry signal propagates in a counter-flow manner from the most significant bit to the least significant bit; hence, the carry input signal has higher significance than the output carry. This method of carry propagation leads to higher stability in the presence of delay variations. Three implementations of the reverse carry propagate full-adder (RCPFA) cell with different delay, power, energy, and accuracy levels are introduced. The proposed structure may be combined with an exact (forward) carry adder to form hybrid adders with tunable levels of accuracy. Further this project is enhanced by using square root modified carry select adder. This enhancement improves the area time optimizations in adder implementations.

KEYWORDS: Reverse Carry Propagate Adder, Inexact adder, Accuracy, Digital Signal processing, Carry select adder.

INTRODUCTION: The challenge of the verifying a large design is growing exponentially. There is a need to define new methods that makes functional verification easy. Several strategies in the recent years have been proposed to achieve good functional verification with less effort. Recent advancement towards this goal is methodologies. The methodology defines a skeleton over which one can add flesh and skin to their requirements to achieve functional verification. The report is organized as two major portions; first part is brief introduction and history of the functional verification of regular Carry skip adder which tells about different advantages of Carry skip adder and RCA architecture and in this Regular model, there is a drawback and in order to overcome that complexity, the modified architecture of CSKA has been designed. The electronics industry has achieved a phenomenal growth over the last two decades, mainly due to the rapid advances in integration technologies, large-scale systems design due to the advent of VLSI. The number of applications of integrated circuits in high-performance computing, telecommunications and consumer electronics has been rising steadily and at a very fast pace. Typically, the required computational power of these applications is the driving force for the fast development of this field.

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Performance Analysis of Cross-layer Efficient Selfishness Prevention Routing Protocol for the Dynamic CR Networks

R. Sri Uma Suseela, KSN Murthy, Hima Bindu Valiveti

Abstract*: As wireless communication is very dependent on the use of spectrum, increased demand for and practical application of new wireless services generally leads to spectrum shortages. A remarkable feature of protocols in the cognitive radio is to, to detect the selfish behaviour of node and discard the abnormal packets. However, minimize transmission latency and enhance energy efficiency are two main issues in multi-hop Cognitive Radio Networks (CRN) where it is difficult to gain knowledge of topology and spectrum statistics. The misconduct of selfish nodes such as not participating in the routing process, delaying RREQ packet intentionally, removing the data packet, not responding or sending hello messages. This misconduct of the selfish nodes will affect efficiency, trustworthiness, and fairness. This paper proposes the cognitive radio dynamic nature, associate with that of selfish nodes, the cross-layer efficient Selfish Prevention Routing Protocol (ESPRP). All the above characteristics are simulated with help of NS-2.35 simulator, and our proposed protocol attains good enactment in terms of lower delays, higher throughput and better packet delivery ratios for collaborative node traffic related to traditional routing protocols in the cognitive radio.

Index Terms: **Cognitive radio**, *Selfish attack, Decentralized Trust Model, Layer Modelling, and routing protocol*

I. INTRODUCTION

Cognitive radio (CR) is an analytical radio under which the commensurate communication system, for instance in the field of RF positioning and use, has its knowledge internally and externally [1]. It can decide on working behavior using this data against prearranged objectives. A CR regularly reviews its performance and interprets its results, then uses this data to analyze radio backgrounds, channel state information, throughput, and more, then modifies its radio parameters to meet the required QoS restrictions, operational constraints and administrative constraints [2]. The growing market for wireless networks tends to increase security difficulties. However, it is susceptible to most security threats due to the complexity and critical applications of the cognitive radio network [3, 4].

Despite this great advantage, guaranteeing security for these networks is a major challenge. According to observations, CRN has a group of little vulnerability that cannot easily be rectified. To resolve such threats, CR should probably learn to be environmentally aware. Since the CRN is resilient to most attacks, there are very few attacks that can severely affect the CRN. The primary objective of CRN safety is to safeguard primary users and their range while competing for resources with secondary unlicensed users. In cognitive radio networks, there are three types of selfish attacks. In cognitive radio networks, there are three different types of selfish attacks. They are signals for fake selfish attacks, the signal for false selfish attacks and a selfish attack by dynamic access behavior.

In this paper, we immediately identify several selfish nodes in the egoistic attack of channel pre-occupation. In this attack, a selfish cognitive radio node is attempting to occupy the primary spectrum resources completely or partially available. The selfish nodes will degrade network performance substantially. Selfish attacks can take place in the communication environment that is used to transmit the currently available channel information to nearby transmission nodes. Hence why the major concern is when and how often the attacker and CR system defender should carry out both the PUE selfish assault and the channel surveillance process.

Recent protocol developments in the cognitive network seem to be a major issue because of the unavailability of centralized regulation have led to selfish nodes in the network. There is a need for cross-layer for efficient prevention in the network that can have the ability to reduce selfishness in the routing protocol to make the cognitive radio to be more dynamic in all the cases. The conducted workouts clearly show that by increasing the throughput, lower delays and better delivery ratio, SAR offers better performance. It can, therefore, be said that cross-layer selfishness avoids the routing protocol.

The main contributions and organization of this paper are summarized as follows: In section 2 we describe background details of attacks in CR network. Section 3 discusses the proposed work. Section 4 deliberates results and discussions. Finally, in section 5, we concluded the paper.

II. BACKGROUND WORKS

In [5], an attack on the physical layer was submitted by the authors. The authenticated users are facing severe problems with the attackers as they attack the packets that are intended for the authenticate users during the transmission session. The attackers also make the radio transmission interference by sending damaged packets to the user. In [6], the authors discussed how the attacker behaves selfishness by sending false sensing data to its all neighbouring nodes and the fusion center that results in Spectrum Sensing Data Falsification (SSDF), the attack induces a recipient to make an incorrect spectrum-sensing decision. This attack targets centralized as well as distributed CRNs.

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Real Time Number Plate Recognition System using Hybrid Models

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Abstract: **This Paper presents a new approach for number plate recognition system to extract details from license plates. It was decomposed into three stages. The first stage was to extract number plate region from the captured image. Then top-hat transformation technique is used for this purpose. Second stage is to segment the extracted number plate characters by using Blob analysis. And final stage is to recognition the segmented characters using template matching. Further, extractions of number plate region in adverse conditions were considered. In this work, it is proposed that Top-hat transformation technique is used to eliminate some adverse conditions such as rain, dust, different fonts, extra characters on the number plate and skewed input cars.**

Keywords: **Image Acquisition, Localization, Extraction of Number plate, Character Segmentation, Template Matching**

I Introduction

Traffic monitoring system has now become an essential administrative part in most of the developed and developing countries. Nowadays vehicles play dynamic role in transportation. Also the use of vehicles has been increasing day by day because of population growth and human desires of vehicles. As the number of vehicles increases day by day, breaking traffic rules, entering restricted area are also increases linearly. Traffic Management is becoming one of the most important issues in rapidly growing cities. Due to bad traffic management a lot of man-hours are being wasted.So the purpose of this work is to develop an application which recognizes license plates from cars. The Vehicle License plate Detection Method has many applications like cars parking in hotels, traffic signal violation, electronic toll collections and border crossing vehicle etc. Any detection method has some major challenges like License plates have arbitrary sizes, orientations, complex backgrounds and localization of license plates.The purpose of this work is to develop an application which recognizes license plates from cars. We are trying to develop an Automatic License Plate Recognition (ALPR) Technique using Image Processing for Indian Conditions where number plate standards are rarely followed. The steps involved in ALPR are identifying a vehicle by reading its license plate, extracting license plate region and recognizing the characters in the license plate. Hybrid methods are introduced in this work in order to improve efficiencies and to overcome adverse conditions. We apply the methodology on an FPGA-based Automatic License Plate Recognition (ALPR) system used in Electronic toll collection (ETC) for real time applications. Arulmozhi K et al. [1] proposed a smart, simpleand efficient algorithm for Indian License Plate Localization using Top Hat Transformation, which suppresses the background of image and remove the non-uniform illumination. Jin Chong et al. [2] developed a new way of vehicle license plate recognition. In license positioning, the license positioning method is based on median filtering double edge detection; in character segmentation, it adopts a combinative method of locating the original level and improved vertical projection segmentation algorithm; in character recognition, the recognition method is based on the classification template matching of font characteristics. AymanRabee et al. [3] proposed highly reliable license plate detection and recognition approach using mathematical morphology and support vector machines. Sahil Shaikh et al. [4] proposed innovative method for number plate recognition. It uses series of image manipulations to recognize number plates. Shoaib Rehman Soomro et al. [5] presented a paper which is implemented for automatic toll collection. The system detects the vehicle first and then captures the image of the front view of the vehicle. XiaojunZhai et al. [6] presented a FPGA implementation of a complete ANPR system which consists of Number Plate Localization (NPL), Character segmentation (CS) and Optical Character Recognition (OCR). M. Venkata Subbarao et. al. [7] proposed a navel approach for decomposition of an image using DWT and NN. Youngwoo Yoon et al. [8] present a character segmentation method to address automatic number plate recognition problem.

II Proposed Approach

The major steps involved in the proposed approach for a number plate recognition system is shown in the Fig. 1.

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Minimizing Energy Consumption Based on Neural Network in Clustered Wireless Sensor Networks

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Wireless sensor networks were organized with the collections of sensor nodes for the purpose of monitoring physical phenomenon such as temperature, humidity and seismic events, etc., in the real world environments where the manual human access is not possible. The major tasks of this type of networks are to route the information to sink systems in the sensor network from sensor nodes. Sensors are deployed in a large geographical area where human cannot enter such as volcanic eruption or under the deep sea. Hence sensors are not rechargeable and limited with battery backup; it is very complicated to provide the continuous service of sending information to sink systems from sensor nodes. To overcome the drawback of limited battery power, this paper proposes the concept of minimizing energy consumption with the help of neural networks. The modified form of HRP protocol called energy efficient HRP protocol has been implemented in this paper. Based on this concept, the workload of cluster head is shared by the cluster isolation node in order to increase the lifetime of the cluster head node. Also cluster monitoring node is introduced to reduce the re-clustering process. The implementation procedure, algorithm, results and conclusions were proved that the proposed concept is better than the existing protocols.

Keywords: Energy Consumption, WSNs, Neural Networks, HRP Protocol, Clustering Process.

RESEARCH ARTICLE

1. INTRODUCTION

1.1. Wireless Sensor Networks

Wireless sensor Networks are a type of distributed networks which are formed by small and lightweight nodes. Each sensor node is also called as mote. Sensor nodes are deployed to monitor the environment or any other objects for measuring the environment or any other objects for measuring the physical parameters such as temperature, pressure and humidity, etc., Wireless sensors are used now-a-days in many applications such as environmental monitoring, traffic analysis and remote sensing, etc. Wireless sensors have many working units and the major four working units are transmission rate, power consumption, scheduling of nodes and computation [1]. It has many real time applications, the sensor nodes are performing different tasks like neighbor node discovery, smart sensing, data storage and processing, data aggregation, target tracking, control and monitoring, node localization, synchronization and efficient routing between nodes and base station. The simple structure of the Wireless sensor networks is shown in Figure 1.

1.2. Kinds of Wireless Sensor Networks

The categories of Wireless Sensor Networks, the mechanism by how they are organized were discussed below in detail.

1.2.1. Terrestrial Networks

These networks contain many hundreds to thousands of nodes which are organized in an ad hoc or structured manner. Terrestrial WSNs are clever to establish communication with the base stations particularly. The structured terrestrial WSN contemplates two dimensional placement models, three dimensional placement models, grid placement and optimal placement. In this type of networks the batteries were backed up by solar cells as the alternate source since the battery power is limited. The Energy preservation can be attained by applying low duty cycle operations, minimized delays and also by optimal routing.

1.2.2. Underwater Networks

The earth is filled with nearly 75 percent of water and the networks under water contain more number of sensor nodes and vehicles. The data were collected from the sensor nodes with the help of Self-governing immersed vehicles. Sensor failures, lengthy delays in propagation and

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AN OPTIMIZED HYBRID MODEL FOR LOAD BALANCING IN CLOUD USING MACHINE LEANING

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ABSTRACT: Despite significant infrastructure improvements in Cloud computing, still faces numerous challenges in terms of load balancing. There have been various metaheuristic approaches being used for proper load balancing in the cloud. However, most of the approaches consider only a single QoS (Quality of Service) metric and ignore many important factors. The performance efficiency of these approaches can be further enhanced by implementing with machine learning (ML) techniques. An optimized hybrid model for load balancing in cloud using machine leaning is presented in this paper. An optimized hybrid model that combines Support Vector Machine (SVM) along with Cat Swarm Optimization (CSO) and Ant Colony Optimization (ACO) is being implemented with File Type Formatting (FTF) to provide a better load balancing solution in cloud computing. The classification is performed using SVM considering various file formats such as audio, video, text maps, and images in the cloud. The resultant data class provides high classification accuracy which is further fed into a metaheuristic algorithm namely ACO using FTF for better load balancing in the cloud. Then, the data is input to the modified load balancing algorithm CSO that efficiently distributes the load on Virtual machines (VMs). Simulation results compared to existing approaches showed an improved performance of QoS metrics such as SLA (Service Level Agreement) violation, throughput time, response time, migration time, energy consumption and average execution time.

KEY WORDS: Cloud computing, Load balancing, Machine learning, QoS, VMs, SVM, CSO, ACO and FTF.

I. INTRODUCTION

Cloud computing is a method of providing services to the user by using internet through web-based technology and applications [1]. Cloud computing possess distributed technologies to satisfy a variety of applications and user needs.

Sharing resources, software, information via internet are the main interest of cloud computing with an aim to reduced capital and data transfer cost, better performance in terms of response time and data processing time, maintain the system [2]. So there are various technical challenges that needs to be addressed like Virtual machine relocation, server consolidation, fault tolerance, high availability and scalability but central issue is the load balancing, it is the mechanism of spreading the load among various nodes of a distributed system to improve both resource deployment and job response time while also avoiding a situation where some of the nodes are having huge amount of load while other nodes are doing nothing or idle with very little work [3]. In Cloud computing environment, load balancing needs to distribute the dynamic local workload evenly between all the nodes. In load balancing transfer the whole load of the system to the one node to another node of the system for better resource utilization and to diversity the response time of the job, simultaneously removing a state in which some of the node are over loaded while some other are under loaded [4]. It is used to gain a high user fulfilment and resource utilization ratio, hence improving the overall performance of the system. Proper load balancing can help in utilization of the available resources optimally, thereby minimizing the resource consumption. It also help in implementing enabling scalability, fault tolerant and over-provisioning, reducing response time etc [5]. Load balancing faces one of the challenges to distribute a large amount of data and allocate a suitable resource at the time of task allocation. One of the challenges of task scheduling in cloud is to assign the tasks to different VMs so that the load balancing is achieved with minimum resources [6]. The advantage is to better utilize the resources on cloud and fulfill the demands of users in a timely manner. These approaches combine the relative benefits of load balancing algorithm backed up by powerful machine learning models such as Support Vector Machines (SVM). In the cloud, data exists in huge volume and variety that requires extensive

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A NOVEL MECHANISM TO EXTRACT RELEVANT FILES FROM DOCUMENT STREAMS BASED ON CONTENT SEARCH

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ABSTRACT

Information Retrieval (IR) is mainly used for extracting the most related information from a set of resources that are available. In current day's IR is done only based on index (i.e. filename, folder name or sub-folder name), hence the data which is extracted based on these categories is not always accurate. Hence there is no single mechanism to extract the continuous top k monitoring on the document stream which can extract the most related and exact information for the given search keyword. In this paper we mainly try to extract the information based on both index based and content based by applying a class of RF algorithm on the search technique. The term RF indicates relevance feedback in which the data can be extracted either based on index as well as content, so that the data user who try to search the files can get related files as top priority and those which are not exactly matched will be set as non priority files by the application and they will be send to the last level. In this proposed thesis we try to analyze the inner functionalities of the documents based on index and content separately and we can able to get performance evaluation reports for both the concepts separately. Here we try to analyze the Eigen vector and Eigen matrix for proving the efficiency of the proposed thesis.

Key Words: Information Retrieval, Index Search, Content Search, Continuous Top-K Monitoring, Document Stream.

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A NOVEL MECHANISM TO EXTRACT RELEVANT FILES FROM DOCUMENT STREAMS BASED ON CONTENT SEARCH

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Design and Analysis of a Tweet Alert System for Identifying Real Time Traffic Using K-Means Clustering Algorithm

D D D Suribabu, T Hitendra Sarma, B Eswar Reddy

Abstract--- ***At present, one of the major issues for an individual to meet their requirements is the disordered traffic. In order to resolve this issue, this proposed thesis focuses on designing an application in order to classify each and every individual tweet based on the traffic related keywords and assign a unique label for all tweets. If any message, which contains traffic-related information, it is being sent as an alert to the end users who are following the current user, or else the same tweet will be just posted on the user wall. In the digital era, the social networks have become a fascinating domain for every human for sharing and communicating their recent updates among each other. In order to implement this application, it chooses a compatible social media that is Twitter, for sending traffic related tweets to the followed users. This problem is solved by applying the K-Means algorithm for identifying the traffic-related keywords from the tweet and then clustering the traffic tweets and normal tweets into two separate categories.***

Key Words: Traffic Tweets, Tweet Classification, Social Networks, Text Mining Technique, Twitter Stream Analysis,K_Mean

1. INTRODUCTION

Twitter is becoming one of the fabulous blogging services, which has received much attention in recent days. This is one of the OSN the service which attained a variety of individual's interest towards it in terms of updated status information can be shared among the friends, family, and coworkers [1]. In twitter, each and every message is termed as a status update message or simply SUM, which is just a message to wish friends or colleagues. As we see there are lots of research papers published on twitter as of now, about various possible facilities that are present in twitter. All the previous research papers are mainly divided into three groups: Initially if we look in the starting group, we will try to identify maximum researchers analyze the complete network structure of Twitter and they want to calculate the workload that is present for the Twitter application [2]-[4]. In the next group, many researcher staff tries to examine or find out the important characteristics of a Twitter application as one of the social medium [5]-[8]. In the last group we can examine clearly that user's try to create unique apps in order to compete for the twitter. As we all know that, in the twitter there is a separate terminology that was used in order to represent the tweets. When any tweet user try to post a new message or tweet on his/her wall, then such a message is termed as Status Update Message (SUM).This SUM contains not only the information related to tweet in text manner but also contains some additional information like tweet time stamp, geographic coordinates like latitude and longitude of that posted tweet user, username of that corresponding tweet posted user and finally the hash tags that was applied for that appropriate tweet[9]-[14].

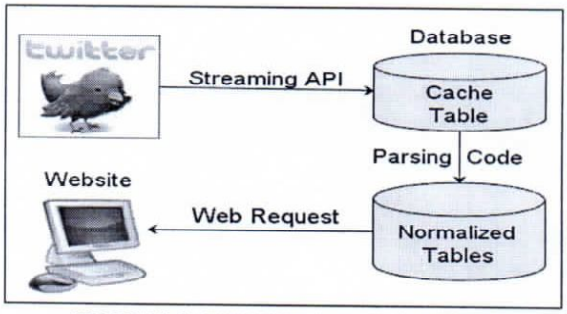

FIGURE 1: DENOTES THE SAMPLE ARCHITECTURE OF A TWITTER

From the above figure 1,we clearly find out the detailed demonstration about the flow of a twitter API, where each and every twitter has a facility to stream the information. For this twitter will connect with stream API, once the twitter sends any tweet it will be saved into the database with the help of cache table. Now the information which is available in the cache table will be parsed, the term parsing indicates that token is generated for the each and every individual tweet. In this parsing approach, it will try to normalize the tweets and eliminate if there are any duplicate tweets that are available in the cache table. Once the tweets are normalized then the information is passed into the website in the form of a web request.

Generally, in the twitter there are a separate terminology that was used in order to represent the tweets, one among them is when a user message is shared in the social networks, it is called as Status Update Message (SUM), and it may contain, apart from the text, it also contains the other information like timestamp, geographic coordinates (i.e. latitude and longitude), username who posted that tweet and also the hash tags that was applied for that appropriate tweet. As we all know that a lot of SUMs which refer to a certain topic or related to a limited geographic area may provide some information about an event or topic [9]- [10].

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EXTRACTING MOST FREQUENT ITEM SETS OVER LARGE DATA SETS USING WD-FIM ALGORITHM

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ABSTRACT

In current day's data mining plays an important role in the aspect of decision making activities. Frequent item set mining is an important step of association rule analysis, is becoming one of the most important research fields in data mining. Weighted frequent item set mining in uncertain databases should take both the existential probability and importance of items into account in order to find frequent item sets of great importance to users. As a result, the search space of frequent item sets cannot be narrowed according to downward closure property which leads to a poor time efficiency. In this paper, we try to find out the most frequent item set efficiency of given data set based on support or confidence value and then try to find out the most frequent items based on rank manner.

I. INTRODUCTION

Generally, data mining (sometimes called data or knowledge discovery) is the process of analyzing data from different perspectives and summarizing it into useful information - information that can be used to increase revenue, cuts costs, or both[1].

Data Mining

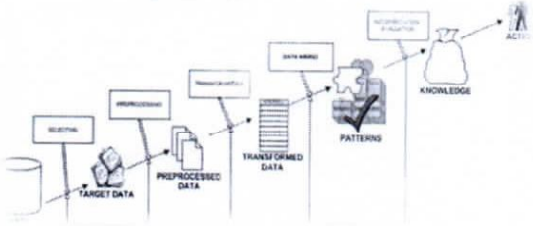

Figure 1. Represents the Structure of Data Mining

From the above figure 1,it allows users to analyze data from many different dimensions or angles, categorize it, and summarize the relationships identified. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases.

Working

While large-scale information technology has been evolving separate transaction and analytical systems, data mining provides the link between the two[2]. Data mining software analyzes relationships and patterns in stored transaction data based on open-ended user queries. Several types of analytical software are available: statistical, machine learning, and neural networks.

Generally, any of four types of relationships are sought:

- **Classes**: Stored data is used to locate data in predetermined groups. For example, a restaurant chain could mine customer purchase data to determine when customers visit and what they typically order[3]. This information could be used to increase traffic by having daily specials.
- **Clusters**: Data items are grouped according to logical relationships or consumer preferences. For example, data can be mined to identify market segments or consumer affinities.
- **Associations**: Data can be mined to identify associations. The beer-diaper example is an example of associative mining.
- **Sequential patterns**: Data is mined to anticipate behaviour patterns and trends. For example, an outdoor equipment retailer could predict the likelihood of a backpack being purchased based on a consumer's purchase of sleeping bags and hiking shoes[4].

Data mining consists of five major elements:

1) Extract, transform, and load transaction data onto the data warehouse system. Store and manage the data in a multidimensional database system[5].
2) Provide data access to business analysts and information technology professionals.
3) Analyze the data by application software.
4) Present the data in a useful format, such as a graph or table.

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Dynamic and Advanced Security Approach for Data Storage in Distributed Environment

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Abstract: With the implementation of data sourcing and other cloud services in real time environment, it describes efficient data transmission between different users parallel in distributed environment. Security or privacy is also important factor in data different users data sharing so that efficient and advanced cryptography system is required to do privacy for data from multiple users in cloud computing. Attribute based encryption is one of the basic advanced encryption system to provide efficient privacy between multiple users in distributed environment. Cipher text policy based attributed based encryption (CP-ABE) and Deffie- Hellman is one of the advanced secure approach proposed in this paper to multi user data sharing in distributed environment. In this scenario reduce the computational cost overhead in data sharing and other features in distributed environment. Performance evaluation of proposed approach describes efficient results in terms of encryption, decryption and other specification in cloud computing environment

Index Terms: Attribute based encryption, Cipher text policy based encryption, distributed computing,

I. INTROUDCTION

Cloud computing is the basic application to share data with different resources to accomplish equivalent economic scale to provide efficient data out sourcing in distributed environment. At the implementation of appropriate broadcast communication establishment between different organizations relates to cloud applications. Because of difficulties in data sharing of the cloud, i.e. security is the main security aspect in customers' ability to share data without any privacy aspects for distributed environment. Cloud resources are also major impact in data sharing between different users in cloud, for instance cloud client enter into application and then serve the resources like file sharing, and different types of security related approaches were introduced/developed to explore resource sharing between users in distributed environment. Various customers face different security concerns in storage of their data in distributed environment to explore access control issues with square different services in cloud for various applications.

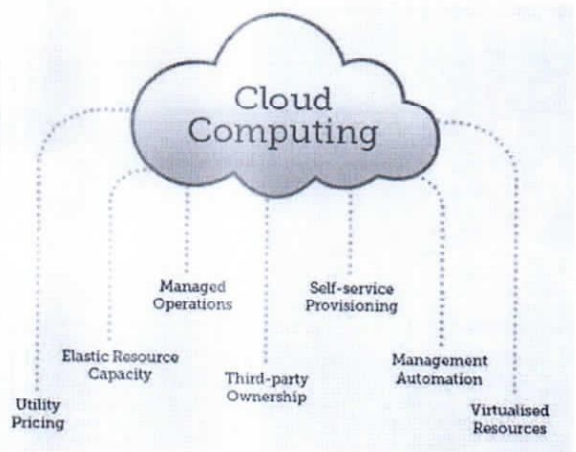

Figure 1: Different cloud computing services with respect to processing

As appeared in the above figure distributed computing gives three sorts of administrations with respect to cloud administration and different procedures present in conveyed registering tasks. The ABE plan can result the issue that data owner needs to utilize each endorsed client's locale key to verify data. Key-approach property based security (KP-ABE) plan planned the openness plan into the client's close to home key and portrayed the

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Experimental Works on Self-Compacting Concrete By Partial Replacement of Rice Husk Ash with Subjected To Acid Attack

R. Ramya Swetha, M. Swaroopa Rani, U.RangaRaju

Abstract: ***The objectives of this work is effect of Rice husk ash (AWM) in self-compaction concrete (SCR) in order to increase in strength and a better bonding between aggregate and cement paste. SCR had an improvement over conventional concrete so that it can be placed easily without vibration or mechanical consolidation. The properties of SCR have been studied in several researches due to its importance and ability to solve the problems of concrete mix. AWM was used to substitute cement in stepped concentration of 0 %, 5%, 10%, 15%, 20% and used to gain characteristic CS of M_{40} grade concrete mix. It is cured normal water and sulphuric acid solution (H_2SO_4) in for different ages (7days, 28days and 60days) and the strengths were determined. Sulphuric acid used in the percentages of 0%, 1%, 3%, 5%.***

Index Terms: ***Self compacting concrete, cement replacement, rice husk ash, acid solution.***

I. INTRODUCTION

Self-compacting concrete (SCR) is a new approach to high performance concrete (HPC) developed in the year 1986 by Japan. Congested reinforcement and reduction of concrete expedient is also one the reason to develop SCR. SCR flows into the formwork and around obstructions under its own weight to fill it completely and self-compacting, without any segregation and blocking.SCR mixes normally have a much higher content of fine fillers, including cement, and produce excessively high CS concrete, which restricts its field of application to special concrete only. This paper, it explores about the use of AWM to raise the number of fines and consequently reach self-compact ability in capable way and focuses on comparison of fresh and hardened properties of SCR containing different percentages of 0%, 5%, 10%, 15% and 20% AWM as an admixture. Sulphuric acid (H_2SO_4) is one of the violent natural threats to concrete structures. Acid show aggression is exaggerated by the process of corrosion and escape of cement paste constituents. Important volume of admixtures in SCR paste can really control its resistance to acid aggression.

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Curing H_2SO_4 acid as 0%, 1%, 3% and 5% in SCR to avoid the acid rain effects, higher durability, no difficulty to place, no vibration, reduced noise levels and good surface finishing of concrete.

II. STUDY AREA

In present study a concrete mix design is made for M_{40} and is taken as normal concrete. In the normal concrete cement is replaced with (5%, 10%, 15% and 20%) of AWM. This study was conducted for the duration of 7, 28 and60 days. Specimens of two types, namely specimens casted with normal concrete and on concrete by partial replacement of cement with AWM, were exposed to three percentages of H_2SO_4 solutions with concentrations of 0%, 1%, 3% and 5%. It is well known that the concrete under acidic environment is deteriorated due to a chemical attack. For example, acid rains cause concrete unexpectedly short service life due to the damages concrete cover.

III. METHODOLOGY

A. Concrete Mix design (as per is 10269: 1982)

In this analysis mix proportioning is done using BIS method for, M_{40} grade of concrete. The consequential mixes are modified after conducting trials at laboratory by duly the Indian standards guidelines and test result values are satisfied.

B. Mix Proportions by Weight

W/C ratio =0.39, Cement = 1, Fine aggregate =1.12, Coarse aggregate = 2.28.

Testing of hardened properties:

After getting final results of mix proportions, cubes are been casted.

Fig(a) Casted cubes M_{40} grade of SCR

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Nano structured materials' mechanical characteristics

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Abstract:

The mechanical characteristics of nanocrystalline (n-) materials are said to be affected by numerous microstructural factors, including as grain size and shape, distribution of pores, other flaws/defects, surface condition, impurity level, second phases/dopants, stress, duration of application, and temperature. There aren't any studies that go into great detail on the impact of each of these factors. The findings of both unequivocal and contradicting experiments are summarised below. The current theoretical levelThe mechanical behaviour of n-materials is discussed in some depth here. All rights reserved by Elsevier Science B.V.In terms of mechanical characteristics, microhardness, tensile and compressive behaviour, wear resistance, grain boundary sliding, and nanostructured materialsa steady stream of water

1. Introduction

Recent research has focused on 'nanostructured' (n-) materials with grain sizes less than 100 nm [1–3]. Even materials with a grain size have received favourable ratings in certain cases.There are 500 nm in this group. This should not be done.superplastic ceramics and highly deformed metallic materials are to blame.Materials with grain sizes ranging from 300 to 500 nm are often used.The high strain rate and/or low temperature superplasticity may be caused by Sub-micron grains are those with a grain size less than 100 nm.even though there are several uses for nanostructured materialsImportant, but not covered in this lecture.

2. Nanoscale structures in one or two dimensions and hybrid structures

Limiting the scope of the experiment yields positive outcomes. Nanoscale effects in a material that is otherwise normal. As This topic has previously been extensively discussed [3]. Some of the strategies will be briefly described. The advantages of adding a few to a few precipitates' materials with dimensions in the nanoscale range (The hardening of precipitation) is well-known. The moment n-Moan increase in hardness and fracture resistance was achieved by dispersing molybdenum in micrometre-sized Al2O3.strength and toughness were produced, however each characteristic peaked at a certain level. Composition in a different way the fracture strength of Al2O3 with n-SiC dispersions of grain size 200 nm was increased. The high temperature mechanical characteristics were also improved by a factor of three. it's at its most thick, it's hard to tell the hardness of n-composites based on Al2O3, MgO, and Si3N4 was the hardness change was consistent with the norm of increasing grain size and increasing SiC content mixtures. The hardness of n-composite Al2O3/SiC decreased much less with rising temperature than in Al2O3/SiC.Al2O3 is a single piece.

This gap grew as the amount of time passed. Sic content, however, the temperature at which brittleness changes to ductility also went up at the same time. In the case of Mg– the tensile strength and elongation to fracture Alloys of Zn and La with amorphous or hcp Mg phases particulates in the phase (interparticle distance: 5–10

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A Fuzzy Modelling for Selection of Machining Parameters in Wire Electrical Discharge Machining of D2 Steel

Santosh Patro, I. Harish, P. Srinivasa Rao

Abstract: ***Wire Electrical Discharge Machining (WEDM) is a widely used non-traditional machining process used for machining of hard and difficult-to-machine materials. Proper selection of machining parameters in WEDM is required for better output performance, such as Material Removal Rate (MRR), Wire Wear Rate (WWR) and Surface Roughness (SR) etc. In the present paper, Pulse ON time, Pulse OFF time, Peak Current, Spark Voltage, Wire Feed and Wire Tension were taken as the input parameters to optimize MRR, WWR and SR. A set of 27 experiments were performed as per Taguchi Design. A Fuzzy model has been proposed to select the optimum values of machining parameters. The proposed fuzzy model was found to predict the experimental values with more than 90 percent accuracy.***

Keywords: Material Removal Rate, Wire Wear Rate, Surface Roughness, Orthogonal Array.

I. INTRODUCTION

Wire Electrical Discharge Machining (WEDM) is a widely used non-traditional machining process used for machining of hard and difficult-to-machine materials. The basic concept of WEDM process is cratering out of metal due to sudden stoppage of electron beam by the solid metal surface leading to reaching of the surface to its boiling point temperature and evaporation [1]. WEDM can be used for machining of any material provided the material should have some electrical conductivity. It has been used for manufacturing of components used in automobile, aerospace and machine tool industries [2]. Proper selection of machining parameters in WEDM is required for better output performance. The traditional Taguchi technique used widely is suitable for single response optimization. In order to have multi response optimization, a number of techniques have been developed. Fuzzy modelling is one of the widely used multi response optimization technique as it predict the optimal values with greater accuracy. Shabgard et. al. [3] investigated the machining of Tungsten Carbide-Cobalt (WC-Co) metal matrix composite in EDM and Ultrasonic assisted EDM using Fuzzy approach. In their result, they showed that proposed fuzzy model was in accordance to the experimental findings. Kumar et. al. [4] used fuzzy approach for the optimization of process parameters in the machining of Aluminium Metal Matrix Composite (AMMC). They found the optimal set of parameters to get the desired outputs. Dewangan et. al. [5] experimented the machining of AISI P20 tool steel to get the optimal machining parameters using Grey-Fuzzy logic based hybrid optimization technique. The optimum EDM parameters were obtained for minimum surface integrity of AISI P20 tool steel. Ramanan et. al. [6] adopted Grey-Fuzzy technique to obtain the optimum machining parameters during machining of AA7075-PAC composite. They found that the technique gives the optimal combination of process parameters to obtain the corresponding values of maximum material removal rate and minimum surface roughness. Puhan et. al. [7] investigated the machining of Aluminium Silicon Carbide ($AlSiC_p$) metal matrix composite in EDM and adopted a hybrid approach combining Principal Component Analysis (PCA) and Fuzzy Inference System (FIS) to optimize the machining parameters. It was observed that process parameters such as discharge current, pulse on time, duty factor and flushing pressure have significant effect on the output characteristics. Rao et. al. [8] studied the effect of input parameters like current, duty cycle, servo control and open – circuit voltage on the output performance like MRR, TWR, Surface Roughness and Hardness during machining of AISI 304 Stainless Steel. They developed the Fuzzy model to study the effect of input parameters on output performance. Caydas et. al. [9] adopted ANFIS modelling to improve the machining performance during the machining of AISI D5 tool steel. The result shows that ANFIS modelling can greatly improve the process responses such as surface roughness and white layer thickness. Maji et. al. [10] performed the machining of mild steel in EDM and developed the input-output parameters relationship of EDM process both in forward and reverse directions using ANFIS. The modelling was done using linear as well as non-linear membership function distributions. They found that ANFIS modelling with non-linear membership function distribution gives better results than that with linear membership function distribution. In the present paper, the Fuzzy approach has been utilized to select the machining parameters in WEDM for machining of D2 steel. The fuzzy model developed for the selection of process parameters is compared with the experimental results.

II. FUZZY LOGIC

Fuzzy logic technique is used when there is some degree of uncertainty in making decision. Some cases decision is partially true.

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HIGH THROUGHPUT AND MORE RELIABLE HYBRID CRYPTOGRAPHIC SYSTEM

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ABSTRACT:

Privacy has always a growing impact on the modern applications and the growth in term of technology. The demand for the highest privacy must be guaranteed in the field of technical, commercial and legal regulations whenever sensitive information is stored, processed, or communicated in any form. Thus new technologies are also created new ways togather private information. In this system, to transmit data securely and to improve robustness, imperceptibility and payload capacity, combination of steganography and cryptography techniques are used. The referable values of secret image is embedded in the video file with the use of Arnold scrambling technique, discrete wavelet transformation and least significant bit. The secret key generated referable values of image is embedded behind the audio file. Before embedding of secret key, it is encrypted by a new proposed encryption algorithm, Twisted Exchange algorithm. Further, this project is enhanced by compressing secrete image to reduce bandwidth of the whole yield. So, computational time will be decreased to almost half to the former. Here, in this enhancement process HAAR wavelet transformation is used for reducing computational process.

KEYWORDS: scrambling, Cryptography, Steganography, Arnold, Twisted Exchange algorithm, LSB Replacement.

INTRODUCTION: Today images usually contain private or confidential information so that they should be protected from leakages during transmissions. Recently, many methods have been proposed for securing image transmission such as image encryption and data hiding. Image encryption is a technique that uses to encrypt image into noise form, using high redundancy and strong spatial correlation. The encrypted image is a meaningless file and before encryption additional information is not provided. Data hiding is alternative for image encryption that hide secret image into a cover image so that no one can realize the existence of the secret data. Large number of data is not hide into a single is the main issue of data hiding. Specifically, if one wants to hide a secret image into a cover image with the same size, the secret image must be highly compressed in advance. A new technique for secret image transmission is proposed with the help of secret image and target image. Select three images secret image, target image, and mosaic image. After selecting the target image, the given secret image is first divided into number of rectangular fragments called tile images, which then are fit into similar blocks in the target image, called target blocks, according to a comparison of colour transformation. Next, the color characteristic of each tile image is transformed into the other colour, resulting in a mosaic image which looks like the target image.