NATIONAL CONFERENCE INNOVATIONS IN SCIENCE, TECHNOLOGY AND MANAGEMENT (NCISTM-2018)

Proceedings of National Conference on Innovation in Science, Technology and Management (NCISTM-2018)

21st & 22nd December 2018

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GANDHI INSTITUTE OF EXCELLENT TECHNOCRATS (GIET)
www.gietbbsr.edu.in

NATIONAL CONFERENCE ON INNOVATIONS IN SCIENCE, TECHNOLOGY AND MANAGEMENT (NCISTM-2018)

[21ST & 22ND DECEMBER, 2018]

INTEGRATED VEHICLE NAVIGATION SYSTEM BASED ON ANDROID

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ABSTRACT

The main contribution of this research is an enhanced level of reliability in the navigation solutions of GPS-denied environments. The research on aiding navigation applications is a very important topic nowadays due to the enormous need for reliable navigation solution that account for different applications. The developed map aided, low-cost, user-friendly navigation system can be used in many systems such as in-vehicle navigation or smartphone location-based tools.

Keywords: *Android, GPS and GIS.*

1. INTRODUCTION

Android is a mobile operating system, which is a modified version of Linux. Android system is chosen due to its open-source and based on Linux. APIs in Android SDK are good for developing and transferring applications and controlling the interoperability between different LBS modules. Earlier navigation system used to provide the use of a handheld GPS receiver in the areas of precise positioning, mapping locations, navigating across the mapped locations [5]. Now with the advancement of technology and development of smart phones and android devices, it has become easy to track and locate with the help of GPS through various applications. This research throws a light on a newly developed algorithm which is useful in tracking a route between two defined points and it also saves and shares the tracked route for the future use for other users.

GA'S USE IN COST-BASED SOFTWARE DEFECT PREDICTION SYSTEM DESIGN

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Abstract: *(11Bold)*
Research has yielded approaches to predict future defects in software artifacts based on historical information, thus assisting companies in effectively allocating limited development resources and developers in reviewing each other's' code reduces the cost of maintenance. Developers are unlikely to devote the same effort to inspect each software artifact predicted to contain defects, since the effort varies with the artifacts' size (the number of LOC and cost) of defects that it exhibits (effectiveness). We propose to use Genetic Algorithms (GAs) for training prediction models to maximize their cost-effectiveness. We evaluate the approach on two well-known models, Regression Tree and Generalized Linear Model, and predict defects between multiple releases of 5 open source projects. Our results show that regression models trained by GAs significantly outperform their conventional counterparts, improving the cost-effectiveness by up to 120 %.
Key Word*: Machine Learning, Defect Prediction, Software Engineering, Statistical Methods, Expert Systems, Feature Selection, Regression Tree, Generalized Linear Model (GLM)*

I. Introduction (11 Bold)

Statistical modeling has been often utilized in software engineering to assess quality of software projects. One of its frequent applications would be to produce prediction models to anticipate exactly where defects occur in a software system. Such models are actually valuable in several contexts: For instance, Kim et al. show the importance of theirs in effective API testing, where prediction models take the testing effectiveness in manufacturing environment [20]. Researchers and practitioners underline the importance of proper allocation of computing resources [11], for instance during code assessment [5],to save the appraisal cost of the code.

During initial research, researchers (e.g., [41]) had examined prediction models to make a binary distinction of each an application artifact: Likely or perhaps not very likely to incur in succeeding defects. Widely used evaluation metrics were precision as well as recall [41] or maybe the area Under the Curve (AUC) of the Receiver Operating Characteristic (ROC) curve. The AUC plots the classes properly classified as defective against individuals improperly classified as defective, as the prediction model 's discrimination threshold can vary.

Recently, scientists observed that the effort needed by designers towards inspecting artifacts recommended by binary distinction can vary based on the artifact [25]. Bigger and much more complicated software artifacts require more inspection effort, therefore hindering both the effectiveness and the usefulness of the prediction. As a solution, scientists have suggested to rethink prediction in conditions of cost effectiveness: Artifacts must be inspected in the order which maximizes the ratio between the amount of defects discovered as well as the effort spent (effort typically approximated by the dimensions of the artifacts) [11]. With this context, generally used evaluation metrics are : (i) the cost effective AUC (AUC CE) [11], that represented a weighted model of the more conventional AUC metric; and (ii) the P effort metric[11].In every effort aware prediction model presented very far| no matter the employed statistical mechanism the design is not immediately taught to get the best match to rank on the cost

THE BITCOIN APPROACH: ITS TROUBLES AND ASSULTS

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Abstract:
Bitcoin is the most successful crypto currency that has created a new division in the area of electronic financial transactions. Bitcoin provides a platform to run currency without any central control. It serves as both a peer-to-peer payment system as well as a store of value. Bitcoin records all its transactions in a distributed append-only public ledger called block chain. In this paper, we present a systematic survey that covers the security aspects of Bitcoin. The purpose of this paper is to explore some of these security issues associated with the Bitcoin as well as suggest countermeasures to keep its transactions secure.

***Key Word**: Bitcoin, Block Chain, Miner, Security Threats.*

I. Introduction

Crypto currencies have made great development in recent years. Earlier forms of electronic currencies such as Digi Cash or Cyber Cash, transfer large amounts of money between parties at fast speeds while offering some level of anonymity. More recent innovations in virtual currency were made by Bitcoin which has taken the next step in characterizing the digital money. Bitcoin was launched soon after the financial crisis of 2007-2008 that had dented people's faith in central banking authorities. This could have been another driving force for Nakamoto to start with the decentralized monetary system. Other than the Bitcoin, there are many other forms of digital currencies called Altcoins, which have emerged in the last few years. Altcoins include LiteCoins, Doge Coin, Ripple, Name coin, Peer coin, DevCoin, Byte Coin and the list goes on. With steady growth in digital currency, a parallel economy is developing and it is time when the government should step in and put regulations into it. Putting regulations may help states to impose taxes and prevent black money to sustain in the system. Japan recognizes Bitcoin as a currency and has a positive viewpoint towards it. The major difference between Bitcoin and other digital currencies is that it is decentralized.

BITCOIN uses peer-to-peer (P2P) technology, and it operates without any trusted third party authority that may appear as a bank, a Chartered Accountant (CA), a notary, or any

other centralized service [1].Since its deployment in 2009, Bitcoin has attracted a lot of attention from both academia and industry. With a market capitalization of about 150 billion and more than 150,000 aggregate number of confirmed transactions per day (as of April 2018)

Nakamoto described Bitcoin as providing "a system for electronic transactions without relying on trust" through the use of cryptographic proof [1]. The purpose of Bitcoin is to create a currency through public ledger without the need of the third party and to establish a trust through peer to peer collaboration. Pavel et al. [2] analyzed Bitcoin characteristics to make it a global currency, and identified that it has an insignificant market presence and price volatility that pulls it back when compared to fiat currency. Kleineberg et al. demonstrated how Bitcoin can sustain digital diversity through multidimensional incentive system [3].The open source code of Bitcoin made money transfers without a bank acting as a trusted third party possible for millions of users, and its distributed design gave Bitcoin the properties of permission less network with censorship-resistance. However, Bit-coin's design still struggles to ensure some measure of anonymity, despite the fact that most of its users believe it provides anonymous payments [4].

OPINION MINING AND CUSTOMER REVIEW FOR EFFECTIVE EVENT MANAGEMENT

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Abstract:
This paper describes an approach for mining sentiment from customers" reviews for an Event Management company. The proffered opinion mining system mines qualitative features which are frequently commented on by customers and also classifies the sentiment orientation of the reviews. The system can generate a feature-based graphical summary of sentiment polarities. This is useful to prospective customers in making a decision regarding hire of an event management company. It is also beneficial to the company, as it helps them to improve service in requisite areas as reflected in the feature-based summary
In this prospective
***Key Word**: opinion mining, sentiment classification, natural language processing, feature extraction, event management.*

I. Introduction

In order to stay competitive, businesses need to be responsive to customers" requirements and improve their services based on feedback. Most businesses nowadays facilitate feedback mechanism through website or mobile-based applications. Additionally, internet-savvy customers sometimes post their reviews on publicly available business review websites, which influence the choice of potential new customers. The customer reviews are usually in the form of concise, informally written natural language text. Mining opinion from such reviews can provide useful insights to a business and help them address specific areas to improve customer satisfaction.

Nowadays, professional event management companies are hired by companies to manage events such as conferences, trade exhibitions, product launches and award ceremonies, as well as by private individuals to manage social events such as birthdays and weddings. This paper presents a technique to perform opinion polarity mining from customer reviews for an event management company. Section 2 of the paper discusses related work in the area of opinion mining, Section 3 describes the method for mining sentiment polarity from customer reviews, Section 4 presents the results of experimentation and Section 5 concludes the paper with important observations and scope for future work

II. Related Work

In recent years, mining of opinion from verbal or textual natural language expressions has been explored by researchers for several applications such as mining of web forum messages to predict stock returns [1], mining of political sentiment from public opinion expressed on social media [2, 3], discovering influencers or opinion leaders on a social network [4, 5], ranking of books from readers" reviews [6], comparison of products based on their reviews [7, 8], contextual online advertisement [9], talent management [10], classifying sentiment from movie reviews [11], various scenarios in human-agent interactions [12] etc.

Mining opinion from natural language text comprises of multiple steps including language dependent parsing, labeling of parts-of-speech (POS), identification of opinion bearing sentences and classifying the polarity of the sentiment as positive, negative or neutral [7, 8].

Various lexical tools have been developed by researchers to assist and automate these tasks. For example, parsing and parts-of-speech (POS) labeling for English language can be accomplished using parsers such as the Link

A BETTER AGRICULTURAL CLASSIFICATION SYSTEM IS BEING DESIGNED

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Abstract:
Agriculture is the main source of income for most of the people of African's countries. So there is a need to transform the huge agriculture data into technologies and make them available to the farmers. The aim of this work is to find out the best classification algorithm enhances the classification of the agricultural dataset according to countries, area harvested, yield, production, and seed. Five classification algorithms are used namely J48, PART, Decision Table, IBK, and Naïve Bayes. Real agricultural dataset of the production in African countries is used and applied on WEKA software. The obtained results revealed that J48 algorithm outperformed in terms of error rate and provides slightly better performance than PART and Decision Table. IBK and Naïve Bayes classification algorithms are not suitable for this dataset. This means that trees classifiers and rules classifiers are good for this dataset.:
***Key Word**: Classification of agriculture, WEKA, J48, Decision Table, NaiveBayes, PART, and IBK*

I. Introduction

As it is known that the backbone of the country's economy is agriculture. Hence, the agricultural firms are aimed to computerize their operations in order to increase the productivity [1]. The wide availability of huge amounts of agriculture data has generated an urgent need for the research of data mining. Generating rules with higher accuracy for Agriculture databases can be done using different techniques of data mining [2]. The agricultural classification algorithms enable the farmers to identify the area harvested, the yield, the production, the seed, and etc. The application of agriculture classification is increasing day by day to improve and increase the production of crops. Therefore, the accuracy of agriculture classification systems is very important in agriculture sector. This work aims to find out the best classification algorithm to enhance the accuracy in agriculture classification. Then, recommended the suitable classifier to classify the African's countries and their crops in the harvested area to give the best classification. Five classifiers are applied namely Bayesian, Rules and trees, and Lazy in that Bayesian classifier is NaiveBayes classification algorithm, in rules classifier two classification algorithms are applied Decision Table classification and PART classification algorithms. In trees classifier J48 classification algorithm is examined and in Lazy classifier IKB is applied. These algorithms are examined with 10-fold cross validation test mode by using WEKA software with real agriculture dataset. This paper is organized as: section 2 presents work of other researchers in agricultural classification. Section 3 describes the agricultural dataset which is used. Section 4 implements and discusses the experimental results while section 5 concludes the results.

II. Literature Review (11 Bold)

- They used combination of object-based image analysis and advanced machine learning methods to improve the identification of crops. From ASTER satellite images captured in two different dates of nine major summer crops in central California. They evaluated the classification by applying c4.5, LR, SVM, MPL both as single classifiers and combined hierarchical classification. They found that MPL and SVM as single classifiers obtained accuracy slightly higher than LR and notably higher than c4.5. as the hierarchical combination, the best method is (SVM+SVM) which improves the accuracy of classification for all the studied crops.

- They investigated the effect of three different vegetation indices of rapid eye imagery on classification accuracy. They used overall accuracy and kappa coefficient to evaluate the accuracy of the classified

PASSIVE DAMPER NETWORK IN A BASIC DC DISTRIBUTION POWER SYSTEM

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ABSTRACT:-

Distributed power system (DPS) distributes power amongst processing units such as power electronics converters with DC system. Due to the increasing usage of power converters in DPS system, the system becomes unstable and the converter tends to draw constant power needed by the load of the system. Constant power load (CPL) characteristic has negative input impedance that could produce instability problems in the DC bus system. Passive damping network which consists of series RC damping circuit was connected in parallel to the DC bus system with the purpose to reduce the instability. The passive damper was designed, simulated with MATLAB/Simulink and verified experimentally with different values of CPL power levels and input voltage changes. The obtained simulation results show that simple DC system with constant power load was successfully stabilized by the installation of the passive damping network. The experimental set up was also conducted to validate of the proposed technique, and the obtained results were in excellent agreement with the theoretical parts of the project.

1. INTRODUCTION

Distributed power system (DPS) uses direct current (DC) bus bar to distribute power among processing units such as power electronics converter or DC/DC converters [1], [2]. DPS mostly applied in major industry around the world such as in aircraft, industrial systems, communication systems and many more [3]. DPS is a mature technology as an alternative method to deliver power to the end user [4].The advantages are due to its weight, voltage regulation, size and the flexibility of the system [3], [5]. In DPS, the main supply will be connected to the source voltage that used to modulate the output voltage instead of being supplied directly to the load. The output voltages are desirable to be used and meet the load requirement after the regulatory process was done. However, DPS has some disadvantages, especially in stability issues, where the interactions between converters make the system become unstable. Apart from that, it also causes uneven power distribution between parallel connected converters in the system.

1.1. The Causes of Distribution System Instability

There are several weaknesses in the DPS. One of them is the interaction between the individual converters which leads to the instability of the system. The unbalance power distribution amongst parallel converters also led to an unequal distribution of the output current. Consequently, it will cause an outrageous tenseness on some modules and will increase the failure [6]. The instability of the DPS contributed by the interaction between the interconnected sub-systems [7]. There is no guarantee that the stability of one stand-alone system can be maintained when two stable sub-systems are combined together. Even though the system might be well-designed for the stand-alone operation, there is a possibility that there will be an interaction when the sub-system is integrated together [7].

This reaction occurs due to internal control functions of each individual converter, for instance, the regulation of the converter output voltage [6]. Thus, it causes the converter to draw constant power and will have negative incremental input resistance within the bandwidth of the converter control loop [6]. The negative incremental input resistance is the main characteristic of the constant power load. The characteristic demonstrates that the internal controller in the converter will draw more current to meet the constant power demanded by the load if the source voltage shows some decrement [7]

ASSESSMENTS OF TWIN CYLINDER TRACTOR ENGINE EFFICIENCY USING BIO DIESEL

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Abstract:

The air contamination in the air by expanded utilization of carbon fuel and the exorbitant oil costs prompts scan for exchange sources which will fill in for carbon fuel that could build the exhibition and productivity of the vehicle and all the while diminishes the poison in condition. Biodiesel are the promising substitute for interchange fuel. To limit the use of carbon fuel the biodiesel mixes are utilized. The biodiesel created from cotton seed oil by Trans esterification process speaks to one of the most appropriate choices for utilization of customary carbon fuel. Cotton seed oil is changed over into cotton seed oil methyl ester known as biodiesel arranged within the sight of The air contamination in the air by expanded utilization of carbon fuel and the extreme oil costs prompts scan for exchange sources which will sub for carbon fuel that could build the exhibition and proficiency of the vehicle and at the same time diminishes the poison in condition. Biodiesel are the promising substitute for exchange fuel. To limit the utilization of carbon fuel the biodiesel mixes are utilized. The biodiesel created from cotton seed oil by Trans esterification process speaks to one of the most appropriate choices for utilization of regular carbon fuel. Cotton seed oil is changed over into cotton seed oil methyl ester known as biodiesel arranged within the sight of homogeneous corrosive impetus. The properties of the cotton seed oil is discovered and similar qualities study carried on the readiness of biodiesel mix. The cotton seed biodiesel mix is at first a twofold blend of cotton seed biodiesel+ diesel fuel. The current work is intended to decrease the discharge and to build the exhibition of the motor. The exhibition test is done on the twin chamber tractor motor by utilizing the biodiesel mix. The cottonseed curcas biodiesel is utilized something like half blended in with diesel fuel and the exhibition of the motor is estimated. It creates around 60% significantly less carbon emanation and near 80% considerably less sulfur dioxide. Biodiesel is more greasing up than diesel fuel, expanding the ways of life pattern of the motor. To fulfill this twin flash worry inside the gas oil shortage. Air contamination incited by methods for the developing utilization of oil fuel, exchange clean consuming corrosive impetus. The properties of the cotton seed oil is discovered and similar attributes study carried on the planning of biodiesel mix. The cotton seed biodiesel mix is at first a double blend of cotton seed biodiesel+ diesel fuel. The current work is expected to decrease the emanation and to expand the exhibition of the motor. The exhibition test is done on the twin chamber tractor motor by utilizing the biodiesel mix. The cottonseed curcas biodiesel is utilized something like half blended in with diesel fuel and the presentation of the motor is estimated. It delivers around 60% substantially less carbon emanation and near 80% significantly less sulfur dioxide. Biodiesel is more greasing up than diesel fuel, expanding the ways of life pattern of the motor. To fulfill this twin sparkle worry inside the gas oil shortage. Air contamination provoked by methods for the developing utilization of oil fuel, substitute clean consuming.

Key Word: ***Diesel Engine, Performance, Emission, Cotton seed biodiesel blends.***

I. Introduction

Biodiesel, an environmental friendly diesel fuel which is like a petro-diesel in combustion homes, has obtained widespread attention inside the latest beyond international. Biodiesel is a methyl or ethyl ester of fatty acid crafted from renewable biological sources consisting of vegetable oils (both fit to be edible and nonedible), recycled waste vegetable oil and animal fat [1]. The use of cotton seed oils as fuels has been around since 1900 whilst the inventor of the diesel engine Rudolph Diesel first tested diesel oil in his compression ignition engine [2].

SMART GRIDS MAINTENANCE AND ASSET MANAGEMENT

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Abstract:
This paper presents the importance, issues and challenges related to Smart Grid. It also evaluates various approaches for Smart Grid planning and operation. It discusses tools for asset management and their applicability to the next generation grid. Aging assets, uncertainty in load demand profile and renewable energy resources, and demand management create a challenge for the optimal operation and maintenance of electrical grid. This paper addresses the challenges and opportunities to improve transmission and distribution systems asset maintenance. This paper also presents the asset replacement alternatives. This paper also presents the cost-benefit analysis of asset management using the information/real time data from the utility company. This paper will serve a guide for doing the asset management to the electrification process, investment and recovery to sustain reliable and efficient power delivery

Key Word: Aging assets Asset management Renewable energy resources Smart grid Uncertainty

I. Introduction

Asset Management (AM) is one of the key issue in the Smart Grid context. Aging assets and uncertainty in load demand profile and demand management create a challenge for the optimal operation and maintenance of electrical grid. The proper asset management reduces the risk of equipment failure, extends the equipment life and minimizes the occurrence of unplanned outages. AM refers to any system where the things that are of value to an entity are maintained and monitored. AM is the systematic process of maintaining, operating and upgrading assets with minimum possible cost [1]. Enterprise AM (EAM) is the business processes and enabling information systems that support management of an organization's assets. Physical AM (PAM) is the practice of managing the whole life cycle of physical and infrastructure assets such as production and service plant, power, structures, water and waste treatment facilities, transport systems, distribution networks, buildings and other physical assets. Infrastructure AM expands on this theme in relation primarily to public sector, utilities and transport systems.

Background: Fixed AM (FAM) is the process of accounting which offers to track fixed assets for the financial accounting purposes. IT asset management (ITAM) is the set of business practices which joins the contractual, financial and inventory functions to strategic decision making and support life cycle management for the IT environment [2]. Digital asset management (DAM) is a form of electronic media content management which includes the digital assets. Power systems face several new challenges which includes the sheer complexity that results from the introduction of new devices like phasor measurement units (PMUs), Geographical Information Systems (GIS), sensors and advanced controllers on equipment throughout the system, intelligent electronic devices (IEDs) in substations, electric and hybrid vehicles, smart meters, distributed storage systems, photovoltaic generation and wind generating units [3]. In [4], an application- based distribution network asset management is discussed by proposing a dynamic network rating methodology to facilitate the low carbon network operation. A two-step approach for the scheduling of an electric vehicle (EV) charging while limiting the burden on transmission and distribution assets is proposed in [5].

The Problem: Reference [6] develops a model for determining the location and number of automatic switches in distribution networks with the objective of minimizing the investment, operation, and unreliability costs. In Reference [7], an intelligent framework for the condition monitoring and the assessment of power transformers is

HOW TO CONTROL EMOTIONS FOR EFFECTIVE USE OF HUMAN CAPITAL

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Abstract:
Emotional maturity being one among the mental elements of Emotional insight implies the capacity to assess one's own feelings and of others; recognize and express sentiments; balance the condition of heart and brain; value others' perspective; create others and being versatile and adaptable anytime of time. Passionate development is one which makes a person to be adjusted consistently and does their exercises plainly and effectively. Henceforth the current examination was made to know the degree of Emotional development among the product experts and to look at the impact of individual segment factors on enthusiastic development among programming experts. Expressive research configuration was embraced for the current investigation and tests were chosen utilizing advantageous inspecting procedure and programming experts structure the objective examples for the current examination. Essential information was gathered by utilizing all around organized survey and to demonstrate the outcomes factually t-test was applied. With the showed up discoveries of the examination not many ramifications was determined and not many proposals were recorded as the extension for additional investigation.
Key Word*: Emotional maturity, Emotional intelligence, Emotional development*

I. Introduction

Emotional maturity is reflected in the behavioral pattern exhibited by individuals while dealing with the inner self and the immediate environment. Emotional maturity covers various aspects such as self-awareness, developing others, delaying gratification and being adaptable and flexible at various situations. These are some of the qualities demanded in today's corporate world professions as it requires interacting with people, working in teams etc. This is especially goes true with software professionals as their approach of work is both individualistic and group. Moreover they work in cross cultural environment and they work long hard hours to accomplish their targets within the stipulated time which makes to experience pressure and unbalanced at times resulting in emotional hijacking/harassment. For that reason their nature of job demands them not only with excellence in their technical side but also excellence in their emotional/behavioral side. Currently many organizations across the world have started to realize the significance of role of behavioral attitude among the individuals and in workplace. As a result they have started to learn about Emotional intelligence and its dimensions and stared with practical implementation of these skills among their employees in order to attain assured success both personally and professionally. As a result when software organizations take steps to impart Emotional intelligence and its dimensions skills among their employees, they would be able to handle and balance their emotions at all times and attain assured success continuously.

II. Review of literature

Daniel Goleman and Richard Boyatzis (1999) has found that Software developers with high levels of Emotional Intelligence can develop effective software three times faster than others. Sales Consultants with high levels of Emotional Intelligence generate twice the revenue of their colleagues. A national furniture retailer found that sales people hired based on Emotional Intelligence has half the drop out rate during their first year. Experienced partners in a multi – national consulting firm who were assessed on their levels of Emotional Intelligence delivered $1.2 million more profit from their accounts than did other partners – a 139% incremental gain.

Richburg and Melanie (2002) saw that the intrigue of why some people become successful while others fail despite natural talents, gifts, of intelligence has provoked inquiry into qualities that determine success. While some people possess varying degrees of ability, oftentimes the most talented are not always the most successful, happy, or wealthy, which goes against our rational way of thinking. Although it is premature to conclude that Emotional intelligence plays a key role in determining life success, it is proposed that there may be a significant relationship.

WITH PARTICULAR REFERENCE TO THE MSMED ACT OF 2006, MSME AND ITS EFFECT ON THE INDIAN ECONOMY

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Abstract:
Micro, Small & Medium enterprises have pivotal importance in the development of an economy. They are key supporters of the gross domestic product (GDP) in terms of export promotion and import substitution. MSMEs are noteworthy work generators after agricultural sector. As per latest information, near about 51 million working enterprises employed over 117 million people and contributed nearly 8% to India's total GDP. Despite the fact that it contributes more to the development of economy, the part has been confronting different obstacles in India since long. The Government of India has found a way to defeat such imperatives. It has passed Micro, Small and Medium Enterprises Development (MSMED) Act 2006 which got enormous changes this part. In India, before the sanctioning of this Act, little businesses were done including tiny, cottage and traditional enterprises. This act segregated the medium enterprises three tiers namely micro, small and medium. It also develops legal framework mechanism at the national level as well with balanced representation of stake holders in three categories of enterprises with a wide range of all functions. Keeping in view the urgent role performed by the MSMEs in our economy, the current study explains the feature of MSMEs Act and also highlights the performance of MSMES before and after the MSMED Act 2006. The examination time frame uncovers that there is an outstanding development has been appeared by the MSME area which has been a main supporter for trade, employment and GDP in India. However, in this study, all statistical information are collected from the different government agencies.
Key Word*: GDP, MSME, Economic Growth and Development, Export & Import.*

I. Introduction

II. MSMEs are instruments that help to achieve economic growth and development to create employment as well as it is a tool for poverty reduction and enhance the rural development in the country. It encourages new ideas and increase the entrepreneurial skills. These are flexible enough for adapting rapidly changing demand in the market environment. MSMEs help in diversifying economic activity, and make significant contribution to industrial development and exports. Thus, the establishment and promotion of MSMEs across the world has assumed strategic importance. It contributes approximately 45 percent of the output to manufacturing sector and nearly 40 percent of the total exports of the country. It facilitates near 117 million of employment opportunities to the people throughout the country. There are over 6000 products ranging from traditional to high-tech items, which are being manufactured by the MSMEs in India.

III. Literature Review

Various empirical studies have been conducted from time to time to examine the different aspects of growth pattern and performance of small scale industrial sectors in India and in this context; important studies are reviewed below in a chronological order.

Mali (1998) observed that small and medium enterprises (SMEs) and micro enterprises have to face increasing competition in the present scenario of globalization, they have to specifically improve themselves in the fields of management, marketing, product diversification, infrastructural development, technological up gradation. Moreover, new small and medium enterprises may have to move from slow growth area to the high growth area and they have to form strategic alliance with entrepreneurs of neighboring countries. Data bank on industries to guide the prospective entrepreneurs including investors from abroad is also needed.

RESEARCH ON SOLAR POWERED VAPOR ABSORPTION REFRIGERATION

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ABSTRACT

Vapor absorption refrigeration has a place with the class of Vapor cycles like Vapor pressure refrigeration cycle. Contribution for fume ingestion framework is as warmth subsequently these frameworks are additionally called as thermal worked frameworks. Since the fluids are utilized to retain the refrigerants, they additionally called as wet absorption framework. So these framework runs on second rate vitality, they arranged when poor quality vitality, for example, squander heat or sun oriented vitality is accessible. So from all the perspective, for example, natural cordial, cost and effectively accessible vitality. Work has been done to check the presentation like Cop and Circulation proportion utilizing sun oriented based framework to watch the factors like stream rate and creation.

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1. INTRODUCTION

Vapor Absorption Refrigeration Systems (VARS) belong to the class of vapor cycles like vapor compression refrigeration systems. However, unlike vapor compression refrigeration systems, the required input to absorption systems is in the form of heat. Hence these systems are also called as heat operated or thermal energy driven systems. Since conventional absorption systems use liquids for absorption of refrigerant, these are also sometimes called as wet absorption systems.

Like vapor compression refrigeration systems, vapor absorption refrigeration systems have also been commercialized and are widely used in various refrigeration and air conditioning applications. Since these

STRUCTURING A ROAD WITH RBI GRADE-81

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Abstract:

Clearly, in street development the fluffy rationale utilized for order of street including RBI level 81 of dark cotton soil. For contracting or growing because of shifting moistness content, dark cotton soils are sweeping muds through high potential. The dark cotton soils contain short quality and are powerless against outrageous volume changes, fabricate their use for improvement reasons outstandingly inconvenient. RBI Grade 81 assembles the essential for an all around illustrated, trustworthy and incredibly financially savvy strategy by making strong and irreversible impermeable layer impenetrable to opposing climatic conditions, since high temperatures to permafrost conditions, and obliging each vehicular burden. In this proposed work, fluffy rationale model is utilized for inspecting street development intertwine modification of RBI level 81 by extension of dark cotton soil. In street development, fluffy rationale is used to characterize the yields in which level the street has been used. The outcome exhibits that the two essential thoughts are light moving vehicles and overwhelming moving vehicles. In light of the accomplishment of three yield esteems the street can be utilized for both light and substantial moving vehicles. By supporting in this assessments the toughness and dependability is acceptable in street development.

Key words: *Fuzzy logic algorithm, Road construction, Black cotton soil, RBI grade 81, Modulus of elasticity (ME), Unconfined compressive strength (UCS) and California bearing ratio (CBR).*

I. Introduction

Great road network is a fundamental prerequisite for the overall improvement of a territory. Regrettably, poor road network is hampering the undeniable advancement of the generally prosperous areas.[1] Highway designers are frequently worried with the solidness of pavement structures particularly when subgrades that display high volumetric instability, for example, broad black cotton soils (BC soils) are encountered.[2] Black cotton soils (BC soils) are inorganic clays portrayed by low bearing limit, high compressibility, low porousness and high volume change under changing dampness conditions.[3] Black cotton soil are shaped under state of poor waste under rotating stormy and dry occasional conditions.[4] The harms regularly show up as cracks in, structures, waterway quaint little inns, pavements, lifting of water supply pipeline and sewerage lines etc.[5]

As of late, different polymer stabilizers have developed and are being utilized for soil adjustment. RBI Grade-81 is one of them. RBI Grade-81 (Road Building International Grade-

81) is a compound stabilizer which has been utilized by different analysts for enhancing the properties of various sort of soils.[6] Soil stores in nature exist in an great degree whimsical way delivering along these lines an unending assortment of conceivable blends which will influence the quality of the soil and the strategies to make it purposeful.[7] Soil adjustment is the modification of at least one soil properties, by mechanical or synthetic means, to make an enhanced soil material having the wanted designing properties.[8] In this stage Fuzzy Logic (FL) is a problem solving control framework philosophy that fits execution in frameworks running from basic, little, inserted small scale controllers to expansive, arranged, multichannel PC or workstation-based information securing and control systems.[9]

The organization of this paper is collected as takes after: section 2 demonstrates Literature review, section 3 demonstrates proposed methodology, section 4 shows results and discussion finally section 5 illustrates conclusion.

II. LITERATURE REVIEW

STUDIES ON THE METAL TUBES' ENERGY ABSORPTION CAPACITY

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Abstract:

Effect energy absorbers are superfluous mechanical auxiliary components, which are brought energetically to disseminate the active vitality in case of an undesirable crash. These go about as mechanical wires to constrain the heaps, which may follow up on the primary structure following a crash. The utilization of aluminum tubes and cylindrical structures for use as effect vitality safeguards in various designing applications is empowering. This is a direct result of their prepared accessibility in various cross areas and sizes, and furthermore has high energy retention limit under semi static and dynamic burdens. In this current investigation, tests are led on roundabout aluminum tubes under semi static, hub pressure. The various methods of twisting of these cylinders are analyzed in two separate cases. Case 1: when the cylinders packed pivotally between a level platen and molded bites the dust of various radii. Case 2: when the cylinders compacted pivotally between two level platens. Bites the dust of various radii are utilized to assess the effective method of twisting. Theenergy ingestion limit under semi static stacking conditions is assessed in the above cases to assess the energy retention limit and to analyze the vitality assimilation of aluminum tubes dependent on the distinctive distortion modes. The consequences of the investigation are helpful in the plan of effect energy absorbers

Key Word:

I. Introduction

The major challenge in the design of impact energy absorbers (IEA) is to establish the relation between the specified force level to the geometric and material properties of the impact energy absorber.

The selection of an appropriate energy absorber depends very much on its application and the desired response upon impact. So, for an IEA to perform effectively it should possess the following qualities:

- Undergo large plastic deformations at controlled rates.
- A predictable flat load-deformation characteristic under quasi-static and dynamic loading conditions.
- High specific energy absorbing capacity (energy absorbed per unit mass). This makes it ideally suitable for applications in automobile and aircraft industries.

High energy-dissipation density (or energy absorbed per unit volume). This is required as for protective claddings in static structures or to absorb the kinetic energy of a falling lift.

1.1. Aluminium Tubes as Impact Energy Absorbers

Circular tubes are used extensively as energy absorbing elements, the main attraction being their ready availability in a wide range of dimensions and materials as well as the wide range of deformation modes which can

COMPOSITE MATERIALS WITH FIBER REINFORCEMENT: A REVIEW

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Abstract: **Fiber strengthened composite materials are currently a significant class of a designing materials. They offer extraordinary mechanical properties, one of a kind adaptability in plan capacities, and simplicity of manufacture. Extra points of interest incorporate light weight and erosion opposition, sway obstruction, and phenomenal weakness quality. Today fiber composites are routinely utilized in such assorted applications as autos, airplane, space vehicles, seaward structures, compartments and funneling, outdoor supplies, hardware, and machines. In the current work, micromechanical conduct of a square unit cell of uni-directional fiber fortified composite with orthotropic filaments (viz., Hexply Im7-8552, Kelvar and Carbon T300) installed in epoxy gum has been dissected under tractable stacking utilizing Finite component investigation programming bundle Ansys 13.0. The 3-D Finite Element Model with overseeing limit conditions has been created from the unit cell of square example of the composite to assess the building constants like, Longitudinal modulus (E1), Transverse modulus (E2), In-plane shear modulus (G12) and Major Poisson's proportion (v12) of the above FRP composites for different fiber volume portions. Additionally, interfacial anxieties initiated at the fiber-lattice interfaces because of longitudinal stacking for different fiber volume portions has been evaluated. At last the outcomes acquired from limited component examination (Numerical technique) are approved with benchmark results. The current work will be helpful to foresee the designing constants of uni-directional fiber strengthened composite materials exposed to longitudinal stacking.**

Key Word: **Epoxy, Finite Element Analysis, FRP, Interface, Lamina, Micromechanics.**

I. Introduction

A Composite is a material system consisting of two or more phases on a macroscopic scale, whose mechanical performance and properties are designed to be superior to those of constituent materials acting independently. One of the phase is discontinuous, stiffer, and stronger and is called reinforcement. Where the less stiff and weaker phase is continuous and is called matrix. The low density, high strength, high stiffness to weight ratio, excellent durability and design flexibility of fiber-reinforced composite materials are the primary reasons for their extended use. The fiber reinforced composites can be a tailor made, as their properties can be controlled by the appropriate selection of the substrata parameters such as fiber orientation, volume fraction, fiber spacing, and layer sequence. The required directional properties can be achieved in the case of fiber reinforced composites by properly selecting fiber orientation, fiber volume fraction, fiber spacing, and fiber distribution in the matrix and layer sequence. As a result of this, the designer can have a tailor-made material with the desired properties. Such a material design reduces the weight and improves the performance of the composite. For example, the carbon-carbon composites are strong in the direction of the fiber reinforcement but weak in the other direction. Chen and Chang [1], Hussain S.A. et.al [2], have developed predictive models for micromechanical analysis of fiber reinforced composites with various types of constituents. Tandon [3] has evaluated the interfacial normal strength in

ENVIRONMENTAL BROILING INDIA STUDY

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Abstract:

This study addressed Social perceptions and awareness about environmental warming in India through a survey of 851 subjects in the city of Delhi in the year 2017. A stratified sample of nine segments of society showed that, although people consider environmental warming a serious problem, they do not clearly understand its causes, impacts, and solutions. The analysis of data using paired T-tests indicated differences in levels of awareness about environmental warming, across age and education. ANOVA and regression analysis suggested that levels of awareness among respondents varied according to their occupation. The degree of seriousness with which subjects viewed environmental warming influenced the degree of their support for eco-friendly initiatives. The level of education of subjects was correlated with variations in their perceptions about environmental warming and support for environmentally friendly initiatives. However, subjects associated environmental warming with the issue of air pollution. They showed a tendency to advocate action by society and government rather than by individual initiatives to address the problem. Based on these findings, policy makers can tailor awareness initiatives, highlighting the seriousness of the problem and the measures that could be taken at the individual level.

Key Words: . ANOVA and regression, *GHG discharges*

I. Introduction

India attests that even while seeking after monetary development and improvement, its per-capita GHG discharges won't surpass those of created nations which it thinks about in charge of a great part of the current ecological warming (Prime Minister's Office, 2017). Like other creating nations, India sees natural warming as an issue caused mainly by inefficient vitality use by created nations. Along these lines, it would be troublesome for India to elevate residential measures to forestall natural warming unless it held advantage for the nation (Nomuri Research Institute, 2004). India knows that natural environmental change will adversely affect the nation's biological communities, horticulture, woods, illness vectors, and marine assets. The Prime Minister's Council on Climate Change administers the joining of environmental change worries into the national advancement arranging through a "moderately GHG favourable economical development way" which incorporates dissemination of sustainable power source, vitality productivity, backwoods and water assets administration, and natural instruction (National Environment Policy, 2006). India is likewise actualizing area particular GHG diminishment programs in association with multi-parallel associations and under reciprocal projects with created nations. Ecological warming needs a multi-pronged approach which includes changes in innovation, vitality costs, business rehearses, customer conduct, and different exercises influencing individuals' everyday lives (Sterman and Sweeney, 2017). Since a low level of mindfulness about environmental change in creating nations is one of the hindrances to ecological warming alleviation, it is important to advance and encourage instruction, preparing, and mindfulness programs in such nations (Chatterjee, 2002). Since Social help for and support in natural warming moderation are essential for effectively tending to this issue, this exploration learned the level of Social mindfulness and information about ecological warming in India. A stratified study of 851 respondents was done in the year 2017 in Delhi, India's fifth biggest city, to find out about Social

THE IMPACT OF PMS ON GOVERNMENT FOUNDATION IN TERMS OF ITS PARTICIPATION AND ROLE

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Abstract:
The motivation behind this examination is to research the impact of the execution components of Performance Measurement System (PMS) on government foundation to the hierarchical presentation of the Regional Device Work Unit (RDWU). It is intervened by the factors the utilization of execution estimation and responsibility frameworks of Central Java Province. Execution, use and responsibility are the phases of action attempted in the structure of execution estimation frameworks. While the presentation of the association is the accomplishment of the executives as estimated from the degree of accomplishment of the program plan dictated by the acknowledgment of the program that has been resolved. Execution is estimated by utilizing a money related and non-budgetary methodology whose information originates from the monetary authority and the territorial association department of Central Java area. The respondents of this examination are 102 government employees who are for the most part some portion of the program staff. The sort of information utilized is essential and optional information from more than 50 RDWU Central Java. This investigation depends on Quantitative Method of Structural Equation Modeling technique utilizing Partial Least Square (WarpPLS 5.00) examination to test the speculation assembled. There is proof that administration duty and initiative style have a noteworthy beneficial outcome on the utilization of PMS data. Administrative Council Authority and Supervision of Supreme Audit Board (SAB) likewise significantly affect execution responsibility. This examination has hypothetical ramifications that institutional isomorphism happens in regular practice in the field and it assumes a significant job in the execution procedure of execution estimation and responsibility framework in the open part, particularly in administration of Central Java Province. From the arrangement making point of view, this examination can be considered by the focal government, authoritative chamber and SAB that inside and outside exhibition estimation framework positively affects the utilization of PMS and execution responsibility in the commonplace legislature of Central Java.

Key words: *Performance measurement system, implementation, quantitative research Data Availability*

I. Introduction

Balabonienė dan Večerskienė (2015) states that public sector organisations are currently operating in a dynamic environment and it is forcing local government organisations to continually adjust and environmental conditions change. Measurement of organisational performance has been conceived as one of the management functions, which is currently analysed as a branch of science that evolved independently. In an effort to measure the performance of public sector organisations, it is very important to apply the appropriate performance measurement methods.

Its heart is a sovereign government public sector, which in turn is controlled by politicians (Jones dan Pendlebury, 2010). At all levels of government, sovereignty has different elements in its application. The concept of triaspolitical consisting of council legislative, judicial and executive general classification a nationality that has been widely known throughout the world. Indonesia's head of government held by the president are being monitored by the legislature authorising the measures taken, while the judicial council is a watchdog agency relationship between the executive and the legislature. Supreme Audit Board (SAB) is a state agency that has been stipulated in the Constitution of the State as the highest legislation in the Republic of Indonesia and serves as a judicial body of the country. Notwithstanding the foregoing, the chief executive can set up institutions outside the executive branch with the SAB as an institution involving the performance of the state examiner (Presiden, 2006).

The monitoring body or the highest government inspectors Audit Board, while the Financial and Development Supervisory Board (FDSA) is the internal agency within the government how the internal environment of government institutions. Likewise, an internal agency of government inspectorates that are within the scope of internal government. Monitoring and evaluation function is a major task undertaken by the investigative agency to ensure that all government work plan implemented (Leoveanu, 2016). Performance

THE IMPACT OF THE STOCK MARKET ON INDIAN ECONOMY GROWTH

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The fundamental reason for this study was to investigate the causal connection between the stock market operation and economic growth and development in terms of an empirical literature framework. Stock market experts have hold several opinion regarding functions of stock market like improving liquidity position in the economy, amassing and assembling capital, watching supervisors and applying corporate control, giving danger pooling and sharing administrations including speculation levels. The existing literatures argue that stock markets are crucially related to the economic growth and hence a positive e relation exists between efficient operation of stock market and economic prosperity of the country by affecting the aggregate quantum of investment.

Keywords: *Stock Market, Economic Growth & Developed.*

I. Introduction

Recent theoretical studies have already commenced the first step to link the financial market and the rate of economic growth; it is proposed that higher per capita income may affect many aspects of the economy and stock market performance. Gurley and Shaw (1955, 1960 and 1967) argued that financial development is a positive function of real income and wealth. This study supports the quantitative work of Goldsmith (1969) who discovered that, in most of the 35 countries investigated, both developed and developing, the ratio of the financial institution to GDP tends to increase with higher real income and wealth. This relationship between growth and financial system size is further supported by more recent evidence from the World Bank (1989). Much of the research within empirical studies concurs that finance is strongly associated with economic growth rate.

Financial markets are today classified as bank-based or market-based systems. This division can be further exemplified by the Anglo-Saxon market-based models which are capitalist economies and allow for private investment and private ownership and the other, largely exemplified by Germany, which is the bank-based model that has been practised more widely by Eastern European countries. These latter are centrally-planned or, to be politically correct, communist economies (Hall and Soskice, 2001). The UK and US are market-based as these countries have similar long-term growth rates[1]. Throughout the world, the type of financial model practised by sovereign countries reflects the type of government as a regime in power. Many, Eastern European, Middle Eastern and African countries, including Libya, have practised socialism for a long time. However in the light of recent trends, and under the direction of the IMF and World Banks, many countries are now reforming their economies and gradually adopting capitalism, largely as a result of the failure of socialism and particularly in order to rescue their economies. In this context, the World Bank (1994, 1989) has argued for the establishment and promotion of stock markets in developing countries in line with those existing in developed countries.

II. Review of Related Literature

Definition of a Stock Market

A stock market can be a very sophisticated market place, where stocks and shares are the traded commodity. At the same time, it is central to the creation and development of a strong and competitive economy. It is a key to structural transformations in any economy; from traditional, rigid, insecure bank-based to a more flexible, more secure economy that is immune to shocks, fluctuations and lack of investors' confidence (Stapley, 1986). According to Arnold (2004), stock markets are where government and industry can raise long-term capital and investors can purchase and sell securities. Typically, markets, whether they be shares, bonds, cattle or fruit and vegetables, are simply mechanisms to allow the possibility of trade between individuals or organisations. Whilst some markets (e.g. for livestock) are physical where buyers and vendors meet to trade, others (e.g. for foreign currency) are a national network, based on communication using telephone lines and computer links, with no

VOLTAGE MAGNITUDES AND VOLTAGE STEP ANGLES OF REAL ELECTRICAL NETWORKS USING ARTIFICIAL INTELLIGENCE TOOLS

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Abstract:
In the field of electrical network, it is necessary, under different conditions, to learn about the behavior of the system. Power Flow Analysis is the tool per excellent that allow as to make a deep study and define all quantities of each bus of the system. To determine power flow analysis there is a lot of methods, we have either numerical or intelligent techniques. Lately, researchers always work on finding intelligent methods that allow them to solve their complex problems. The goal of this article is to compare two intelligent methods that are capable of predicting quantities; artificial neural network and adaptive neuro-fuzzy inference system using real electrical networks. To do that we used few significant discrepancies. These methods are characterized by giving results in real time. To make this comparison successful, we implemented these two methods, to predict the voltage magnitudes and the voltage phase angles, on two Moroccan electrical networks. The results of the comparison show that the method of adaptive neuro-fuzzy inference system have more advantages than the method of artificial neural network.

I. Introduction

The complexity and the growth in size of electrical systems have necessitated the use of reliable methods which can solve the problem of power flow analysis. The important development in hardware and software technologies have transformed the solution of power flow analysis from complex task to a simple process capable of getting very good solution. The techniques of artificial intelligence have made their own way into a lot of fields in our lives.
Artificial intelligent (AI) is the ability of machines to use algorithms to learn from data, and use what has been learned to make decisions like a human would. Unlike humans, though, AI powered machines don't need to take breaks or rest and they can analyze massive volumes of information all at once. The ratio of errors is also significantly lower for machines that perform the same tasks as their human counterparts. Another benefit of AI is that it allows machines and robots to perform tasks that humans consider to be difficult, boring, or dangerous. In turn, this will enable humankind to do things that were once thought impossible [1]. A neural network (NN) is a computing systems inspired by the biological neural networks. Neural networks have a lot of types, some of them are simple and some others are complex [2]. artificial neural networks (ANN) are effective in dealing with tricky issues, unclear problems or highly nonlinear with a lot of variables [3]. Adaptive neural fuzzy inference system (ANFIS) uses the learningalgorithm of the artificial neural network and it is based on fuzzy logic modeling. Since it combines between the properties of both, it can benefits from the advantages of each method [4]. The purpose of estimating the state of an electrical system is to process the available information and produce the best possible estimate of the actual state of this system. It is a numerical processing scheme that provides a real-time database for many specific functions. With the state estimator we can predict the values of voltage magnitudes and voltage phase angles and get similar results as the real one [5]. In this paper we aim to predict the voltage magnitudes and the voltage phase angles at each bus of the two Moroccan electrical networks, in real time and with great precision using two artificial intelligent techniques and based on the analyzes we obtained from the study that we did, the method of ANFIS was the best compared to the method of the ANN in terms of calculation time and precision. The study proposed in this paper is to predict voltage magnitudes and voltage phase angles using ANN and ANFIS and make a comparison between this two intelligent methods. A lot of articles dealt with subjects related to artificial intelligent methods in solving different problems of electrical power. In reference [6], the paper discussed the use of ANN in

An analysis of virtual reality technology for metal arc welding

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ABSTRACT

Virtual Reality (VR) makes PC produced condition that encourages multidisciplinary collaborative building. PC designs turns out to be a lot of easy to understand for a normal client. It permits individuals to see the encompassing scene in new measurement and to encounter protests that are not plausible, all things considered, condition. Augmented reality helps into the existence where one can collaborate with PC based reproduction rather than simply watching an image on the screen.
Virtual reality condition depends on visual encounters and PC screen or stereoscopic presentations. Virtual condition makes clients to cooperate with the gadgets, for example, a console, a mouse, or a wired glove, goggles and so forth. Computer generated Reality innovation may give a successful and creative arrangement, and different complex cutting edge VR frameworks for preparing. The paper targets giving a survey on computer generated reality, augmented reality frameworks, computer generated reality applications, challenges in augmented reality, virtual welding and Virtual Reality Modeling Language (VRML). The paper additionally accentuates on theoretical structure of virtual welding stage.

Key words: *Virtual Reality, Virtual Welding, Modelling Language Virtual Welding Platform*

1. INTRODUCTION TO VIRTUAL REALITY (VR)

Virtual Reality (VR) is an environment based on computer simulation. It simulates human physical motion presence in the real and simulation world. It creates an interactive experience where human being feels totally involved in virtual environment by means of computer-human interface equipment. Virtual reality helps the users to interact with virtual 3D objects in a natural way, and making them to feel as real and getting to realize, analyze and simulate [1].

There are mainly three types of Virtual Reality namely Non-immersive, Sensory-immersive and Neural-direct. Non-immersive level is basically experienced on a desktop computer, where the virtual environment is created without any hardware equipments. In Neural-direct method, human brain is directly linked to a database and the observer's current position and orientation. [2]. In Sensory-

A SOCIO-ECONOMIC CONDITION ANALYSIS OF AGRICULTURAL LABORERS

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Abstract
Since long time agriculture is the prime occupation in India as well as Karnataka, even today about 58 per cent of the population relied on it as prime occupation. It plays a dominant role in India's economic development although its share to GDP has been declining continuously from 57 per cent in 1950-51 to 17 per cent in 2016-17 (including allied activities). Despite declining its relative share in GDP, this sector has registered the reasonable growth in last few decades. However, one of the major bottlenecks that has emerged and can become an insurmountable problem is the issue of shortage of agricultural labour. Due to the low wage rate, wage monopoly, insecurity, seasonal employment in agriculture and other factors have pushed the agricultural labourers to migrate from agricultural sector to rest of other sectors. In this regard, this paper is devoted to articulate the socio-economic conditions of the agricultural labourers in the study region. This study is relied on both the secondary and primary data for its analysis.
Key words: *Agricultural Labourers, Exploitation, MGNREGA, BPL, Income, Saving, Expenditure*

1. Introduction

As per the 2011 census, India's total population was 1.2 billion of which huge of about 228.3 million populations was relied on agriculture sector (which was 259 million in 2004-05) followed by 110.7 million in secondary sector, 127.8 million in tertiary sector and remaining were the rest of the population. It is really astonishing that between the periods 2004-05 and 2011-12 across the Indian states like Karnataka (4.9 million), Uttar Pradesh (8.47 Million), West Bengal (3.71 million), Bihar (3.63 million), and Rajasthan (3.56 million) huge agriculture workers moved away from the agricultural sector[1]. Yes, transforming of excess labour force from agriculture sector to other sectors is positive sign of Indian economy…… but what is the acceptance rate of such unskilled workers in other sectors? Still it is mysterious in India.

Agricultural sector is classified into three main categories namely cultivators, agricultural labour and workers engaged in forestry, fishing and livestock etc….. Labour is the most important factors of production in traditional agricultural system. India's economic development is heavily relied on the growth of agricultural sector. In order to increase the living standard of the agricultural labourers and bring them into the main stream, since first five year plan on words, the central and states governments have set a number of programmes. In India agricultural labours do not possess any other skills and they have little employment opportunities in any other sectors. Agriculture is the weather based activity, if country receives good monsoon, agricultural labourers get their subsistence otherwise not. Indian agriculture was marked by lack of supply of form labour in recent years. The available labour force was remained under-utilized due to the residuary nature of work in the agriculture sector. Looking at agricultural wage has its advantages both as a statistical measure as well as a way of thinking about how growth trickles down to the poor.

2. Statement of the Problems and Research issues

Problems identify for the study is descriptive and analytical in nature. Since Independence our state and central government have strived to improve the life of the agricultural labourers through implementing several flagship programmesand schemes. Several studies were already done regarding the socio-economic conditions of the agricultural labourers across the country. This is another one effort in this regard and which certainly helps to know the current socio-economic status of the agricultural labourers in the study region. Issues relating to the income, savings, housing, basic amenities, daftness, Debt, banking literacy and so forth status of the agricultural labourers in the study

COMPARATIVE STUDY OF INFORMATION FROM LANDSAT COMPUTERIZED HEIGHT MODEL (DEM)

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Abstract

In this paper, a contextual investigation is introduced to separate among Landsat and Aster information by morphometric examination. For this the Aster and Landsat computerized height model (DEM) information of a similar report territory was taken and afterward both the information was portrayed for the equivalent (normal) outlet. The significant contrasts found in the middle of Landsat and Aster information after outline are in the quantity of first request stream, hub length of streams, normal width and size of watershed. The contextual investigation introduced will be valuable in exhibiting the way that Landsat DEM has preferable exactness over Aster DEM for land spread regions when the DEM information trademark are kept comparative.

Keywords: ArcGIS 9.3, Aster; Digital Elevation Model, Landsat, Morphometric Analysis;

1. Introduction

Watersheds are natural hydrological entities that cover a specific aerial expanse of land surface from which the rainfall runoff flows to a defined drain, channel, stream or river at any particular point. The morphometric parameters of a watershed are reflective of its hydrological response to a considerable extent and are helpful in synthesizing its hydrological behavior because it enables us to understand the relationship among different aspects of the drainage pattern of the basin, and also to make a comparative evaluation of different drainage basins developed in various geologic and climatic regimes.

The basin morphometric characteristics of the various basins have been studied by many scientists using conventional (Horton, 1945; Smith, 1950; Strahler, 1957) and remote sensing and GIS methods (Krishnamurthy and Srinivas, 1995; Srivastava and Mitra, 1995; Agarwal, 1998; Biswas et al., 1999; Narendra and Nageswara Rao, 2006). The rapidly emerging Geoinformatics technology has effective tools to overcome most of the problems of land and water resources planning and management on the account of usage of conventional methods of data process. Morphometric analysis requires measurement of linear features, gradient of channel network and contributing ground slopes of the drainage basin.

In this study two DEM data (Landsat and Aster data, of same pixel resolution of 30 meter), was used to analysis an area of 4996.2 km^2 covering East Singhbhum. Both Landsat and Aster DEM data was downloaded from GLCF having the same latitude and longitude boundaries. Then both the data were processed in ArcGIS 9.3 and DEM based automatic delineation method was used to delineate the watershed at the same common outlet. This automation has made delineation very dependent on the quality of the digital elevation data.

2. Study area and Data

The region selected for proposed study is an area covering East Singhbhum which is situated at the southeast corner of Jharkhand in India showed in figure 1. The district is bounded on the east by Midnapore district, on the north by Purulia district, both of West Bengal, on the west by West Singhbhum district of Jharkhand state and on the south by

EFFICIENT RESOURCE SHARING WITH ALL MOBILE USERS SUPPORTED BASE-BAND PROCESSING TECHNOLOGY

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Abstract:

In our paper, SRAN (single radio access network technology) supports multi-band and multi- mode communication for mobile users. In this, we address the signaling impact results of various mobile bands and its spectrum utilization, resource utilization for high speed and its reduced latency model. We deployed this architecture of network using reduced space capacity and increased network resource utilization. Achievements made by simplicity of baseband board technology. This introduces an optimization problem involving a trade-off between the number of additional bands that are required and the costs of moving through the mobile field for the purpose of spectrum usage. The Basic idea is to achieve 2G, 3G and LTE communication using a single multi-band rectangular antenna. The method proposed guarantee that no further delay or latency of the network can occur during the restoration. It considers about the energy consumption and the remaining energy of base station as well as quality of links to find energy-efficient and reliable routes that increase the operational lifetime of the network. Quality of Service of the communication network is also improved in rural or hilly regions. From this, we will analyze the multimode concurrency and conclude the performance of different bands. The performance can be shown in graphical model.

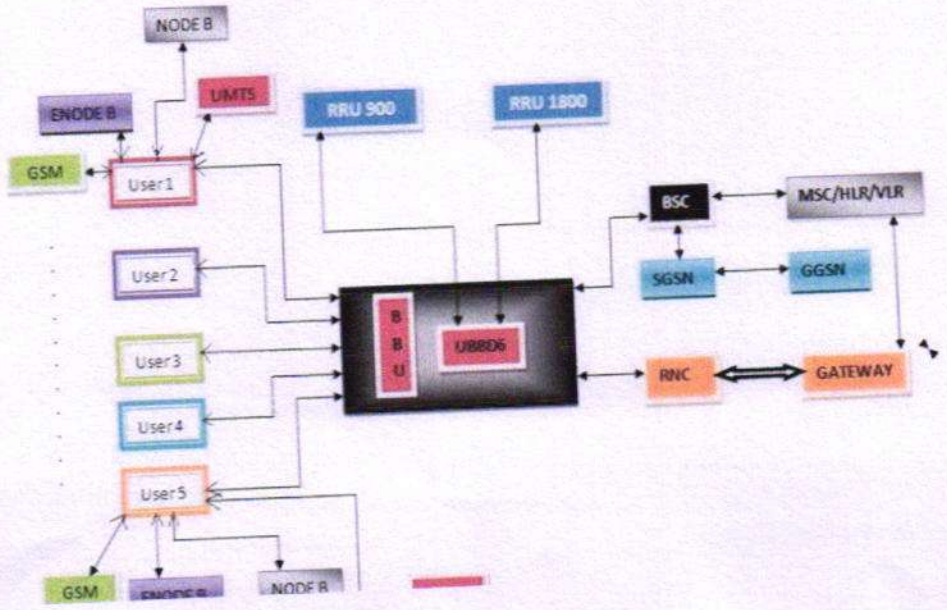
Key words: *2G, 3G, LTE communication, Effective Resource Sharing, SRAN, UBBPd6 technology*

I. Introduction

1. Communication Network Using Sran Technology

Figure 1 shows the base station functioning in an SRAN network. In this paper, users of different band technologies are considered and they are connected to RNC (Radio Network Controller) via UBBPd6 (Universal Base-Band Processing unit) card. SRAN is similar to Software Defined Radio (SDR), ie., controlling hardware using appropriate software. With SRAN, all relevant wireless technologies are supported by modular multi-standard architecture for wireless base stations (BTS). The functionality of BSC and RNC is made available on a common platform. And third, the standardization of the management solution for the network elements (NEM/ OMC) leads to economic operation and first opens the door to the use of cross-technology techniques for network optimization.

Figure 1 Proposed work –General block diagram using SRAN technology



IMPROVEMENT OF THE HILL CIPHER ALGORITHM USE IN THE SOCIAL DEFINED NETWORK BASED STRATEGY DEVELOPMENT SECURITY APPLICATION

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Abstract:
The aim of this study is to develop a strategy based security applications to improve the software security defined network using modern proficient algorithm. It has a control model by the separation of the control plane and data plane. It's well suited to secure the network deployments and provides logically centralized intelligence programmability. But, the software defined network suffers from denial of service attacks in most cases. To overcome this crisis, security algorithm has been proposed to protect the network and investigated the security assets on the software defined network control channel and required algorithm to overcome the security problem. Hill cipher algorithm is used for providing authentication to secure the software defined network. This analysis is focused on performance of various routing protocols running over software defined network by using the authentication mechanism. Performance metrics like throughput, end-to-end delay and packet delivery ratio were considered for analysis. The result shows that the destination sequenced distance vector routing protocol have better performance in software defined network.
***Key Word**: SDN, Security, DoS, Routing Protocol, DSDV Routing*

I. Introduction

In current scenario the new technique of Software Defined Network (SDN) manages network services through low-level functionality. SDN has a centralized controller that defines the behavior of the network. It enables the administrator to use simpler and more flexible network control and management. The controller manages the underlying network devices through an open and standardized Application Programming Interface (API). The control plane exchanges the information to data plane through the southbound application programming interface [1-4]. The centralized controller of the SDN had the global view of the entire network state, and can adapt to complex networks by reacting to network states and events. Each device in the network communicates with each other to coordinate network path construction. In a centralized control plane paradigm, a single-control plane would exist. This plane helps to push commands to manipulate its physical switching and routing for each device [5-8]. On comparing the software defined networks and traditional networks, SDN has centralized controller, where the other has distributed controller, shown in Figure 1. The way, the traditional network handles an incoming packet is written into its firmware and moreover, they are static and inflexible networks. According to SDN architecture, SDN is suitable for several networks such as data center, transport networks and mobile networks [9-12]. The SDN has the capacity to block certain packets by automatically prioritizing and ability to control switches that handles data. It enables to increase the efficiency without the need of application-specific network switches. The architecture of the SDN is categorized into three layers such as application layer, control layer and data layer as shown in Figure 2. The data plane composed of forwarding devices that performs a set of elementary operations. Each device forwards the incoming packets through a well-defined instruction sets [13-16]. The most important layer of the SDN is the control layer which keeps on tracking the topology and has the control of all the network devices in the infrastructure. The control layer exchanges the information of the network state with the application layer through the northbound API. The application layer consists of an application that works under the commands offered by the northbound interface with the network application includes load balancing, monitoring, firewalls, routing, etc. The research work focuses on improving network security in SDN. It monitors the system dynamically to detect suspicious traffic during real-time network operations [17-21]. One of the most common types of security problems

SIMULATION OF FLOW CHARACTERISTICS IN A FIRE-TUBE BOILER

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ABSTRACT

This paper gives the thermal investigation of fire-tube boilers utilized in thermal force plants. For reproduction reason, a little scope model of the first fire-tube evaporator is planned utilizing Solid Works. The numerical reproduction of the structured model is completed in ANSYS Fluent. The underlying area of the paper speaks to the weight and temperature varieties along the length of the kettle for various water speeds (25 m/s, 30 m/s, 35 m/s and 40 m/s). The later segment bargains by changing the evaporator packaging material between steel, metal and treated steel to consider the weight and temperature varieties at consistent water speed of 30 m/s. In light of the outcomes, the best kettle shell material among these three has been recognized. The outcomes have been given as weight and temperature shapes as got from the CFD investigation.

Key words: Fire Tube Boiler, Numerical Analysis, ANSYS Fluent, CFD Analysis, Negative Heat Flux, Pressure-Velocity Variation.

1. INTRODUCTION

Boilers are pressure vessels which are used for heating water or generating steam for the heating facility in industries and to generate electricity through steam turbines. A boiler is an enclosed vessel which is used to provide heat for the combustion of the fuel in the thermal power plant [1]. In a fire tube the hot gases or flue gases pass inside the boiler tubes and the water is transferred outside in the shell. Water gets converted into the high temperature by the heat transfer from the gases to water [2]. If the boiler is subjected to the high temperature and high pressure conditions then the walls of boiler are subjected to the high stresses [3]. The main components of a boiler are fabricated by the high-temperature alloys such as steel, cast iron, stainless steel etc. The failure in the boiler generally affects the output of the overall power plant. Identifying the correct failure reason often helps to ensure integrity of the component. There are many reasons due to which boiler failure occurs such as pitting, stress corrosion cracking, stress rupture, creep, erosion and thermal fatigue [4].

In the Pulverized coal-fired boiler, the flue gases temperature can reach up to the 1200°C and it contains fly ash that induces the erosion [5]. In present, the boilers have to completely isolated from the external environment for the proper functioning. So, methodologies based in the computational simulations have been used to analyze effect of velocity on boiler function. Now a days, the computational analysis is used instead of prototype. It is the advantageous tool for analyzing the fluid flow and heat transfer problems.

A SECURE WAY OF IMPROVING DATA INTEGRITY, DATA SHARING, AND PRIVACY POLICY IN A CLOUD ENVIRONMENT

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Abstract:
Data sharing with a huge numeral of accomplices requisite take into account a number of concerns, including data owner's efficiency, data integrity and privacy. Ring signature is an auspicious candidate to build an unspecified and trustworthy data sharing system. It endures a data owner to anonymously endorse data which can be positioned into the cloud for storage or analysis determination. The exorbitant certificate verification in the traditional public key infrastructure (PKI) setting suits a blockage for this elucidation to be ascendable. Identity-based (ID-based) ring signature, which eradicates the process of certificate verification, can be used instead. Data sharing has certainly not been tranquil with the progresses of cloud computing, and a precise analysis on the shared data runs an array of assistances to both the society and individuals. In this Improving efficiency, data integrity and Effective privacy policy and Anonymous Data Sharing with Forward Security, it is additionally enriched the security of ID-based ring signature by providing forward security

Key Word: *Authentication, Data Sharing, Cloud Computing, Forward Security, Smart Grid .*

I. Introduction

The reputation and prevalent routine of "CLOUD" have fetched pronounced accessibility for data sharing and collection [1]. The individuals can acquire useful data more easily as well as sharing data with others can provide a number of benefits to the society also. As a representative example, consumers in Smart Grid [4] can acquire their energy norm data in a fine-grained method and are stimulated to stake their personal energy usage data with others, like by uploading the data to a third party platform such as Microsoft Hohm . Starting the collected data a statistical report is formed, and one can equate their n energy consumption with others. This capacity to access, analyze, and return to much more precise and exhaustive data from all levels of the electric grid is critical to resourceful energy process. Due to its openness, data sharing is always organized in a hostile environment and vulnerable to a number of security threats. Taking energy usage data distribution in Smart Grid as an example, there are several security goals a practical system must meet, together with Data Authenticity, in the situation of smart grid, the statistic energy usage data would be misleading if it is forged by adversaries. While this issue alone can be solved using well recognized cryptographic tools, one may meet additional difficulties when other issues are taken into account, such as obscurity and proficiency.

Anonymity: Energy usage data contains vast information of consumers, from which one can citation the number of persons in the home, the types of electric utilities used in a specific time period, etc. Thus, it is critical to protect the anonymity of consumers in such applications, and any failures to do so may lead to the reluctance from the consumers to share data with others; and Efficiency, the number of users in a data sharing system could be HUGE, and a practical system must reduce the computation and communication cost as much as possible. Else it would lead to a waste of energy, which contradicts the goal of smart grid.

INFORMATION SYSTEM FOR THE LABOR MARKET

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Abstract

In India, organizations related to Information Technology have made its place and name in the global IT market based on large and cost-effective labour force. Over the years, organizations across the world have recognized the value of India's huge and readily available pool of IT professionals. In order to transfer this huge pool of skilled labour force into productive labour force, pre-requisite is to conceptualize a centralized framework that provides the information on labour market where people can find job and employer can find a candidate with required skills. Labour Market Information System, commonly known as LMIS, is a platform for manpower management that has the ability to integrate process, analyze and disseminate labour market information. LMIS acts as a single window for data and information source on the labour market. LMIS also bridges the difference between the required and available skill levels of the huge labour force in the country. It will facilitate students to take right decision about education, job process, required types of training program and identification of key skill requirements across different IT sectors, geographies. Objective of this paper is to conceptualize a well-structured LMIS to assist planning of information system for Indian geography. This paper provides the overview of labour market information system and framework of it in IT Sector.

Keywords: *Labour Force, Labour, Labour Market Information System, Centralized Framework, Information Technology.*

1. Introduction

Indian economy is considered as the tenth largest and the fastest growing economy with estimated GDP growth of more than 7% for the upcoming years. Furthermore, India's population was 1 billion in 2001 and is estimated to reach 1.4 billion in 2021 of which 64% is estimated to be of age group 15-34 and labour force is also estimated to increase by 20% between 1990 to 2011 [6].

Labour force refers to number of employed and unemployed people available for work. Currently, India has the second highest labour force and is estimated to have 25% of the world's total labour force by 2021. According to National Sample Survey Office (NSSO), about 40% of the population belongs to the labour force [7]. Organizations across the world have recognized this vast pool of cost-effective and easily available labour force of India.

Skill anticipation plays very crucial role in introducing a virtuous cycle of high skills, high productivity, and high rates of wages. Proper anticipation of skills will help in reducing mismatch and would prepare people for newer technologies. Employment growth and development committee states that "A mismatch between demand and supply of skills has high economic and social cost which leads to structural unemployment. Advance identification of ongoing and future skill requirement is part of a forward-looking strategy that reduces the gap between required and available skill set". Over 67% companies in India have reported difficulty in filling jobs, which is second highest in the world after Japan.

In order to bridge the gap between required skills and available skills, one centralize framework solution can be developed that has potential to rectify key skill requirements and evaluate the existing skill level of vast labour pool. Labour market information system has the ability to collect, analyze and disseminate information of labour market. LMIS converts skilled people into productive people. It will support information based decision making by providing research authenticated market information regarding reliable workforce to the stakeholders.

Information technology encompasses all forms of technology for storing, transmitting and manipulating data for business. IT sector in India is known as knowledge economy. The sector has increased its contribution to India's GDP from 1.2% in FY1998 to 7.5% in FY2012 [8]. This sector has contributed in generation of large employment and has also served bright future in sub sectors like BPO, Software and ERD.

Purpose of this paper is to describe the overview of LMIS and framework structure which will bridge the required

THE CAPABILITY OF A REINFORCED CONCRETE FRAME TO BEAR LOAD

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Abstract

Numerous strategies have been created so as to consider the effect conduct of solids and structures. Two basic strategies are limited component and exploratory technique. The nonlinear limited component technique is one the best strategies for foreseeing the conduct of RC bars from zero-burden to disappointment and its crack, yield and extreme qualities. The benefit of this technique is its capacity to make this expectation for all segments of the surveyed RC bar and all phases of stacking. This paper thinks about the test results acquired for a RC outline with the numerical outcomes determined by ABAQUS programming, and plots the two arrangements of results as hysteresis–dislodging charts. This examination shows that the numerical FEM actualized by means of ABAQUS programming produce legitimate and dependable outcomes for load bearing limit of RC outlines exposed to cyclic burdens, and hence has noteworthy expense and time productivity favorable circumstances over the elective methodology

KeyWords: ABAQUS; Reinforced Concrete Frame; Displacement Force Diagrams; Pushover Analysis.

1. Introduction

Earthquakes around the world have shown the importance of the rehabilitation of existing buildings; especially those were built before the modern codes of seismic design were issued [1]. Many traditional methods have been used for strengthening the RC structures such as adding of RC infill walls, precast panels, steel bracing, and concrete jacketing of the frame member [2]. Simulation of impact behaviour of solids and structures still poses significant difficulties on computational methods and constitutive models [3]. Finite element method is the numerical approach which is used to solve approximately partial differential equations[4]. The reinforced concrete (RC) moment-resisting frames with masonry infill walls are widely used in buildings. It has been well recognized that the arrangement and constructional detail of infill walls have significant effects on the seismic performance of RC frames [5]. The "behavior factor" is widely recognized as the most important parameter of seismic design. The nonlinear finite element method is one the most popular and effective methods of assessing the exact behavior of RC beams from zero load until failure, and obtaining its fracture, yield and ultimate strengths. The advantage of this method is its ability to predict the behavior of all sections of the assessed RC beam at all stages of loading [6]. ABAQUS is finite element software with extensive use in engineering applications, mostly because it lacks the flaws of other software developed for this purpose. This software consists of three main components: i) ABAQUS/Standard for solving all linear and nonlinear static and dynamic problems, ii) ABAQUS / Explicit for modeling the transient dynamic problems such as collisions, impacts as well as quasi-static problems, and iii) ABAQUS/CAE, which is a GUI designed to facilitate the procedure of defining the model, the boundary conditions, and the loading process. In a study by Bolea (2016), author used the laboratory of University of Bucharest to examine the seismic response of RC frames with masonry infill

MACHINE LEARNING APPROACH FOR DIABETES MELLITUS PREDICTION

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Abstract: ***(11Bold)***
Diabetes mellitus is a common disease caused by a set of metabolic ailments where the sugar stages over drawn-out period is very high. It touches diverse organs of the human body which therefore harm a huge number of the body's system, in precise the blood strains and nerves. Early prediction in such disease can be exact and save human life. To achieve the goal, this research work mainly discovers numerous factors associated to this disease using machine learning techniques. Machine learning methods provide effectual outcome to extract knowledge by building predicting models from diagnostic medical datasets together from the diabetic patients. Quarrying knowledge from such data can be valuable to predict diabetic patients. In this research, six popular used machine learning techniques, namely Random Forest (RF), Logistic Regression (LR), Naive Bayes (NB), C4.5 Decision Tree (DT), K-Nearest Neighbor (KNN), and Support Vector Machine (SVM) are compared in order to get outstanding machine learning techniques to forecast diabetic mellitus. Our new outcome shows that Support Vector Machine (SVM) achieved higher accuracy compared to other machine learning techniques.

Key Word*: (11Bold) machine learning, C4.5 Decision Tree, Support Vector Machine, Logistic Regression, Naive Bayes, K-Nearest Neighbor, and Random Forest, diabetes.*

I. Introduction (11 Bold)

Diabetic is a disease that affects the hormone insulin, follow-on in abnormal metabolism of carbohydrates and advance steps of sugar in the blood. This great blood sugar affects several organs of the human body which in turn complicates many source of the body, in precise the blood strains and nerves. The details of diabetic is not nevertheless totally exposed, many researchers supposed that both hereditary elements and environmental effects are complex therein. As exposed by the International Diabetes Federation, extent of people having diabetes mellitus stretched 382 million out of 2013 [1] that take 6.6% of the world's total adult population. According to the world healthcare medical data it has been probable that diabetic patients will be increased up to 490 billion within the year 2030 [2]. Furthermore, diabetic is imaginably independent causal factor to micro-vascular entanglements. Diabetic patients are maybe more incapable against a hoisted risk of micro-vascular damage, in this way long term difficulty of cardio-vascular disease is the leading reason of death. This micro-vascular harm and hasty cardio vascular disease ultimately quick to retinopathy, nephropathy and neuropathy [3].Early prediction of such disease can be controlled over the diseases and save human life. To accomplish this goal, this research work mainly discovers the early prediction of diabetes by taking into account various risk factors related to this disease. For the willpower of the study we gathered diagnostic dataset having 16 attributes diabetic of 2000 patients. These attributes are age, diet, hyper-tension, problem in vision, genetic etc. In later part, we debate about these attributes with their conforming values. Based on these attributes, we figure prediction model by means of various machine learning techniques to predict diabetes mellitus. Machine learning techniques provide well-organized result to extract knowledge by making predicting models from diagnostic medical datasets composed from the diabetic patients. Haul out knowledge from such data can be beneficial to predict diabetic patients. Innumerable machine learning techniques have the knack to predict diabetes mellitus. Though it is very difficult to select the best technique to predict based on such attributes. Thus for the determination of the study, we deal six popular machine learning algorithms, namely Support Vector Machine (SVM), Naive Bayes (NB), K-Nearest Neighbor (KNN) ,Logistic Regression (LR) ,Random Forest (RF) and C4.5 decision tree (DT), on adult population data to predict diabetic mellitus.

MATLAB/SIMULINK MODELING OF SENSORIZED BLDC MOTOR SPEED CONTROL

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Abstract: *Recent developments in the field of magnetic materials and power electronics, along with the availability of cheap powerful processors, have increased the adoption of brushless direct current (BLDC) motors for various applications, such as in home appliances as well as in automotive, aerospace, and medical industries. The wide adoption of this motor is due to its many advantages over other types of motors, such as high efficiency, high dynamic response, long operating life, relatively quiet operation, and higher speed ranges. This paper presents a simulation of digital sensor control of permanent magnet BLDC motor speed using the MATLAB/SIMULINK environment. A closed loop speed control was developed, and different tests were conducted to evaluate the validity of the control algorithms. Results confirm the satisfactory operation of the proposed control algorithms.*

Key Word*: BLDC motors Hall sensors Modeling Speed control*

I.INTRODUCTION

Brushless direct current (BLDC) variable speed drives are increasingly applied in many new industrial applications. Recent developments in power electronics and semiconductor technology have led to their widespread use [1]. This type of motor is now more popular in applications, such as for electric vehicles, due to its energy-efficient consumption [2]. Furthermore, the BLDC motor has many advantages over the induction motor and brushed DC motor, including better efficiency, power factor, less maintenance, longer life, and less rotor inertia. BLDC motor is also easier to control with its trapezoidal configuration. This study utilizes a three-phase BLDC motor with trapezoidal back EMF [3]. The brushes and commutators have been eliminated, and the windings are connected to the control circuits. Commutation is done electronically instead of using brushes [4]. Because such motors have no brushes, they need a solid state commutation circuit in order to supply the stator windings according to the rotor position [5]. Rotor position can be obtained by either a shaft encoder or, more often, by Hall Effect sensors [6].

The dynamic features and digital control of the BLDC motor furthered its wide utilization in different high and low power applications, compared with other types of motors. Moreover, these motors became one of the major components used to develop 3D printers due to its compatibility and easy integration with used digital controllers [7], which are digitally controlled through power electronic converters integrated with high speed microcontroller. The use of such devices enabled an easy adaption of BLDC motors in 3D printers and Internet of Things (IoT) devices [8]. Nowadays, real-time connection technologies, either at the residential or industrial level, is considered as the primary technology that established a wide range of IoT applications, such as smart homes and automated industrial applications [9]. A review of the variety of microcontroller-based applications shows the rapid developments in science and technology. The advantages in developing embedded microcontrollers in many industrial applications realized remote monitoring and using wireless/wired techniques of different systems [10]. A BLDC motor drive can be considered a digitally controlled drive system. Therefore, sensors are implemented to realize control and drive system [11]. This is mainly required for rotor position. The commutation process was accomplished using a digitally controlled inverter based on Hall-effect sensors signals. The BLDC motors are characterized by their rectangular current, which needs six discrete rotor positions [7].

MANHATTAN DISTANCE CLASSIFIER, EDGE HINGE, AND EDGE EXTRACTION TECHNIQUES FOR OFFLINE HANDWRITTEN SIGNATURE RECOGNITION

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Abstract:

In this paper, another way to deal with distinguish, the issue that emerges in off-line manually written signature recognition as been examined. As opposed to numerous current framework, an endeavor made utilizing Edge hinge and Edge Extraction method. To finish this assignment, as an initial step the mark test is preprocessed and standardized to perform content distinguishing proof effectively. The second step removing the data and educational components occurred amid this period. At long last the Signature Sampleization decision was done in view of Data Acquisition and Preprocessing, Feature extraction. Edge hinge dissemination is an element that describes the adjustments in heading of a script stroke in the specimen of signature. The edge hinge appropriation is extricated by method for a windowpane that is slid over an edge-identified double picture. At whatever point the mid pixel of the window is on, the two edge pieces (i.e. associated arrangements of pixels) rising up out of this mid pixel are measured. Their headings are measured and put away as sets. A joint likelihood appropriation is acquired from an expansive specimen of such matches. Regardless of ceaseless exertion, off-line signature recognizable proof remains a testing issue, because of various methodologies use distinctive assortments of elements, having diverse. Subsequently, our study will concentrate on acknowledgment in light of highlight determination to rearrange highlights removing assignment, enhance Signature Sampleization framework many-sided quality, lessen running time and enhance the order precision.

Key words: *Recognition, Signature*

I. Introduction

The issue of manually written mark cheque has been well established in examination group most likely on account of its different valuable applications in everyday life, for example, cheque extortion recognition, managing an account exchanges, programmed reserve exchanges, individual recognizable proof, official courtroom. The online-based mark confirmation frameworks have been appeared to give a somewhat high accuracy rate since they take quite a bit of advantage of element highlights like increasing speed, speed, the request of strokes, weight, and constrain data. This dynamic data is gained straightforwardly amid the written work process utilizing extraordinary electric marking gadgets. In the opposite, the disconnected from the net based framework gets as the contribution of dark scale on the other hand twofold pictures which are procured by scanners after the marking procedure has as of now been finished. As no dynamic data is caught on the mark pictures, the issue of disconnected from the net mark confirmation turns out to be a great deal more confused. Regardless, the offline based frameworks require no uncommon gadgets for information securing, and the greater part of the marks are, in day by day life, displayed in the types of writings, papers or records. In this manner, it draws much of enthusiasm from exploration group to outline hearty logged off mark cheque frameworks. The issue of programmed logged offline/online written by hand signature cheque has been well established in examination group likely on account of its different helpful applications in everyda life, for example, cheque misrepresentation discovery, saving money exchanges, programmed reserve exchanges, individual ID, courtroom. The online-based mark confirmation frameworks have been appeared to give a fairly high exactness rate since they take quite a bit of advantage of element highlights like speeding up, speed, the request of strokes, weight, and compel data. This dynamic data is procured straightforwardly amid the written work process utilizing unique electric marking gadgets. In the opposite, the logged off based framework gets as the contribution of dark scale on the other hand twofold pictures which are obtained by scanners after the marking procedure has as of now been finished. As no dynamic data is caught on the mark pictures, the issue of disconnected from the net mark confirmation turns out to be significantly more convoluted. In any case, the offline based frameworks require no uncommon gadgets for information procurement, and a large portion of the marks are, in everyday life, introduced in the types of writings, papers or records. Hence, it draws much of enthusiasm from exploration group to plan hearty disconnected from the net mark cheque frameworks. The vast majority of the current frameworks take after a general structure of a mark verifier comprising of three fundamental stages: prepreparing, highlight extraction and grouping [8]. In the first stage, the commonplace undertakings are mark extraction, commotion expulsion, skew

BASED ON ENTSO-E REQUIREMENTS, A REVIEW OF THE KOSOVO POWER SYSTEM UNDER THE FREQUENCY LOAD SHEDDING PROGRAM

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Abstract:

Under-frequency load shedding (UFLS) is designed to protect the power system when the frequency drops below given thresholds by switching off certain amounts of the load aiming thus to balance generation and load. This paper presents a review of the existing UFLS (Under Frequency Load Shedding) program in compliance with recently revised Police-5 of Operational Handbook of ENTSO-e. The proposed review of the current UFLS program for Kosovo Power System has considered the main standards requirements and guidelines for UFLS set by ENTSO-E. This work examine system performance by conducting dynamic simulations of UFLS schemes subject to different imbalances between load and generation, and includes three power system island mode scenarios with different equivalent inertia of the system, respectively different size of the systems. With aim to define the best program of UFLS, which fits to the Kosovo Power System frequency behavior, two different UFLS programs are analyzed and results are compared. The proposed program is tested using a large scale PSS/E model which represents interconnected power system area of Southeast Europe.

1. INTRODUCTION

Under-frequency load shedding (UFLS) is defined as a coordinated set of controls using under frequency relays which results in the decrease of electrical loads in the power system, with aim to recover the system frequency. Load shedding as the last resort to avoid a major power system breakdown has been utilized for a long time. It is mainly triggered by under-frequency or under-voltage protection relays and actuated by distribution system circuit breakers. Proper design of load shedding schemes which include proper settings of under-frequency protection is most relevant issue to ensure smooth load relief, in situations where the power system otherwise would go unstable. The current revised program requirements for UFLS are presented in Operational Handbook of ENTSO-E/Police-5.

Each TSO shall implement the ENTSO-E RG CE general UFLS scheme as followed:

Frequency in the range 49.0 to 48.0 Hz:

a. At least an amount of demand corresponding to 5% of the total load shall be disconnected at 49.0 Hz.
b. In total, an amount of demand corresponding to 45% +/- 7% of the total load shall be disconnected between 49.0 and 48.0 Hz.

The UFLS scheme shall be implemented stepwise taking into account following considerations:

a. The number of disconnection steps shall be minimum 6 (including the step triggered at 49.0 Hz),
b. For each step, an amount of demand corresponding to 10% of total load shall be disconnected at maximum.
c. Additional df/dt function in UFLS relays is allowed in the range 49.8 – 49.0 Hz.
d. No intentional time delay shall be set in UFLS relays.
e. Maximum disconnection delay shall be 150 ms including breakers operation time [1].

The existing UFLS program which is operational in Kosovo Power System, was established based on previous recommendation of ENTSO-E, including only four steps with different amount of load

DEVICE FOR HYDRAULIC OVERHEAD CRANE SAFETY TRANSPORT

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ABSTRACT

In this paper, zero speed is practiced in drive motor of an Electrical Overhead Traveling (EOT) crane by strategies for a powerful easing back system. There are two modes in the crane action. The first is running mode and another is hindering mode. In the zero speed easing back down, an acknowledgment motor is changed over as a hindering segment. The dynamic hindering circuit is incited during the hindering mode. In EOT crane, a motor easing back system is generally used and it is an electro-mechanical device. The motor brake is presented between the drive motor and gear box for controlling the stack anyway the electric power is failed. The motor brake is used to block the rotating speed of motor shaft and to stop it at needed position. The Thruster brake and drive motor are fortified simultaneously to run the crane/lift is known as the running mode and stop the crane/raise by both are de-animated is known as the hindering mode. A youth baseball differentiate (time cut) between the limit of motor and motor causes massive impact beat on the gear box/shaft. This impact heartbeat may lessen the apparatus box/shaft constantly that cause load drop disaster. For going without/restricting the time cut, the drive motor is changed over as a hindering contraption during the hindering mode. The drive motor will be gone to zero speed as opposed to de-animated.

Key words: *Time clip, Shaft, Gearbox and Rope drum.*

IOT-BASED SOLAR-BASED SMART GARBAGE MONITORING SYSTEM

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Abstract:

The Clean India scheme emphasizes maintenance of the city premises free from household and industrial waste. India being a heavily populous country generates a huge amount hold wastes in residential area due to the FMCG packaging material. The collection and proper disposal of such wastes are essential for maintaining the ambience clean. The Municipal Corporation has number of garbage collection units for collection of garbage from different areas with in the municipal corporation. The project proposes a solar based self-sustaining garbage collection unit which connects to the municipal server through a Esp. 8266 Wi-Fi module. The system provides the municipal system with the necessary data such as garbage level in the collection unit.

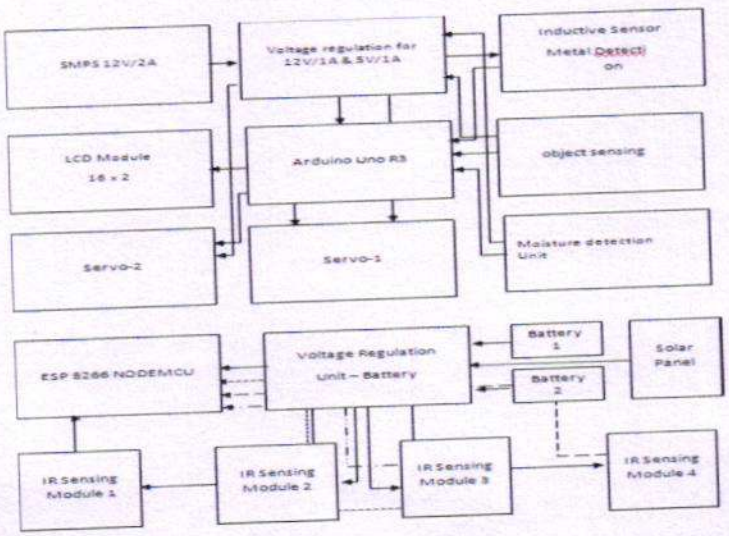
Key words: *Angular JS, Ionic Framework ,HTML 5,Cordova.*

I. Introduction

The Clean India scheme emphasizes maintenance of the city premises free from household the system has an android application for displaying the status of the collection units. The android application will provide intimation in the form of colored visuals in the app UI. The systems IOT unit is powered by a 12V/500ma Solar Panel. Thus the system will provide an efficient and smart way for monitoring the garbage level in a waste collection units and industrial waste. The collection and proper disposal of such wastes are essential for maintaining the ambience clean. The project proposes a solar based self-sustaining garbage collection unit which connects to the municipal server through a Esp. 8266 Wi-Fi module. The system provides the municipal system with the necessary data such as garbage level in the collection unit. The system has an android application for displaying the status of the collection units.

Thus the system will provide an efficient and smart way for monitoring the garbage level in waste collection units.

II. PROPOSED MODEL



STUDY OF PRE-HEATER'S PROCESS EFFECT ON TEMPERATURE

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ABSTRACT

In different industries such as for example, synthetic, food and petrochemical, controlling of the temperature assumes an imperative job. This assists with ensuring the effective procedure activity, creating more determination accommodating item with less waste. In this paper, the work is completed in temperature process which is constrained by SCR based voltage controller. Since it is a Non-direct procedure, the exchange capacities are acquired for different areas. The framework models are distinguished utilizing step test strategy for the temperature procedure with and without pre-warmer get together. The got models for both the procedures are approved by looking at the reactions of the distinguished exchange capacities with the first framework for a stage input. In the wake of picking the best fit model, a PID controller is intended for the equivalent. At that point the viability of pre-radiator get together to the temperature procedure is broke down.

Key words: PID Control, Pre-heater, SCR, System identification, Validation.

INDIAN AGRICULTURAL SYSTEM STUDY ON ATOMIZATION OF AGRICULTURAL ENVIRONMENT

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Abstract

Agriculture continues to play a major role in Indian Economy. Agriculture Sector is changing the socio-economic environments of the population due to liberalization and globalization. Irrigation system in India has given a high priority in economic development. In the years since its independence, India has immense progress towards food security. Indian population has tripled, but food grain production more quadrupled, there has been substantial increase in available food grain per capita. The project is designed to provide medium and long term credit to farmers for the purchase of farm machinery and for the development of small private irrigation system. For the precisely monitoring and controlling of the agricultural field, different types of sensors were used. To implement the proposed system ARM LPC2148 Microprocessor is used. The irrigation mechanism is monitored and controlled more efficiently by the proposed system, which is a real time feedback control system. GSM technology is used to inform the end user about the exact field condition. Actually this method of irrigation system has been proposed primarily to save resources, yield of crops and farm profitability.

Keywords: *ARM controller, GSM Modem, Temperature sensor, Humidity sensor, Real Time system, LPC2148, 16x2 LCD display.*

1 .INTRODUCTION

Atomizing the agricultural system is very useful for old people and normal person who live far away from the agricultural field. We require monitoring of agriculture these days because in this modern world as the technology has taken tremendous changes in many fields we are going to implement in the field of agricultural. As the time has playing key role we have introduced this system so that farmer can save some time and need not go to farm every time. Now a days resource are getting drained so we should not waste them and use the existing resources carefully. So this will help in protecting resources and saving time. We have a LCD display to see the status of the farm and GSM modem is used to send the messages to farmer regarding the status of the farm. Farmer can know the information of the farm from the remote places also. In this LPC2148 microcontroller has taken because it is a 64-bit RISC architecture. So that it can be easy to write the program with less instruction set and if we want to add any advancement we can add easily to them. We can have many other sensors required for farm to have advancement in the project. As the advancement regarding monitoring of agriculture using ARM7 are increasing we have tried for code optimization technique. So that by doing code optimization we can decrease the time and space complexity

Irrigation may be defined as the science of artificial application of water to the land or soil. It is used to assist in the growing of agricultural crops, maintenance of landscapes, and revegetation of disturbed soils in dry areas and during periods of inadequate rainfall. Additionally, irrigation also has a few other uses in crop production, which include protecting plants against frost, suppressing weed growing in grain fields and helping in preventing soil consolidation. In contrast, agriculture that relies only on direct rainfall is referred to as rain-fed or dry land farming. Irrigation systems are also used for dust suppression, disposal of sewage, and in mining. Irrigation is often studied together with drainage, which is the natural or artificial.

The project is implemented by using advanced processor ARM7TDMI which is a 32 bit microprocessor, GSM serves as an important part as it is responsible for controlling the irrigation on field and sends them to the receiver through coded signals. GSM operates through SMSs and is the link between ARM processor and centralized unit. ARM7TDMI is an advanced version of microprocessors and forms the heart of the system. This project aims to implement the basic application of automizing the irrigation field by programming the components and building the necessary hardware. This project is used to find the exact field condition. GSM is used to inform the user about the exact field condition. The information is given on user request in form of SMS. GSM modem can be controlled by standard set of AT (Attention) commands. These commands can be used to control majority of the functions of GSM modem.

The LPC2148 are based on a 16/32 bit ARM7TDMI-S™ CPU with real-time emulation and embedded trace support, together with 128/512 kilobytes of embedded high speed flash memory. A 128-bit wide memory interface and unique

GEOMETRIC AND MATERIAL PARAMETER RESEARCH ON THE IMPACT ON SHEAR LOADED NOTCHED COMPOSITE PANELS

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Abstract:
Scores are given in different shapes known as patterns for weight decrease and for giving attached joints. The comprehension of the impacts of cut-out on the heap bearing limit and stress centralization of such plates is significant in planning of structures on account of the subsequent diminished quality of parts and higher measure of harm around this district. Studies were directed already for scored composite plate under strain and pressure. The primary target of this examination is to explore the impact of geometrical parameters and material parameters on shear stacked scored composite board. Numerical examination was broadly done on ASTM D5766 OHT model for various kinds of indents of fluctuating shapes just as for materials-carbon epoxy and fiber strengthened plastic. Contrasted with different sorts of stacking, shear stacking displayed more impact on pressure focus around scores. Additionally, variety of stress focus factor as for geometric parameters was significantly more when contrasted and material parameters. Among geometric variables, various shapes and directions effectsly affected pressure focus factor.

Key words: *Sheard load, Notched composite panels, Stress concentration, Geometric and material parameters.*

I. Introduction

Notched or holes are provided in various shapes known as cut outs for weight reduction and for providing fastened joints. In addition, Notches in the structure are often used for providing access to areas for damage inspection or installation of electrical and piping systems. The presence of notches in a structure results in a high stress gradient at the vicinity of their edges. The ratio of the maximum stress at the cut-out edge to the nominal stress is called the stress concentration factor (SCF). The understanding of the effects of cut-out on the load bearing capacity and stress concentration of such plates is very important in designing of structures because of the resulting reduced strength of components and higher amount of damage around this region. The point near maximum stress concentration is often the location of initialization of damage in the structure. Currently, the study of SCF around circular notches for isotropic material has reached a high level. The strength prediction of isotropic material with a notch can be accurately predicted since the stress gradient around the notch is not dependent of the material. However, unlike isotropic material, the stress gradient around a notch in laminated composites can be affected by various parameters like material constants, fibre orientation, laminate stacking sequence etc. [1-6]. This complex stress gradient results in a complicated failure mechanism near the notch.

Tension and compression loadings are the common types of loading which are applied to the material for the investigation. But in many cases, notched composites may undergo shear loading as seen widely used in aerospace structures. When the composite materials are subjected to these type of shear loads the chances of failure are very high. It is also seen that geometry of the notch plays a significant role in the stress concentration. Extensive studies are done for composite panels in tension and compression. In this study, an investigation is conducted to determine the effect of shear loading in composite panels with different geometric parameters and material parameters for effective design of composite structures with notches.

II. Material

One of the material used for this study is Fibre reinforced plastic (FRP) In this fibre glass acts as fibre and matrix material used is Polyester Resin GP 002. Fiberglass is a lightweight, extremely strong, and

GEOMETRIC AND MATERIAL PARAMETER RESEARCH ON THE IMPACT ON SHEAR LOADED NOTCHED COMPOSITE PANELS

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Abstract:
This trial study clarifies the elevate limits of single belled stay models in homogeneous and two-layered (lesser thick sand is hidden higher thick sand) sand bed to assess the commitment of installation proportions of 3, 4 and 5, breadth proportions of 0.28, 0.33, 0.38 and 0.46, and ringer edges of 45, 54, 63 and 72°. Higher elevate limits are accomplished in layered sand contrasted with homogeneous sand store in each model in any case the estimations of implant proportions, distance across proportions and ringer edges. Also, it has been seen that elevate limits in the two sorts of sand layers are expanded with higher installation proportions, lesser distance across proportions and more extreme chime points. An undertaking is made to set up six quantities of different relapse conditions which would have the option to foresee breakout factors inside determined cutoff points. These conditions are checked with scarcely any current test outcomes which are not utilized in building up those conditions, and the blunders in 76.67% and rest 23.33% of predicted values of breakout factors are inside the scopes of +08.35 to and +11.48 to dependent on watched aftereffects of present examination.

Key words: *Uplift capacity, Homogeneous sand, Layered sand, Breakout factors, multiple regression equations.*

I. Introduction

For radar tower, television line tower, power pole and road-side signposts etc. the imbalance horizontal forces are mainly due to severe wind velocity, hence, the resultant uplift load and overturning moments at their foundations are fundamental design considerations to ascertain their types, shapes and sizes. Belled anchors may be an attractive and economy-friendly alternative to resist resultant pull-out forces in foundation systems.

The uplift capacity of belled anchors is influenced by embedment depth, size of diameter and bell angle as observed by Dickin and Leung (1990, 1992), Pal (1992), Ghosh and Bera (2010), Bera and Banerjee (2013), Bera (2014) and Nazir et al. (2014) [3,5,6,12,13,15,16]. But these findings are based on homogeneous sand only. The experimental, numerical and mathematical studies were also conducted on plate anchors having a wide vatity of sizes at a different embedment depths by Dickin and Laman (2007), Vanita et al. (2007), Mittal and Mukherjee (2013), and Sujatha and Balamurugan (2014) [10,11,14,17].

The behavior of anchors in the layered sand was experimentally studied by Bouazza and Finlay (1990) [2] on laboratory models. Kumar (2003) [9] conducted a numerical study on the uplift capacity of anchors by introducing velocity hydrograph in failure mechanism. Sakai and Tanaka (1990) [4] documented pictorial observation of failure mechanism in the two-layered sand. The existing literature is having a dearth of data on uplift capacities and insufficient to provide a clear understanding on the comparison of uplift behaviors due to changes in embedment ratios and belled anchor characteristics buried in the different types of sand strata.

The present study aims to explore the comparison in the uplift behavior of belled anchors in homogeneous and layered (i.e., lesser dense sand is underlying higher dense sand) buried sand with variation in several embedment ratios and anchor characteristics on the basis of the experimental study. An attempt is also made to establish multiple regression models to predict the breakout factors as a function of embedment ratios, diameter ratios, bell angles and portions of embedment depth in the lower layer.

II. Testing Set-Up, Materials And Models

2.1. Sand, Model Anchors and Testing Tank

Two different types of dry sands are collected from the local market and these are designated as Sand I (S_I) and S_{II}). Fig. 1 shows grain size distribution curves of sand samples. The placement density of S_I and S_{II} are (γ_I) 15.60 and (γ_{II}) 16.90 kN/m^3 respectively. The angle of internal friction of S_I and S_{II} are recorded to be (ϕ_I) 33.0° and (ϕ_{II}) 39.5° respectively. The physical properties are obtained in accordance with ASTM standards and presented in Table 1.

WORKFLOW SCHEDULING RESEARCH IN A CLOUD ENVIRONMENT

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Abstract:
Workflow scheduling is one of the most challenging issues in cloud computing. Workflow is widely used paradigm in collaborative research and managing complex large scale distributed application. Various distributed environment such as cluster, grid and cloud use workflow to process complex and discrete tasks. Each task may include entering data, processing, accessing software, or storage functions. The task-resource mapping, QoS requirement, on-demand resource provisioning, performance fluctuation and failure management in workflow scheduling is considered to be an NP-hard problem. An efficient scheduling algorithms are required to select the best suitable resources for workflow execution. In this paper, a comprehensive survey of workflow scheduling strategies that have been proposed for cloud computing platforms to help researchers systematically and objectively gather and aggregate research evidences.
Key Word*: Cloud computing, Cost aware, Distributed system, Energy aware workflow scheduling, Workflow scheduling.*

I. Introduction

Scientific workflow scheduling of an application on cloud computing, is a complex optimization problem which may require consideration of different scheduling criteria. Usually, the most important criteria are the expected execution time and the cost of running an application on a machine. In addition, scientific workflow applications have many computations and tasks that generate many intermediate datasets with large size. There exist dependencies among the intermediate datasets. So, the scheduler should also take care of precedence constraints between the set of tasks. In its most general form, the problem of tasks scheduling of a graph onto a set of different resources is an NP-Complete problem [1]. As a result, over several years, a number of heuristic algorithms suitable for workflow scheduling on heterogeneous resources have been suggested [2] that attempt to strike a good balance between running time, complexity and schedule quality [3], but still a lot of work needs to be done for making scheduling in clouds more effective.

The aim of this paper is to provide a comprehensive survey on workflow scheduling techniques in different existing distributed environments. The first section gives an introduction to workflows and workflow scheduling. Then, a survey based on various scheduling objectives are discussed and a comparative study of various algorithms are also done.

1.1. Workflow Modelling

A wide range of scientific applications in distributed systems [4] can be modelled by a workflow which is a directed acyclic graph (DAG) G = (T,E) where T is a set of nodes or tasks (t1,t2,t3.....tn} and E is the set of directed edges {eij | (ti,tj) ∈ E} representing the

dependencies between the tasks. Each task is a workflow task with an associated computation workload wli . Each edge eij represents ti as the parent task of tj and tj is said to be the child task of ti. Only after the complete execution of the parent task, a child task can be executed. If there is data transmission from ti to tj, the tj can start only after all the data from ti has been received. A task which does not have parent task is called an entry task whereas a task which does not have child task is called an exit task. Generally, there are two types of workflow which are simple and scientific workflows. Figure 1 indicates a simple workflow's DAG. It shows a 7-node DAG, where node T1 is

AGRICULTURAL DRAINAGE SYSTEMS: A STUDY

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Abstract:
Integration of remote sensing data and the Geographical Information System (GIS) for the exploration of groundwater resources has become an innovation in the field of groundwater research, which assists in assessing, monitoring, and conserving groundwater resources. In the present paper, groundwater potential zones for the assessment of groundwater availability in Salem and Namakkal districts of TamilNadu have been delineated using remote sensing and GIS techniques. The spatial data are assembled in digital format and properly registered to take the spatial component referenced. The namely sensed data provides more reliable information on the different themes. Hence in the present study various thematic maps were prepared by visual interpretation of satellite imagery, SOI Top sheet. All the thematic maps are prepared 1:250,000, 1:50,000 scale. For the study area, artificial recharge sites had been identified based on the number of parameters loaded such as 4, 3, 2, 1 & 0 parameters. Again, the study area was classified into priority I, II, III suggested for artificial recharge sites based on the number of parameters loaded using GIS integration. These zones are then compared with the Land use and Land cover map for the further adopting the suitable technique in the particular artificial recharge zones.

Key Word: Study, Agricultural, Drainage, Systems

I. INTRODUCTION

General

In geomorphology, a drainage system is the pattern formed by the streams, rivers, and lakes in a particular drainage basin. They are governed by the topography of the land, whether a particular region is dominated by hard or soft rocks, and the gradient of the land. Geomorphologists and hydrologists often view streams as being part of drainage basins. A drainage basin is the topographic region from which a stream receives runoff, through flow, and groundwater flow. Drainage basins are divided from each other by topographic barriers called a watershed. A watershed represents all of the stream tributaries that flow to some location along the stream channel. The number, size, and shape of the drainage basins found in an area varies and the larger the topographic map.

Agricultural drainage criteria can be defined as criteria specifying the highest permissible levels of the water table, on or in the soil, so that the agricultural benefits are not reduced by problems of water logging. If the actual water levels are higher than specified by the criteria, an agricultural drainage system may have to be installed, or an already installed system may have to be improved, so that the water logging is eliminated. If, on the other hand, a drainage system has lowered water levels to a depth greater than specified by the criteria, we speak of an over-designed system. Besides employing agricultural drainage criteria, we also employ technical drainage criteria (to minimize the costs of installing and operating the system, while maintaining the agricultural criteria), environmental drainage criteria (to minimize the environmental damage), and economic drainage criteria (to maximize the net benefits).

Drainage patterns

According to the configuration of the channels, drainage system can fall into one of several categories known as drainage patterns. Drainage patterns depend upon topography and geology of the land.

Accordant Drainage Patterns

WIRELESS BODY AREA NETWORKS: PROTOCOL ANALYSIS OF MANY PROTOCOLS (WBAN)

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Abstract:

A Body Area Network is a system of computing devices located in close proximity to the human body which coordinates and cooperates for the benefit of the user. Body Area Networks have evolved out of sensor network technology and biomedical engineering. In this paper we discuss various aspects of Body Area Networks, introduction section deals with various concepts associated with computer networks and some supporting technologies of Wireless Body Area Networks (WBANs). Section 2 deals with the various definitions of Body Area Networks (BANs) followed by the types of BAN in section 3 and system architecture in section 4. Section 5 gives the draft guidelines by IEEE 802.15.6 for a communications standard for BAN, the next two sections list out the applications and current research trends of BAN followed by the conclusion.

Key words: *Body Area Network, Types of BAN, applications, research trends.*

I. Introduction

A computer network aka as a data network is an interconnection of a group of computing devices via a physical cable or wireless media to share files, information and other peripherals. Devices that are able to share information or other peripherals are said to be networked devices. The most common example of a data network is the internet. For devices to be able to transmit and accept data efficiently and effectively certain protocols have to be implemented. A protocol is a set of rules that control the communication between computers on a network. For example the message signal will have a header block of digits giving information about the sender, recipient and the length of the message. It will also have a termination block of digits that indicate the end of the message and further information to verify the accuracy of the message. Protocols are designed according to the standards decided by International Organization for Standards (ISO) with principles to Open Systems Interconnection (OSI).In any communication network a node is defined as an interconnection point. In a computer network a node is defined as a device that starts and terminates the data. A node can also be a gateway. A schematic description of the nodes and connecting cables in a computer network is called the topology of the computer network. Topologies can be defined as physical topology and signal Topology. Examples of physical topologies include ring, bus, star, mesh. Bluetooth Low Energy and Zigbee are being commonly used for Body Area Networks (BANs). Bluetooth is a short range wireless radio system which operates in the frequency band of 2.4GHz at a maximum signal rate of 1 Mb/s. Its operating range is 10m with a transmission power of 0-10dBm and channel BW of 1MHz. Topologies defined in Bluetooth are piconet and scatternet. A piconet is a Wireless Personal Area Network (WPAN) formed by 2 Bluetooth devices, one serving as a master and the other slave. A scatternet is formed by connecting 2 piconets. A Bluetooth device may interact with several piconets at the same time. A scatternet can be a slave in many piconets but master in only one of them. Zigbee is a low rate WPAN operating in the frequency band 868/915 MHz and 2.4GHz with a maximum signal rate of 250Kb/s, operating in the range of 10-100m with a transmission power of 0dB. It is designed to support devices that consume minimal power. Device types that can participate in a low rate WPAN network are Full Function device (FFD) and Reduced Function device (RFD). An FFD can operate as a device, coordinator or a PAN coordinator. An RFD is used for extremely simple applications. An FFD can talk to another FFD or RFD whereas an RFD can talk only to an FFD.

1. Body Area Network (Ban)

IEEE 802.15 formally defines a Body Area Network as, "a communication standard optimized for low power devices and operation on, in or around the human body(but not limited to humans) to serve a variety of applications including medical, consumer electronics/personal entertainment and other.[1]" As Erik Karulf puts it in more simpler terms, "in more common terms, a Body Area network is a system of devices in close

PROSTHETIC ARM DESIGN USING A FLEX SENSOR

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Abstract:

Prosthesis is an artificial device that replaces a missing body part. In medicine, prosthesis is an artificial device that replaces a missing body part, which may be lost through trauma, disease, or congenital conditions. Prosthetic amputee rehabilitation is primarily coordinated by a prosthetist and an inter-disciplinary team of health care professionals including psychiatrists, surgeons, physical therapists, and occupational therapists. A person's prosthetics should be designed and assembled according to the patient's appearance and functional needs.

For instance, a patient may need transradial prosthesis, but need to choose between an aesthetic functional device, a myoelectric device, a body-powered device, and an activity specific device. The patient's future goals and economical capabilities may help them choose between one or more devices.

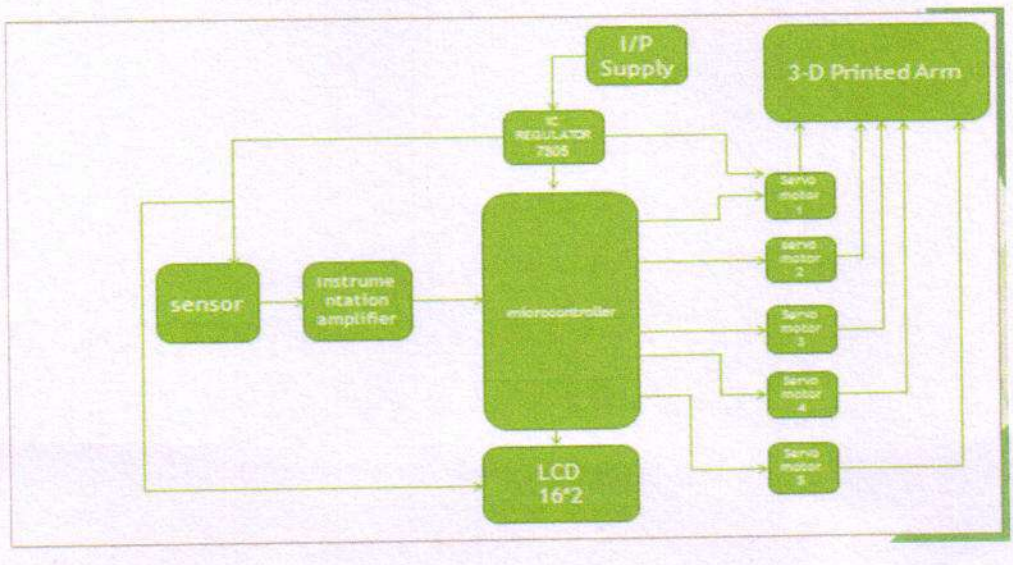
Key words: *prosthesis, flex sensor, data glove, robotic arm, human hand replica.*

I. Introduction

Many people incur an illness or experience an accident that results in the loss of a limb. They may also have been born with a congenital condition in which one or more of their limbs are missing. Fortunately, there are artificial limbs that enable those people to still do things such as run, walk, reach, and grip. These apparatuses are known as prosthetics. A robotic arm is a robot device, which can perform similar functions to a human arm. Robotic arms are the important part of almost all the industries. In industries, a robotic arm performs various different works such as welding, trimming, picking and placing etc. Moreover the biggest advantage of these arms is that it can work in hazardous areas and also in the areas which cannot be performed by human. The main objective of this research work was to design and construct a prosthesis that will be strong and can perform assigned task. The hand is the one of the most complex and load bearing part of our human body which act as an input and output device to human. These goals where targeted by using flex sensor. A sensor a device which detects or measures a physical property and records, indicates, or otherwise responds to it , and sensing plays an important role in robotics. Robotic arm manipulators can have different configurations. Few of these constraints can be effectively mapped from the human arm domain to the robot's restricted joint space. In this paper a general method of mapping human motions to the robotic arm domain has been demonstrated. The arm moment is reciprocated almost exactly by the robotic arm. Any human arm moment can be mapped on to any of the robotic arm manipulator.

1. Robotic arm using flex sensor and microcontroller:The block diagram consists of sensor, microcontroller, instrumentation amplifier, servomotor, ic regulator, lcd.

Figure 1 flex sensor based robotic arm using microcontroller.



A LARGE TASK IN PARALLEL PROCESSING IS OUTLIERS ELIMINATION.

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Abstract:
In clusters with heterogeneous systems the progress of data intensive task is estimated using mapreduce framework. But it is not suitable for computational intensive task due to biased estimation of task progress, traditional frameworks cannot timely cut off outliers and therefore largely prolong execution time. Here proposed new framework No Outlier with the instrumentation and outlier clustering techniques for identification of outliers. Since dynamic instrumentation is more precise than static instrumentation, the exact outlier can be identified at runtime and speculative task execution is taken place with average CPU usage.

***Key Word**: Instrumentation, Outliers Clustering, Scheduler, Parallel processing.*

I. Introduction

The clusters with large number of servers handle the computational intensive task to support users' applications (e.g., information retrieval, analytical or scientific computation). For this large scale infrastructure an efficient processing framework is needed.

The observation is that most existing computing frameworks are suitable for data-intensive tasks but lack consideration for compute-intensive ones. The main reason behind involves the important scheduling component in these frameworks. Many previous investigations have shown that outliers constitute a notorious performance killer in massive task processing. Outliers progress much more slowly than peer tasks and therefore dramatically delay the completion time of the whole job. Many common and unexpected factors may lead to outliers, like uneven task assignment, hardware/software problems, and network congestion. In order to address this issue, computing frameworks heavily rely on a smart scheduler, which is capable of identifying outliers, timely aborting them, and re-executing replica tasks on other healthy nodes.

In this paper, focus on the frameworks that achieve parallelism via SPMD (single program, multiple data) and support tasks with minimal mutual communication, rather than the message-passing tasks (e.g., MPI programs). A job is the unit that a user submits to the framework, and tasks refer to what a job is split into when executed on a large multi-node infrastructure. Here proposed a new framework with a proactive scheduler which schedule the task to various nodes for parallel execution. The task can be dynamically instrumented by including instrumenting code for the functions in an application program before sent for execution. Later gather result of instrumentation from all nodes. On applying the k means clustering algorithm to this resultant data the identification of exact outlier is possible and accordingly cut off outliers.

II. Literature Survey

MapReduce is one of the most successful and representative frameworks, they lack a mechanism to estimate the progress of compute-intensive tasks and are consequently incapable of action to outliers. For example,

EMERGING RECRUITMENT CHALLENGES AND THEIR IMPACT ON HUMAN CAPITAL IN THE ECONOMIC SLOWDOWN

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Abstract:
Economic slowdown decline countries Gross Domestic product (GDP) growth for two or more quarter of a year. Economic slowdown takes place when consumer loses confidence in the growth of the economy and spends less. These leads to decrease in demand for goods and services results in decrease in production, layoff, reduced investor interest, adversely affects on import-export and overall GDP of an economy & its effect spends all over the world. This study focuses on the emerging challenges of Recruitment in economic slowdown. In manufacturing sector, the growth comes down to 4.0 per cent in April-Nov 08 as compare to 9.8 per cent in last year. This slow down of the economy will definitely put pressure on Human Resource management. Human Resource professional are likely to be dealing with stressed employees. During the last three year, Indian economy grew at an average annual rate of 8.6 per cent. , Finexpert opened that fallout of the crisis will remain stick only to the financial sector of advanced economies. Economist believed that recession of 2008-09 was the worst global recession since 1930.(Choudhari 2008). The paper is an also effort to examine the Human Capital in economic slowdown and also the emerging challenges of Human Capital.
Key Word: Economic slowdown, Gross domestic product, Human capital

I. Introduction

Economic slowdown decline countries Gross Domestic product (GDP) growth for two or more quarter of a year. Economic slowdown takes place when consumer loses confidence in the growth of the economy and spends less. These leads to decrease in demand for goods and services results in decrease in production, layoff, reduced investor interest, adversely affects on import-export and overall GDP of an economy & its effect spends all over the world. During the last three year, Indian economy grew at an average annual rate of 8.6 per cent. For the first time economy come down at 7.8 per cent in the first half of the year 2008-09(April-Sept).The service sector which contributes more than 50 per cent share in GDP seen to be slowing down. The industrial growth has decelerated during April Nov 2008. In manufacturing sector, the growth comes down to 4.0 per cent in April-Nov 08 as compare to 9.8 per cent in last year. This slow down of the economy will definitely put pressure on Human Resource management. Human Resource professional are likely to be dealing with stressed employees. Therefore it becomes challenging for Human Resource to handle the affaire skilfully and tactfully. Human Resource Management works to ensure that employees are able to meet the organizational goals. The organization needs to save the costs and it needs to identify and potential additional source for the cost saving and starting a new growth era. The HRM Function has to prepare a new HRM Vision and a new HR Strategy for the coming period as the cost cutting is not the only way to build a stronger organization fighting with the recession.

II. Review of Literature

Economic slowdown spread across the globe. Many financial institutions like **Lehman Brother, Washington Mutual** or **General Motors** collapsed and many financial institutions become bankrupt in this recession. Six month ago, Finexpert opened that fallout of the crisis will remain stick only to the

Analysis of ergonomic passenger behaviour in locally modified buses

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ABSTRACT

In India , privately changed midi transports are occupied with giving open transportation administration to intercity significant distance travelers. One of the serious issues in the privately made midi-transports is, the thought given by the rubberneck manufacturers for the travelers' ergonomics, security and solaces exceptionally less. Also, the nonappearance of all around expressed code of training for transport body structure and endorsement to control the business made the things to go in the incorrect manner. This investigation covers an examination from the ergonomic perspective, wherein differing angles and factors identified with the solace and protections of the clients. Among the primary perspectives assessed are the passage and exit of the transport, the straightforwardness to show up at the seats, the seats measurement, and dispersion of the seats. Every one of these viewpoints is identified with human body estimations, confirming its adjustment to the number of inhabitants in clients. Moreover, the dimensional information of the assorted units were contrasted and the qualities and parameters determined in the norm. At last a few proposals show up on the moves to be made in configuration terms that unquestionably will add to improve the security and the solace of the intercity travelers to get least degrees of solace without dumping the worries of wellbeing and security. This exploration is directed utilizing a few techniques or blended methodology, which incorporate perception, agenda, surveys and meetings with various gatherings of travelers, transport authorities, vehicle vendors, eavesdropper developers and professionals.

Key words: Midi-buses, Passengers ergonomics changes, Safety.

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1. INTRODUCTION

Transport represents one of the most important human activities worldwide. It is an indispensable component of the economy and plays a major role in spatial relations between locations [1]. The purpose of transportation is to overcome space, which is shaped by a variety of human and physical constraints such as distance, time, administrative divisions and topography.

In Ethiopia there are three modal systems of transport that exist (road, air and rail). However, studies conducted in Ethiopia in showed that about 99.31 percent of the total passengers used road transport for their mobility, 0.65 percent used airline and 0.04 percent used railway transport. [2]

Comparison of the output of a hybrid active power filter using the P-Q theory and the SVPWM technique

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ABSTRACT

Consonant Distortion in huge numbers of the modern applications are happen essentially attributable to the tremendous usage of burdens with high non-linearity like force converters, speed fluctuating drives and circular segment heaters. The force semiconductor is utilized to accomplish the variety in speed and change starting with one source then onto the next. Generally dynamic channels and tuned channels are used to eliminate the symphonious remembered for the source current. The tuned detached channels and inductance embedded in the line lessens the sounds and yet actuates the resonances in the vast majority of the modern applications. Because of this, consonant twisting increments in the source current and voltage. This can be diminished by including cross breed channel in the framework with diminished rating of dynamic channel in high force applications. This article manages the different geography of mixture channels. The working of the proposed channel plan in factor inductance mode dependent on the contamination made in the source voltage and current is examined. In the proposed crossover channel inactive channel is tuned with seventh consonant recurrence and associated in arrangement with dynamic channels to diminish the symphonious twisting. DC connect voltage and the dynamic channel VA rating could be limited. The control sign to the channel is gotten from p-q hypothesis and space vector beat width regulation (SVPWM). The presentation of the framework under examination is mimicked and noted for the THD rate when the channel is added to the framework and a similar model is explored different avenues regarding decreased voltage level.

Keywords— *Harmonic distortion Hybrid active power filter SRF theory p-q theory SVPWM*

I. INTRODUCTION

The reason for intensifications of deviation in the voltage and current in supply side is mainly because of the loads which produce non-linearity in the power systems. The non-linear loads such as variable speed drive systems, switched mode power supply, uninterrupted power supply and battery charging systems are fitted with the semiconductor devices as their switching components, due to less cost and easy control to achieve power conversion. The power converters present in the power system will increase the harmonic current leads to huge harmonic distortion. The sensitive equipment may be subjected to malfunctioning because of such harmonic distortion. Generally, tuned passive filters are employed at the other end of the distribution transformer to suppress the harmonic content present along with the fundamental current by providing low impedance path [1, 2]. Since, passive filters can be used only for fixed compensation, there may be a chance of series or parallel resonance among the line inductance and passive filter. This willworsen the function of a passive filter, due to which additional harmonic may arise [3, 4]. To overcome this resonance problem various active filters are employed.

The active filters are classified based on their contribution with the load and source side as shunt and series to provide current and voltage compensation respectively [5-7]. However, when load requirement of the system increases leads to higher rating of filter also may not get the effective elimination of harmonic resonance [8]. So, a combination of active with passive filters promises a better solution for the reduction of harmonic resonance and current [9, 10]. Further the active and passive filter can be connected in either series or parallel way. A non-linear load of 10KVA rating that is a six-pulse uncontrolled bridge rectifier is taken as a case study. A displacement factor of 0.95 is considered for analysis. A comparison is made between the hybrid active power filter (HAPF) and shunt active power filter (SAPF) on the basis of system performance [11]. Synchronous reference frame (SRF) control strategy is used to extract the compensating current in this method. The line current distortion, DC voltage value, inverter voltage and current, overall inverter size and overall inverter voltage is discussed. Earlier, for a three-phase controlled bridge rectifier of 20kVA rating, series active filter is connected in series with the shunt passive filter. Further that is inserted into the line in series through 10:1 transformer [12]. This combination reduces the active filter rating. The series active filter act as a harmonic isolator and shunt passive filter reduces the harmonic current. A SAPF with ripple filter and passive filter with transformer is considered to design the hybrid filter for reactive power compensation, harmonic elimination and voltage unbalance compensation [13-15]. Recently, HAPFs without transformers were proposed for compensating harmonic current in the industrial power system applications[16-22].

A transformer-less HAPF is constructed by shunt active filter connected in series with a seventh- tuned passive filter to further

AFFECT SOCIAL ENTREPRENEURSHIP HAS ON BUSINESSES AND ORGANIZATIONS

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Abstract

This paper targets at presenting examna affecting does social entrepreneurship organizational learning and business partnership with 168 respondent small medium entrepreneurs The sample of this study are 168 small scale business oriented apparel industry oriented creative industries in DKI Jakarta. The sampling technique is through the Slovin formula. Sources of data obtained through questionnaires and supported by field documentation. From the results of data acquisition, then analyzed through: (i) descriptive statistics; and (ii) inferential statistics through GSCA (Structured Generalized Component Analysis). The results of this study found that: (i) social entrepreneurship has a significant effect on organizational learning; (ii) social entrepreneurship has a significant effect on partnerships.

***Keywords*:** *Social Entrepreneurship, Organizational Learning, Partnership.*

1. Introduction

SME has an important role for the economy, including: (i) as a support and driving force of the real sector; (ii) job creation; (ii) capital creator; (iii) contribute to exports; (iv) poverty reduction; and (v) able to reduce inequality between regions. However, MSMEs are also faced with various problems, such as high levels of competition and high risk of business failure. These problems are categorized as difficulties in governance, especially the weak nature of cooperation between SMEs. Various empirical studies prove that the main factors determining the success of MSME are determined by the application of strategic management, such as organizational learning, partnerships, competitive advantage, and business performance. Some of these aspects are categorized as forming aspects of social entrepreneurship entities (social entrepreneurship). However, there is still debate whether social entrepreneurship is truly able to be a determining factor for the success of MSMEs.

2. Literature Review

Understanding the effect of social entrepreneurship on organizational learning can be seen from the opinion expressed by Kirzner (1973) which states that entrepreneurs can see opportunities for entrepreneurial profit. Opportunities are considered imperfect market participants' knowledge, and they can be captured by anyone who discovers their whereabouts before others do. Thus, according to Kirzner, the opportunity requires differential access to existing information. By responding to this, people can obtain resources and put them back together to sell the results in the hope of making a profit (Shane, 2003).

Godói-de-Sousa and Júnior (2013) conducted a study on "Social Enterprises in Brazil: Socially Produced Knowledge Versus Social Innovation" which aims to investigate whether socially generated knowledge in social enterprises in Brazil has promoted social innovation and regional development. This research is exploratory and descriptive in nature, and was developed in two stages. Initially, the sample group consisted of 378 projects selected from the Solidarity Economic Enterprises mapping, conducted by the National Secretary for Solidarity Economics. The sample was surveyed to verify the main characteristics of the company. After that, interviews were conducted with key managers in a sample of 32 projects.

Research results show not easily propose a model or uniformity of action to disseminate learning in the context of third sector organizations which aims to social innovation. Each has its own logic and before carrying out the analysis, it is necessary to recognize the individuals who participate in it and their goals and thus understand the goals of the organization and the dynamics of learning.

Proposition 1: Social Entrepreneurship Effect Organizational Learning

Social Entrepreneurship and Business Partnership

Brady and Haugh (2008) conducted research related to social entrepreneurship and business networks. Based on theoretical descriptive studies show that the structure of concepts, ties, content, context, and objectives identified from the theory can be applied to the analysis of social enterprise networks. This shows that social enterprises can encourage business partnerships. Through social enterprise partnerships will be stronger in the face of the

A DISTRIBUTION NETWORK'S EFFECTS FROM AN INTERMITTENT PHOTOVOLTAIC POWER SOURCE

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ABSTRACT

The reconciliation of the photovoltaic (PV) nearby planetary group to the current conveyance networks has carried new difficulties to the organization organizers. One of the most fascinating difficulties is to forestall the effects of the PV irregular character on the consistent state framework activity conditions. Thus, the principle point of the current work is to examine the impacts of the PV power discontinuity on voltage execution, ordinary generator every day conduct and programmed voltage controller activity. Reproductions are effectuated on 33-transport IEEE spiral conveyance power framework. Furthermore, so as to give a dependable report, a genuine PV power profile is adjusted in this examination. The considered organization is demonstrated and reenacted when the PV entrance and afterward a near report is set up. Gotten results over a time of 24 hours uncovered that the PV coordination adds to an upgrade of the general voltage profile, an extensive sparing in the aggregate sum of the delivered dynamic force and a decrease of intensity misfortunes; yet then again, the PV discontinuous character causes noteworthy change in transports voltages every day profiles just as changes underway day by day plan. To summarize, this paper reports the changes, brought about by the PV source discontinuity, which must be contemplated by the conveyance networks organizers to keep up the general organization boundaries inside safe working condition

Keywords— *Conventional generator Distribution power system Photovoltaic source PV intermittence.*

I. INTRODUCTION

In recent years, the electricity sector has seen an exponential development. In many countries a vast movement of deregulation appears. The causes (political will, economic interest, etc.) and the goals (improvement of electric companies, opening of new markets, etc.) of this movement of deregulation are very varied. One of the consequences of the deregulation of the electricity markets is the connection of new means of production [1]. The means used for this new electricity production are very diverse. There are wind farms, cogeneration plants, photovoltaic cells, small hydropower plants, fuel cells and other developments are expected in the future [2].

On the other hand a number of reasons such as: the obligation to reduce the emission of greenhouse gases, the diminution of fossil fuels, the issue of energy independence and sustainable development, have pushed to consider the energy problem not only from the economic point of view, but also from an ecological point of view [3, 4]. This has encouraged many countries to develop their energy systems based on renewable energies[5].

Photovoltaic (PV) solar energy was first developed to meet electrical needs in isolated sites, such as mountain regions, islands and rural areas of developing countries. Since the early 2000s, the development of solar photovoltaic energy has grown exponentially. In fact, the installed capacity in the world has increased from a few Megawatts in the early 2000s to 102 GW at the end of 2012 then 227 GW at the end of 2015 and 300 GW at the end of 2016. The installation rate of photovoltaic solar power is currently more than 70 GW per year[6].

ThissignificantgrowthofthePVinstallationhasanimportantimpactontheenergysystembehavior. For this reason, many research works have been conducted to study the effect of PV penetration on power systems. Farhad et al. [7] evaluated the application of custom power devices (DVR and DSTATCOM) to improve voltage unbalance in LV feeders with the presence of rooftops PVs. Another work [8] investigated the impact of a high PV insertion on steady state and transient transmission network stability. In [9] authors studied the effect of a PV with low voltage ride through (LVRT) capability on the transient stability of a synchronous generator connected to an infinite bus.

Although the already cited studies revealed effective outcomes in terms of the impacts of a high PV penetration, they generally eliminated the intermittent character of the solar power system. However, the variability of the PV output has significant consequences which must be completely studied before any other photovoltaic penetration. In light of this fact, the motivation of this work is to investigate the effects of the PV intermittence on the behavior of an existing distribution system. The penetration of such alternating power source brings a lot of new challenges from the system modeling and simulation point of

A JUDICIAL PROTECTION OF INTELLECTUAL PROPERTY RIGHTS AS A PART OF CIVIL LAW

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Abstract

The authors of the article explore the digital rights management in judicial protection of intellectual property rights through the lens of civil law principles. The principle of protection of civil rights and interests is defined as one of the basic principles of civil law regulation. The specifics of this principle, which are caused by the specificity of the objects of intellectual property rights, the peculiarities of obtaining legal protection, are determined. The provisions of the theory and the current legislation are analyzed in terms of defining ways of protecting intellectual property rights as one of the factors that determine the peculiarities of the implementation of the principle of protection of civil rights and protected interests in the field of intellectual property.

Keywords: *Civil Law, Digital Rights Management, Intellectual Property Rights, Judicial Protection, Principle of Civil Law.*

1. INTRODUCTION

Software and hardware were first developed in the USA, which complicates or limit various actions with data in electronic form (copying, modification, viewing, etc.), and also allow tracking such activities - the so-called DRM (Digital Rights Management).

Digital Rights Management) - software or hardware-software tools that deliberately limit or impede various actions with data in electronic form (copying, modification, viewing, etc.), or allow you to track such activities. DRM is a set of access control and management systems [1-3].

The complex of access control and management systems is designed to prevent the illegal copying of works that do not allow or restrict any copying, including the bonafide copying of free works (including those works whose exclusive rights expired after the introduction of DRM), since it is not automatically possible by technical means to distinguish between "legitimate" copying from "illegal" copying all this is DRM, i.e. "Digital Rights Management." Protected works (files, data CDs) are accompanied by DRM and restrict consumer access to various actions, such as copying or transferring data. It should be noted that shell software for viewing, digital pocket players, and DVD players are built into the software of playback and recording devices. It seems, in this case, the consumer is limited in choosing the hardware used with this device, and the period during which the user can view the content is also limited.

Modern DRM systems use cryptographic security algorithms; however, these methods cannot be used entirely, since they are based on the assumption that to access encrypted information, a unique key is required to decrypt it. The key can be tied to the obligatory Internet registration of the user and its constant authentication (identification), that is, entering personal data, the key can also be supplied separately with the product in the form of an access key recorded both on paper and on a separate drive.

Intellectual property, like any other type of property, is often the subject of unlawful actions by third parties and therefore needs legal protection [4-5].

Scientists distinguish the following objects of intellectual property (Fig. 1).

A STUDY OF IOT TECHNOLOGY AND ITS USE

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Abstract:
Internet of Things (IOT) has provided an opportunity to construct powerful industrial system and applications by leveraging the increasing ubiquity of RFID, wireless, mobile and sensor devices. Various industrial IOT applications have been progressively developed and deployed in recent years. Now-a-days, modifying and monitoring plays a main role in our day to day life. Everything we can monitor and control using innovative technologies. Remote access is a ideal feature that came because of high speed internet. The main objective of suggested system is to deliver a technology oriented and low-cost system to make an advanced industry for those who away from their industry and want to control devices.
KeyWord: *Internet of Things (IOT), Server, Raspberry Pi, Webpage, Ethernet, Smart phone*

I. Introduction

Previously there was a modest manual way of handling machines. However, with the development of technology, new ways are presented for controlling the machines like automation. At the touch of a button, we can contact large amount of information due to ability of computers and the Internet. Everybody wants an affordable and protected way to control their machines from any clever mobile device or Internet connection.

The Internet of Things (IoT) is the network of physical objects or "things" enclosed with electronics, software, sensors and connectivity to enable it to achieve greater value and service by swapping data with the manufacturer, operator or other linked devices. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the prevailing Internet infrastructure.
Internet of Things is the subsequent big revolution of the world on digitalization of commercializing various modules/products. Everything is connected with the internet, some involves controlling and some involves monitoring the factors from anywhere. The Internet of Things is today's most trending technology that stands together with wearables and robotics.

A printed circuit board (PCB) is the simple part in industry for manufacturing of any electronic product. Etching is main process for developing a PCB. In etching machine, the etchant solution is disseminated over the boards by nozzles and recirculated by pumps. Regulation of the nozzle, temperature and etchant composition gives expected control of etching rates and high manufacturing rate. Etching at ambient temperature might take over an hour, so it is better to heat up the etching solvent to about 35-45 degree celcius. At higher temperatures the etching performance declines, so it is necessary to control the temperature of solvent. So, the proposed system constantly monitors the machine and at a specific situation it will take necessary action.

II. Literature Study

Li Da Xu, Wu He, and Shancang Li [1]: This paper reviews the existing research of IoT, key enabling technologies, major IoT applications in industries, and recognizes research trends and challenges. A main contribution of this review paper is that it summarizes the current state-of-the-art IoT in industries systematically.

AlaaAlhamoud, Felix Ruettiger, Andreas Reinhardt, Frank Englert, Daniel Burgstahler, Doreen Bohnstedt, Christian Gottron and Ralf Steinmetz [2]: This paper presents framework for recognizing energy efficient smart homes based on wireless sensor networks and human movement detection. Their work is based on the idea that most of the user activities at home are related to a set of electrical appliances which are necessary to achieve these activities. Therefore, they show how it is likely to detect the user's present activity by monitoring his fine-grained

MATLAB/SIMULINK MODELING OF SENSORIZED BLDC MOTOR SPEED CONTROL

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Abstract: *Recent developments in the field of magnetic materials and power electronics, along with the availability of cheap powerful processors, have increased the adoption of brushless direct current (BLDC) motors for various applications, such as in home appliances as well as in automotive, aerospace, and medical industries. The wide adoption of this motor is due to its many advantages over other types of motors, such as high efficiency, high dynamic response, long operating life, relatively quiet operation, and higher speed ranges. This paper presents a simulation of digital sensor control of permanent magnet BLDC motor speed using the MATLAB/SIMULINK environment. A closed loop speed control was developed, and different tests were conducted to evaluate the validity of the control algorithms. Results confirm the satisfactory operation of the proposed control algorithms.*

Key Word*: BLDC motors Hall sensors Modeling Speed control*

I.INTRODUCTION

Brushless direct current (BLDC) variable speed drives are increasingly applied in many new industrial applications. Recent developments in power electronics and semiconductor technology have led to their widespread use [1]. This type of motor is now more popular in applications, such as for electric vehicles, due to its energy-efficient consumption [2]. Furthermore, the BLDC motor has many advantages over the induction motor and brushed DC motor, including better efficiency, power factor, less maintenance, longer life, and less rotor inertia. BLDC motor is also easier to control with its trapezoidal configuration. This study utilizes a three-phase BLDC motor with trapezoidal back EMF [3]. The brushes and commutators have been eliminated, and the windings are connected to the control circuits. Commutation is done electronically instead of using brushes [4]. Because such motors have no brushes, they need a solid state commutation circuit in order to supply the stator windings according to the rotor position [5]. Rotor position can be obtained by either a shaft encoder or, more often, by Hall Effect sensors [6].

The dynamic features and digital control of the BLDC motor furthered its wide utilization in different high and low power applications, compared with other types of motors. Moreover, these motors became one of the major components used to develop 3D printers due to its compatibility and easy integration with used digital controllers [7], which are digitally controlled through power electronic converters integrated with high speed microcontroller. The use of such devices enabled an easy adaption of BLDC motors in 3D printers and Internet of Things (IoT) devices [8]. Nowadays, real-time connection technologies, either at the residential or industrial level, is considered as the primary technology that established a wide range of IoT applications, such as smart homes and automated industrial applications [9]. A review of the variety of microcontroller-based applications shows the rapid developments in science and technology. The advantages in developing embedded microcontrollers in many industrial applications realized remote monitoring and using wireless/wired techniques of different systems [10]. A BLDC motor drive can be considered a digitally controlled drive system. Therefore, sensors are implemented to realize control and drive system [11]. This is mainly required for rotor position. The commutation process was accomplished using a digitally controlled inverter based on Hall-effect sensors signals. The BLDC motors are characterized by their rectangular current, which needs six discrete rotor positions [7].

Permanent magnets create the rotor flux, and the energized stator windings create electromagnet poles. By using the appropriate sequence to supply the stator phases, a rotating field on the stator is created and maintained. According

DATA SECURITY METHODS FOR A CLOUD COMPUTING ENVIRONMENT

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Abstract:
Cloud computing is an Internet-based computing. It has received attention in recent years but security issue is one of the major inhibitor in decreasing the growth of cloud computing.
***KeyWord**: Data Security, Cloud Computing*

I. Introduction

Cloud Computing and Its Security Challenges: An Overview. These days, data, resources, and applications can be shared and accessed through the internet whenever one requires. This has been made possible due to the introduction of cloud computing. The cloud helps in storage and retrieval of the resources over the internet than storing them in hard drives or any other storage devices.
Instead of managing information through local servers, resources can be shared through the clouds. A cloud server mainly comprises software applications and services for the end users within cloud servers.
India.

II. Cloud Computing

Nowadays, cloud computing is at a peak in its implementation. The top cloud service providers in the recent market include Google Drive, Microsoft Azure, etc. These companies help in providing cloud users in keeping files or develop applications in it. From the cloud, the data and the applications can be accessed by the user anywhere and at any time. If a user chooses cloud services, he/she will be able to store their local data remotely. According to Ravichandiran, "the data stored in the remote server can be accessed or managed through the cloud services provided by the cloud service providers (2014)."

Since working through the cloud is easy and simple, businesses, industries, students, communities are storing and accessing their data as well as hosting their applications in the cloud. This is because the cost associated with cloud storage and hosting is way cheaper than traditional methods of storage and local server hosting. In recent years, the cloud market is rising like never before. In the upcoming years, the usage of the cloud is expected to rise even further.

III. Cloud Services

The working of the cloud is simple as the user sends a request to the cloud and in response; the cloud provides access to the user. According to Cyril and Kumar, "Cloud computing utilize the networks of a huge group of servers naturally brings a low rate data processing with a specialized connection. (2015)" Hence, cloud computing provides a new and interesting model of information technology services and support which benefit the user by helping them drive up their productivity. The same service is provided to multiple users making it flexible for the users to choose their service according to their requirements.

WELDED LAP JOINTS WITH IMPROVED SHEAR STRENGTH

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ABSTRACT

Manufacturing Assembling forms unavoidably prompt a condition of lingering worry into materials and items. This can present potential issues, regarding dimensional dependability, Structural trustworthiness and diminished weariness life. The traditional method to alleviate the leftover anxieties is post-weld heat treatment, which is a successful procedure, however it experiences a few detriments: the expense of treatment as far as gear and vitality is high. Subsequently another methodology is expected to conquer the disadvantages experienced by the ordinary pressure easing procedures. As an expansion to the current strategies for better quality feasibility vibratory welding method is presented. The current test is planned to dissect the impact shear weight on the lap welded mellow steel plates of IS 2062 evaluation B, which are welded during vibration with varieties of current that is at various amplitudes and increasing speeds. What's more, it is recognized that the shear quality is expanding while the welding procedure is finished by offering vibrations to the work piece.

Key words: lap welded, vibratory welding, *IS 2062*

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1. INTRODUCTION

Welding is widely used in automotive industries to assemble various products. It is well known that the welding process relies on an intensely localized heat input, which tends to generate undesired residual stresses and deformations in welded structures, especially in the case of thin plates. Therefore, estimating the magnitude of welding deformations and characterizing the effects of the welding conditions are deemed necessary. Welding is widely used for construction of many structures. There exists residual stress near the bead because of locally given heat. Tensile residual stress on the surface degrades fatigue strength.

SMART AGRICULTURE USING IOT

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Abstract:

India, whose GDP depends on the agriculture is not a developed nation in terms of modernization in agriculture. The high cost of labor, uncertainty in the production of crops, lack of knowledge about new methods, continuing with the same orthodox and traditional means to go about agriculture, the inefficient use of proper irrigational facilities results in low productivity. Due to this uncertainty in the irrigation process the crops may also dry up. About 14.7% of India's growth depends on the agricultural sector, so it's a huge cause of concern.

With this project, the current problems related to farming are solved and practically implemented solutions are provided. Using IOT as well as GSM, a whole new concept of farming using networks is introduced reducing labor, updating farmer about the live conditions of farm on the mobile devices and presenting its graphical value using thing speak. It makes the process handy with the click a button reformation.

We evaluate the performance of our method in a simple temperature sensing application. In terms of reducing human efforts and ease of irrigation, our approach has been observed to outperform the existing conventional approach. We bring out the advantages and disadvantages followed by their applications. The paper concludes the work open for research.

Key words: *IOT (Internet of Things), GSM (Global System for Mobile), Arduino, Thing speak, ENC28J60.*

I. Introduction

The biggest problem faced during production of crops, leading to wastage or below par production is non timely watering in the field or inaccurate amount of water being poured in the field. At times, due to the human tendency, either greater or lesser amount of water is allowed to enter the field thereby destroying the crop. This marks the first major problem. Also water-level in the source tank sometimes goes low orsometimes get over-drained. Thus information regarding scarcity or abundance of water in the reservoir is the second major problem. Over sprinkling of pesticides and chemicals for large production of products lowers the life-span of field. Many times the farmer is far away from the field and is therefore unable to get the current status of the field. Hence his periodic visit is must on the field to take care of the water requirement, chemical requirement, and other production related issues. Thus for timely observation, automatic control over such parameters would ease the burden of any individual. Traditional methods of cultivation like manual ploughing, two crop pattern and old system of irrigation are mainly responsible for low productivity of agriculture. Due to the use of these old implements agriculture is backward. Lack of proper understanding of the need to grow crop sustainability will push farmers in to vicious circle of debts, heavy use of chemical (fertilizers), water mismanagement, and low productivity and thus more debts for the new cycle.

This problem is avoided by making the control of water automatic with the help of digital pins of any microcontroller. Basically any pump (automatic) can be controlled with the help of a microcontroller and a current amplifying device. In this project arduino is being used as a microcontroller and bc147 as a current amplifier and as a switching device. In order to read the information of all these activities on the field, GSM sim900 was implemented on the field. This GSM was a dual band module with features of message oriented (mo) and message terminated (mt). Finally, all these data was received and transmitted via ausb cable and enc28j60 to the thingspeak platform for future purposes.

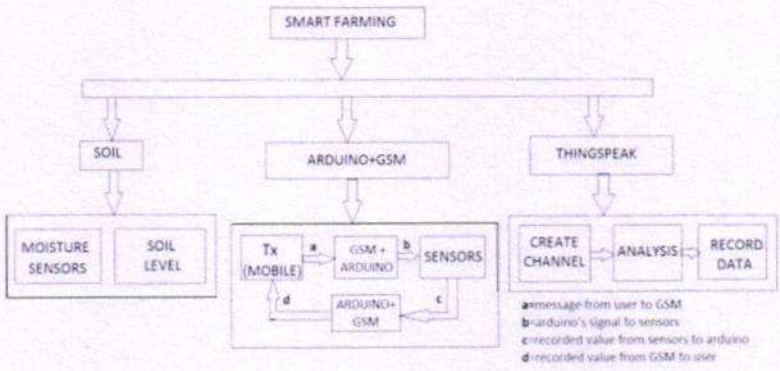

Figure 1 Block Diagram

PLAIN CEMENT CONCRETE'S FUTURE SCOPE ANALYSIS WHEN MIXED WITH GLASS AND FIBRES

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Abstract:

Concrete is principally utilized material for the development of different kinds of structures in the advanced time of common foundations. Concrete is solid in pressure yet it is feeble in strain and shear. To dispense with those issues, strands were acquaint in concrete with upgrade its rigidity and shear quality. By utilizing filaments in solid blend it changes over fragile nature of cement into flexible nature. Different Efforts are being made in the field of solid innovation to grow such kind of cements which have exceptional attributes. In the old time just plain and straight steel fiber were utilized. In present day advancement of fiber fortified solid some new kind of strands like glass, carbon, polypropylene and aramid filaments are given in plain cement to the improvement in elasticity, exhaustion qualities, shrinkage attributes, sway, flexural quality, and compressive quality. The different properties of FRC rely upon fiber geometry, type, modulus of flexibility, solidness, viewpoint proportion, fiber substance and fiber direction. Total size and network quality is likewise a significant parameter of fiber fortified cement.

To utilize concrete as a heap bearing part it is important to increment tractable opposition property of the solid part. This wonder is accomplished from multi year back or more by utilizing essential fortification and furthermore by the Application of prestressing. Both of the two strategies give rigidity to the basic component yet don't expand the innate elasticity of solid network itself. The general execution of strengthened solid composite material is influenced then the individual execution of the solid itself. This prompted the quest for new material for example two stage composite material in which powerless solid framework is fortified with solid fiber to deliver composite of unrivaled property and superior. In two stage composite sinewy material, strands hinder the disfigurement of the solid grid and import to build the properties of solidness and quality. The primary reason for consolidating natural fiber (polyamide) and inorganic strands (glass and steel) is to accomplish unrivaled properties of plain solid quality.

The principle motivation behind consolidating natural fiber (polyamide) and inorganic strands (glass and steel) is to accomplish predominant properties of plain concrete.

Keywords: *Steel, Concrete, FRC, Fibre, Aggregate, polyamides, Sub Area: Material Engineering, Broad area: Structural Engineering*

I. Introduction

In my present investigation the mechanical properties of fibres reinforced concrete is studied by using (steel fibre, glass fibre and polyamide) with different weight fraction of fibres with respect to cement.

The mix design of M25 concrete with W/C ratio of 0.42 is taken. Thirteen mixes (13) included one control mix were prepared and tested in the laboratory. The total quantity of fibres mixed in the concrete are in order of 0%, 0.75%, 1.5%, and 2.25% by weight of cement and One mix contains (0.33% of glass fibre+0.33% of steel fibre+0.33% 0f polyamide). The total tested specimens are 239. Admixture such as superplastisizer (water-reducer) namely sikament is also used with the percentage of 1.5% by weight of cement to all the mixes to improve reaction between cement and water and also avoid the concrete from corrosion. The following properties of the hardened concrete were determined:

a. Compressive strength tests,
b. Split tensile strength tests and,
c. Flexural strength tests.

In this study the cube specimen of size (150mm x 150mm x 150mm) were casted and tested in auto CTM to obtain the compressive strength of FRC.

In addition to this, cylindrical specimens of size (150mm x 300mm) were also prepared to obtain the split tensile strength FRC.

Whereas Beam specimens of size (100mm x 100mm x 500mm) were tested under two point static flexural loading to obtain the flexural strength of FRC.

THE WAY IN WHICH DATABASES CONDUCT THEMSELVES IN MAINTAINING THE SECURITY OF DATA TRANSFERRED BETWEEN TWO COMMUNICATION POINTS

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Abstract:

Keeping and controlling the security and secrecy of database data is significant in the cutting edge time as long as there are a ton of methods for entrance, surveillance, and access to information on the Internet. The significance of database security is a higher priority than the significance of information to be ensured. There are numerous available resources of security that help keep up the security of data and encryption to the level that meets the prerequisites of database security. It is notable that every office or division has its own strategy to shield its information from robbery or harm in relation to the size and sort of information notwithstanding the hand that works on such information and that the data security circumstance is in accordance with the foundation of the database.

Key Words: *Information systems, data exchange, data classification, data encryption, ports.*

I. Introduction

Modern technologies for computers and networks have revolutionized and continue to revolutionize the world of use, dissemination, and transmission of information. The standards of behavior that databases use in the transfer and linking of databases around the world must force users to respect rights and responsibilities.

We can consider information to be a source of strength, and it is the key to prosperity for users who have access to it.

Do not forget that the information is a treasure to the hackers of the computer must be protected from Pirates of information, Do not forget that the information is a treasure to the hackers of the computer must be protected from them, the data and information must be protected whether stored in the database or transmitted directly through the channel connection on both ends of computers, one of them sent to data and other data receiver.

The electronic systems should reach the majority of international institutions, companies, workplaces and private life. Therefore, new ethical and legal decisions must be made to achieve balance and guarantee the rights of all.

II. The Ethical Issue Of Electronic Information Systems

The ethical issue is the accepted standards of behavior and the rules governing members of the profession, including information control, access, privacy and misuse of data. These extend to electronic networks and electronic databases, and more specifically, electronic information systems[1].

2.1. Electronic Copyright Law

The ease with which information is being pumped increasingly on networks is causing confusion and how copyright and intellectual property rights can be applied to electronic files. With the growing growth of networks, especially social networks, and the dissemination of information on them and the ease of sharing and use of information published without reference to the His idea, It became necessary to provide explanations on how to use electronic files, the ease with which the distribution of electronic files and the nature of some electronic information create problems under the law of copyright and intellectual property rights.

2.2. Unintended Consequences of Data Exchange

WELLD JOINTS' RESEARCH ON THE FAILURE OF FUEL STORAGE TANKS

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ABSTRACT

The development of fuel stockpiling tanks is significant and drilled so as to store fuel which is imported from various nations. Fuel released from the boat is put away in the tanks before shipping to deferent fuel stations inside Tanzania and neighboring nations. It has been uncovered that many fuel stockpiling tanks weld joints, bomb inside a brief timeframe in the wake of dispatching.

This paper presents the investigation that has been directed as to visit disappointments of fuel stockpiling tanks weld joints, including elastic testing to check whether the quality of base metal and weld joints are inside the gauges. Base metal and anode arrangements were checked and through pieces, carbon proportionate was confirmed. Further, the appropriateness of welding process utilized was researched and the radiographic test was done to distinguish the weld absconds in the weld joints. The joined weld abandons recognized during administration and development of fuel tanks were investigated.

The aftereffects of the investigation uncovered the quality of materials to be 456 N/mm2 which is satisfactory too noticed that carbon proportional for base metal is 0.346 and for cathode is 0.3245 which are inside the suitable range. It was likewise seen that visit disappointment of weld joints was because of human blunder, poor workmanship, ignorance, and site condition. The primary welding process utilized in development was protected metal curve welding which is manual worked where nature of weld joint relies fundamentally upon aptitudes of welder. So as to limit disappointments, the creator suggests the utilization of lowered curve welding and metal gas circular segment welding which consider semi and full mechanized procedures.

Key words: Fuel storage tanks, Fuel storage, Welding, Tanks failure, Weld joints.

A SOLAR VAPOR ABSORPTION AND REFRIGERATION SYSTEM'S EVALUATION

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ABSTRACT

Solar based adsorption refrigeration gadgets are of incredible centrality to address the issues forcooling necessities of the cutting edge world. They are natural cordial, non-destructive, silent, and don't require any power when contrasted with the VCRS. Different sunlight based fueled cooling frameworks have been tried broadly; nonetheless, these frameworks are not yet prepared to rival the financially utilized fume pressure framework. Therefore, examine exercises in this segment are as yet expanding to illuminate the specialized, financial and ecological issues. The target of this undertaking is to manufacture and examine a two phase fume adsorption refrigeration framework utilizing enacted carbon-methanol pair and to think about the framework execution for various evaporator loads. In light of the examination, the two phase adsorption framework is demonstrating an expansion in execution as the evaporative burden increments, yet the temperature distinction in the evaporator is diminishing as the heap increments.

Key words: *Vapour Adsorption Refrigeration System, Adsorption, ,Activated carbon-methanol pair, solar COP.*