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3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during year 2017-18

Sr. No	Title of paper	Name of the author/s	Name of journal	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	Parallel Outlier Detection for Streamed Data Using Non-Parameterized Approach	Dr. S. M. Sangve	International Journal of Synthetic Emotions (IJSE)	other
2	Partial Least Square based Improved Intrusion Detection System	Dr. S. M. Sangve	International Journal of Computer Applications (IJCA)	Scopus
3	Real Time Spam Detection of Drifted Twitter using Statistical Features	Dr. S. M. Sangve	International Journal of General Science and Engineering Research (IJGSER)	other
4	Efficient Resource Utilization Using Nearby Mobile Devices with Task Sharing Algorithm	Dr. S. M. Sangve	International Journal of General Science and Engineering Research (IJGSER)	other
5	Verifiable Delegation Along With Attribute-Based Hybrid Encryption in Cloud Computing	Dr. S. M. Sangve	International Journal of General Science and Engineering Research (IJGSER)	other
6	Multi-keyword Top-K Ranked Search over Encrypted Cloud Using Parallel Processor	Dr. S. A. Ubale	International Journal for Research in Applied Science & Engineering Technology(IJRASET)	UGC APPROVED JOURNAL
7	Group User Revocation Policy in Cloud Computing	Prof. Kailash Tambe	International Journal of General Science and Engineering Research (IJGSER)	other
8	A Novel Approach for Reliable High Speed Data Transmission Technique Using Light Fidelity	Prof. Kailash Tambe	International Journal of Pure and Applied Mathematics	other

	(LiFi)			
9	Detection and Prevention of Gray Hole Attack by Using Reputation System in MANET	Prof. Umesh Talware	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)	other
10	Survey on access control system in public cloud	Mr. Vikas Madhukar Patil	International Journal of Computer Engineering and Applications (IJCEA)	other
11	Enriching Information Security in Educational Data Mining Using Big Data	Prof. Gopal R. Chandangole	International Journal of Creative Research Thoughts (IJCRT)	UGC APPROVED JOURNAL
12	Detection and elimination scheme for data reduction with low overheads in multi cloud storage	Prof. Y. B. Hembade	International Journal of Innovative Research in Science, Engineering and Technology	other
13	Relevant Information Retrieval using SBIR Algorithm	Prof. Aparna V. Mote	International Journal of General Science and Engineering Research (IJGSER)	other
14	Thumb Based Document Retrieval Using Cloud System	Prof. Aparna V. Mote	International Journal of General Science and Engineering Research (IJGSER)	other
15	Authority Identification Using Keystroke	Prof. G. S. Kothawale	International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)	other
16	Survey on Use of Crowd sourced User Preferences for Visual Summarization of Image Collection	Prof. R. T. Waghmode	International Journal of Engineering Development and Research (IJEDR)	other

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Parallel Outlier Detection for Streamed Data Using Non-Parameterized Approach

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ABSTRACT

Outlier detection is used in various applications like detection of fraud, network analysis, monitoring traffic over networks, manufacturing and environmental software. The data streams which are generated are continuous and changing over time. This is the reason why it becomes nearly difficult to detect the outliers in the existing data which is huge and continuous in nature. The streamed data is real time and changes over time and hence it is impractical to store data in the data space and analyze it for abnormal behavior. The limitations in data space has led to the problem of real time analysis of data and processing it in FCFS basis. The results regarding the abnormal behavior have to be done very quickly and in a limited time frame and on an infinite set of data streams coming over the networks. To address the problem of detecting outliers on a real-time basis is a challenging task and hence has to be monitored with the help of the processing power used to design the graphics of any processing unit. The algorithm used in this paper uses a kernel function to accomplish the task. It produces timely outcome on high speed multi- dimensional data. This method increases the speed of outlier detection by 20 times and the speed goes on increasing with the increase with the number of data attributes and input data rate.

KEYWORDS

Anomaly Intrusion Detection, Compute Unified Device Architecture (CUDA), Gaussian Detection Scheme, Graphics Processing Unit (GPU), Outlier Detection, Parallel Execution

INTRODUCTION

Outlier detection mechanism is the detecting of a different pattern or an unusual pattern that is different from the rest of the normal data set. Outlier detection is usually done to indicate and identify the defective data or a behavior. Sometimes outlier detection is done to analyses the data for security and scientific interest. Instead of discarding the data, researchers sometimes compose the data pattern in the form of data mining technique so that same pattern can be detected very easily in the near future.

The data incoming to the system is in the form of chunks or streams. The data in the form of chunks are usually datagram. The datagram is similar in size and is possible to detect and identify the outliers in it very easily. When the data is the form of streams, it becomes difficult to analyze the data on the regular basis as the stream is continuous and enormous data comes into the system. As the streamed data is continuous is nature, it becomes nearly impractical to store it in a memory and analyze it thoroughly for abnormal behavior. This gave rise to the use of stream outlier detection mechanism which works on one pass basis. The streamed data is put into the tunnel of data outlier

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Partial Least Square based Improved Intrusion Detection System

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ABSTRACT
Various Artificial Intelligence (AI) based computing techniques for intrusion detection has been proposed using popular large-scale datasets like DARPA 98 and KDD Cup 99. However, AI based systems such as using representative instances are computationally inefficient. In this paper, the computationally efficient approach is proposed for anomaly detection by combining Partial Least Square (PLS) and technique of extracting representative instances. The PLS helps in feature selection and provides dimensionality reduction. Further, to decline the processing time the representative instances are properly chosen from the data set before classification. The classic instances are selected from the subsets of data which are obtained by Centroid-based partitioning technique. The system utilizes these paradigmatic instances as a training set. Finally, KNN classifier is trained using these paradigmatic instances. The results obtained using the proposed approach indicates a considerable fall in the processing time and space utilization.

General Terms
Network security, K-nearest neighbor classifier, Training dataset, Testing dataset, Anomaly based intrusion detection

Keywords
Intrusion detection, Artificial Intelligence, Feature selection, Preprocessing, Partial least square, Centroid-based classification

1. INTRODUCTION
The Internet is gaining more importance in different sectors like business and education centers that are utilizing Internet services (web and email for communication). The Internet users access these free services that make them susceptible to attacks which include data stealing [1]. For ensuring, the security policy of data, a modern computer network uses the intrusion detection system (IDS) which is an integral part of well-defined and organized network. The IDS can be a software program or hardware system which monitors the various actions occurring in the real network and analyzes the network for detection of security attacks [2].The intrusion detection system scans the network activity and finds out the attacks. Previously, many techniques have been developed for modeling normal and anomalous behaviour in the network. The most of the deployed techniques are misuse and supervised detections. But the problem generated from supervised detection is that they do not have enough labelled data. If a new type of intrusion comes in a network then the system is unable to capture it because no signature is available in labelled dataset. Thus, there is a need to update the dataset manually. This will consume more time and space. To get rid of these problems, unsupervised anomaly detection has been developed. It includes a set of unlabelled data. For detection of unknown attack, there is no need to keep previous knowledge of training dataset and new attacks.

There are many techniques developed for IDS using two broad categories as supervised (classification) and unsupervised (anomaly detection and clustering). To apply learning techniques for IDS, it is necessary to have the knowledge about the label information. To obtain the information of label can be very difficult because when we check the network traffic or audit logs it requires huge amount of time. Hence, in the real time applications the labelled set may not contain all possible types of attacks. If new attacks appear, the training dataset may not contain instances representing these fresh classes of attacks. Thus, it is important to have trade-off between supervised and unsupervised techniques for IDS [3]. Supervised algorithms are C4.5, k-nearest neighbor (KNN), and multilayer perceptron. The k-nearest neighbor finds the k-samples in training dataset that are closest to the test sample.

Most of the viable and open source IDS tools that are developed during last decades are signature-based. Such tools can detect only known attacks which are described previously by respective signatures. However, for new attacks, the signature databank should be stored and changed manually. To cope up with this issue, machine learning systems are used to learn new attacks those are not previously defined in training dataset [3]. The signature-based IDS are unable to detect zero-day attacks like worms and spyware. To solve this problem, anomaly intrusion detection methods have been developed. The support vector machine (SVM) is one of the known machine learning algorithms to classify abnormal samples[1]. There are two main approaches used for intrusion detection namely signature-based(SIDS) and anomaly-based(AIDS). The taxonomy of labelled and non-labelled attacks is briefly described by Garcia-Teodoro et al. [4].

The various AI techniques such as Naive Bayes, KNN, decision trees, artificial neural networks (ANNs), and SVM have been applied for detecting intrusion. The most commonly used techniques for intrusion detection are SVM and KNN. The multilayer perceptron is the example of neural network architecture which is widely used to solve the problem of intrusion detection. When the research in IDS started, many of the researchers suggested the fusion approach to increase the detection accuracy. The notion behind using a fusion classifier is to put together some learning techniques to attain improved detection performance than a particular classifier [5].

There are certain issues addressed while implementing the IDS. The IDS should be effective and efficient in terms of computational cost. The effectiveness of IDS is calculated in terms of detection accuracy (DA) and false alarm rate (FAR), while the response time is used to measure the efficiency during a network attack [6]. For improving the competency of AIDS, the various research groups have used feature selection to eliminate repetition of data and to decrease the computational complexity of preprocessing. The feature

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Real Time Spam Detection of Drifted Twitter using Statistical Features

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Abstract: *- Twitter Spam has become an essential drawback these days. Recent works specialize in applying machine learning techniques for Twitter spam detection that build use of the applied math options of tweets. In our tagged tweets dataset, however, we tend to observe that the applied math properties of spam tweets vary over time, and therefore the performance of existing machine learning based classifiers decreases. This issue is referred to as "Twitter Spam Drift". In order to tackle this problem, we firstly carry out a deep analysis on the statistical features of one million spam tweets and one million non-spam tweets, and then propose a novel Lfun scheme. The projected scheme can discover "changed" spam tweets from unlabelled tweets and incorporate them into classifier's training process. a number of experiments are performed to evaluate the proposed scheme. The results show that our proposed Lfun scheme can significantly improve the spam detection accuracy in real-world scenarios.*

Keywords: - Social network security, twitter spam detection, machine learning.

I. INTRODUCTION

TWITTER has become one of the most popular social networks within the last decade. It's rated because the most well-liked social network among teenagers in keeping with a recent report. However, the exponential growth of Twitter conjointly contributes to the rise of spamming activities. Twitter spam, that is named as unsought tweets containing malicious link that directs victims to external sites containing malware downloads, phishing, drug sales, or scams, etc[2], not solely interferes user experiences, however conjointly damages the complete net. In September 2014, the web of latest Zealand was run thanks to the unfold of malware downloading spam. This type of spam lured users to click links that claimed to contain Hollywood star photos, however in reality directed users to transfer malware to perform DDoS attacks [14].

Consequently, security corporations, moreover as Twitter itself, area unit combating spammers to create Twitter as a spam-free platform. as an example, Trend small uses a blacklisting service known as net name Technology system to filter spam URLs for users WHO have its products installed[8]. Twitter conjointly implements blacklist filtering as a part in their detection system known as BotMaker[5]. However, blacklist fails to guard victims from new spam thanks to its delay [4]. Analysis shows that, over ninetieth victims could visit a replacement spam link before it's blocked by blacklists. so as to deal with the limitation of blacklists[10], researchers have planned some machine learning primarily based schemes which may build use of spammers' or spam tweets' applied mathematics options to find spam on faith the URLs.[3]

Machine Learning (ML) primarily based detection schemes involve many steps. First, applied mathematics options, which may differentiate spam from non-spam, area unit extracted from tweets or Twitter users (such as account age, variety of followers or friends and variety of characters during a tweet). Then a tiny low set of samples area unit tagged with category, i.e. spam or non-spam, as coaching knowledge. After that, machine learning primarily based classifiers area unit trained by the tagged samples, and at last the trained classifiers will be wont to find spam. Variety of cc primarily based detection schemes are planned by researchers [2].

However, the observation in our collected knowledge set shows that the characteristics of spam tweets area unit varied over time. We tend to ask this issue as "Twitter Spam Drift". As previous cc primarily based classifiers aren't updated with the "changed" spam tweets, the performance of such classifiers area unit dramatically influenced by "Spam Drift" once detective work new coming back spam tweets. Why do spam tweets drift over time? It's as a result of that spammer's area unit combating security corporations and researchers. Whereas researchers area unit operating to find spam, spammers also are attempting to avoid being detected. This leads spammers to evade current detection options through posting a lot of tweets or making spam with the similar linguistics which means however victimization totally different text [9].

II. RELATED WORK

Due to the increasing popularity of Twitter, spammers have transferred from other platforms, such as email and blog, to Twitter. To make Twitter as a clean social platform, security companies and researchers are working hard to eliminate spam. Security companies, such as Trend Micro [8], mainly rely on blacklists to filter spam links. However, blacklists fail to protect users on time due to the time lag. To avoid the limitation of blacklists, some early works proposed by researchers use heuristic rules to filter Twitter spam. H. Gao, Y [12] used a simple algorithm to detect spam in #robotpickupline (the hashtag was created by themselves) through these three rules: suspicious URL searching, username pattern matching and keyword detection. K. Lee [6] simply removed all the tweets which contained more than three hashtags to filter spam in their dataset to eliminate the impact of spam for their research.

Later on, some works applied machine learning algorithms for Twitter spam detection. K. Lee [2] made use of account and content based features, such as account age, the number of followers/followings, the length of tweet, etc. to distinguish spammers and non-spammers. Wang et al. proposed a Bayesian classifier based approach to detect spammers on Twitter , while Benevenuto et al. detected both spammers and spam by using Support Vector Machine[2] .In Stringhini et al. trained a Random Forest classifier, and used the classifier to detect spam from three social networks, Twitter, Facebook and MySpace.

Efficient Resource Utilization Using Nearby Mobile Devices with Task Sharing Algorithm

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Abstract: *- In traditional web-based applications current technology does not facilitate exploiting this resource rich space of machine and human resources. As mobile devices evolve to be powerful and pervasive computing tools, their usage additionally continues to extend speedily. However, mobile device users oftentimes expertise issues once running intensive applications on the device itself, or offloading to remote clouds, attributable to resource shortage and property problems. Node heterogeneousness, unknown employee capability, and dynamism square measure identified as essential challenges to be self-addressed once programing work among near mobile devices we have a tendency to gift a work-sharing model, referred to as well-known work stealing methodology to load balance freelance jobs among heterogeneous mobile nodes, ready to accommodate nodes every which way effort and connection the system. The general strategy of this project is to specialize in short-term goals, taking advantage of opportunities as they arise, based on the ideas of proactive staff and timeserving delegator. We evaluate our model using a prototype framework built using Android and implement two applications.*

Keywords: - Wi-Fi, Hotspot, Job Scheduling, Load Balancing.

I. INTRODUCTION

Today's environments have become embedded with mobile devices with increased capabilities, equipped with numerous sensors, wireless connectivity also as restricted machine resources. However, on the far side some traditional web-based applications, current technology don't facilitate exploiting this resource wealthy house of machine and human resources. Collaboration among such sensible mobile devices will pave the Approach for larger computing opportunities, not simply by making crowd-sourced computing opportunities needing a person's component, however additionally by determination the resource Limitation drawback inherent to mobile devices.

However such mobile crowds aren't meant to interchange the remote cloud computing model, however to enhance it as given below:

-As an alternate resource cloud in environments wherever connectivity to remote clouds is smallest.

-To decrease the strain on the network.

- To utilize machine resources of idle mobile devices [12].

This paper presents the Honeybee model that supports P2P work sharing among dynamic mobile nodes. As proof of concept we present the Honeybee API, a programming framework for developing mobile crowd computing applications. We build on previous work where we initially investigated static job farming among a heterogeneous group of mobile devices in [7], which was followed by a more self-adaptive approach in [6] using the 'work stealing' method and in [7] where three different mobile crowdsourcing applications were implemented and evaluated. The progress of our research on work sharing for mobile edge-clouds is illustrated in Table 1.

We present the honeybee model that supports P2P work sharing among dynamic mobile nodes. As proof of construct we have a tendency to gift the honeybee API, a programming framework for developing mobile crowd computing applications. we have a tendency to rest on previous work wherever we tend to at the start investigated static job farming among a heterogeneous cluster of mobile devices in, that was followed by an additional self-adaptive approach in using the 'work stealing' technique, and in wherever three completely different mobile crowdsourcing applications were enforced and evaluated. The progress of our analysis on work sharing for mobile edge-clouds is illustrated in Table 1.

Phase I	Phase II	Phase III
Simple work farming on Bluetooth	Work stealing on Bluetooth	Enhanced work stealing on Wi-Fi Direct: current paper
connect to workers via Bluetooth	connect to workers via Bluetooth	connect to workers via Wi-Fi Direct
distribute jobs equally	distribute jobs equally	work stealing commences without initial equal job distribution
No load-balancing	load-balancing via work stealing after initial job distribution	fault-tolerance and methods periodic resource discovery

TABLE 1: Evolution of the Honeybee model for computing with nearby mobile devices

We have improved the work stealing algorithmic rule of phase ii to deal with the bottlenecks within the transmission of enormous job information by optimizing the task distribution strategy and using Wi-Fi Direct. Phase III is additionally ready to handle random disconnections and opportunistic connections. We show wide amounts of performance gain and energy savings using our system. Though we tend to acknowledge that incentives, security and trust mechanisms are essential for a made mobile crowd, and honeybee is run on a secure atmosphere.

II. RELATED WORK

Offloading computation and storage from mobile devices to an external set of resources, has been explored in the literature [7]. With regards to the resource offloading, current

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Verifiable Delegation Along With Attribute-Based Hybrid Encryption in Cloud Computing

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Abstract: *-In the cloud, for achieving access control and keeping information confidential information owners may adopt attribute-based encoding to encode the hold on data. Users with restricted computing power are but additional possible to delegate the mask of the decoding task to the cloud servers to reduce the computing cost. As a result, attribute-based encoding with delegation emerges. Still, there are caveats and queries remaining within the previous relevant works. For instance, during the delegation, the cloud servers might tamper or replace the delegated ciphertext and respond a forged computing result with malicious intent. they will also cheat the eligible users by responding them that they're ineligible for the aim of cost saving. What is more, throughout the encoding, the access policies might not be versatile enough likewise. Since policy for general circuits allows realizing the strongest variety of access management, a construction for realizing circuit ciphertext-policy attribute-based hybrid cryptography with verifiable delegation has been thought-about in our work. In such a system, combined with verifiable computation and encrypt-then-mac mechanism, the information confidentiality, the fine-grained access management and also the correctness of the delegated computing results square measure well bonded at a similar time. Besides, our theme achieves security against chosen-plaintext attacks underneath the k-multilinear Decisional Diffie-Hellman assumption. Moreover, an intensive simulation campaign confirms the practicableness and potency of the projected answer.*

Keywords: Ciphertext-policy attribute-based encryption, circuits, verifiable delegation, multilinear map, hybrid encryption.

I. INTRODUCTION

THE emergence of cloud computing brings a revolutionary innovation to the management of the info resources. Within this computing environment, the cloud servers will offer varied information services, like remote information storage and outsourced delegation computation [3-4] etc. For data storage, the servers store an oversized quantity of shared data that can be accessed by licensed users. For delegation computation, the servers can be wont to handle and calculate various information per the user's demands. As applications move to cloud computing platforms, ciphertext-policy attribute-based encoding (CP-ABE)[5] and verifiable delegation (VD)[6-7] square measure won't to guarantee the data confidentiality and also the verifiability of delegation on dishonest cloud servers. Taking medical information sharing as Associate in nursing example with the increasing volumes of medical pictures and medical records, the aid organizations place an oversized quantity of data within the cloud for reducing information storage prices and supporting medical cooperation. Since the cloud server might not be credible, the file cryptological storage is a good method to stop non-public information from being purloined or tampered. In the meanwhile, they'll get to share information with the one that satisfies some necessities, they want, i.e., access policy, can be nine Chief Doctor. To make such information sharing be realizable, attribute based encryption is applicable.

There are 2 complementary kinds of attribute-based encryption. One is key-policy attribute-based encoding (KP-ABE) [9-10-11] and also the alternative is ciphertext-policy attribute-based encoding. During a KP-ABE system, the choice of access policy is formed by the key distributor instead of the encipherer that limits the utility and value for the system in sensible applications. On the contrary, in a CP-ABE system, every ciphertext is related to associate in nursing access structure, and every non-public secret is tagged with a group of descriptive attributes. A user is ready to rewrite a ciphertext if the key's attribute set satisfies the access structure associated with a ciphertext. Apparently, this method is conceptually closer to ancient access management ways. On the other hand, during a ABE system, the access policy for general circuits can be thought to be the strongest sort of the policy categoricalion that circuits will express any program of fixed period.

Delegation computing is another main service provided by the cloud servers. within the on top of situation, the aid organizations store information files within the cloud by victimisation CP-ABE under sure access policies. The users, WHO wish to access the data files, opt for to not handle the advanced method of decryption regionally thanks to restricted resources. Instead, they are possibly to source a part of the cryptography method to the cloud server. Whereas the untrusted cloud servers WHO can translate the initial ciphertext into a straightforward one may learn nothing regarding the plaintext from the delegation.

II. RELATED WORK

Sahai and Waters [1] proposed the notion of attribute-based encryption (ABE). In subsequent works [8], [12], they focused on policies across multiple authorities and the issue of what expressions they could achieve. Up until recently, Sahai and Waters [9] raised a construction for realizing KP-ABE for general circuits. Prior to this method, the strongest form of expression is Boolean formulas in ABE systems, which is still a far cry from being able to express access control in the form of any program or circuit. Actually, there still remain two problems. The first one is their have no construction for realizing CP-ABE for general circuits, which is conceptually closer to traditional access control. The other is related to the

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Multi-Keyword Top-K Ranked Search over Encrypted Cloud Using Parallel Processor

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Abstract: In this paper, we introduce a secure multi keyword Ranked Search over encrypted cloud information which at the same time supports dynamic upgrade operation like deletion and insertion of reports detail the vectored space model and the widely utilized TF-IDF (Term Frequency - Inverse Document Frequency) model are combined in the index construction and query generation. Due to the increasing popularity of the cloud, more and more data owner are motivated to outsource their data to cloud server for great conveniences and reduced cost in data management. The data should be in encrypted form before outsourcing for privacy requirement. In particular, the vector space demonstrates and the broadly utilized TF IDF models are combined in the index construction and query generation. We develop a special tree-based index structure and propose a Greedy Depth-first Search algorithm to give productive multi-keyword Ranked Search..
Keywords: Cloud Computing, Searchable Encryption, Multi-Keyword Ranked Search, Dynamic Update.

I. INTRODUCTION

Cloud computing has been considered as another model of enterprise IT foundation, which can organize huge resource of processing, storage and applications, and empower clients to enjoy ubiquitous, helpful and on request network access to a shared pool of configurable computing resources with extraordinary effectiveness and minimal economic overhead Attracted by these appealing features, both people and enterprises are motivated to outsource their information to the cloud, instead of purchasing software and hardware to [9]deal with the information themselves. Despite of the different ad-vantages of cloud administrations, outsourcing sensitive data, (such as e-mails, personal health records, company finance data, government documents, etc.) to remote servers brings security concerns. The cloud specialist providers (CSPs) that keep the information for clients may get to clients' sensitive data without approval. A general way to deal with secure the information secrecy is to encode the information before outsourcing. However, this will bring about a huge cost as far as information usability. For Example, the current procedures on keyword based data retrieval, which are generally utilized on the plaintext information, can't be directly applied on the encrypted information. Downloading the all types of data from the cloud and also decrypt locally is obviously impractical [5, 6, and 7].
In order to address the above problem, researchers have designed some general-purpose solutions with fully homomorphice encryption. However, these methods are not practical due to their high computational overhead for both the cloud sever and user. On the contrary, more practical special purpose solutions, such as searchable encryption (SE) schemes have made specific contributions in terms of efficiency, functionality and security.
Searchable encryption schemes enable the client to store the encrypted data to the cloud and execute keyword search over cipher text domain [9,10]. So far, abundant works have been proposed under different threat models to achieve various search functionality, such as single keyword search, similarity search, multi-keyword Boolean search, ranked search, multi-keyword ranked search, etc. Among them, multi keyword ranked search achieves more and more attention for its practical applicability. Recently, some dynamic schemes have been proposed to support inserting and deleting operations on document collection. These are significant works as it is highly possible that the data owners need to update their data on the cloud server. But few of the dynamic scheme support efficient multi keyword ranked search.

II. LITERATURE SURVEY

K. Ren, C. Wang,et. al. [1], focus on the first encryption scheme based on search-able paradigm and the search time is proportional to the size of the data. The size of the data if changed or increased led to the change in the time required for running the encryption algorithm. Other proposed wor3k includes two schemes for encryption data. The proposed scheme has single keyword search mechanism which has adaptive and chosen keyword attacks. This single keyword search mechanism shows limitations

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Group User Revocation Policy in Cloud Computing

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Abstract: *- With the development of cloud computing, outsourcing information to cloud server attracts scores of attentions. To ensure the safety and attain flexibly fine-grained file access management, attribute primarily based secret writing (ABE) was planned and utilized in cloud storage system. However, user revocation is that the primary issue in ABE schemes. During this article, we offer a ciphertext-policy attribute primarily based secret writing (CP-ABE) theme with economical user revocation for cloud storage system. The problem of user revocation will be resolved with efficiency by introducing the conception of user cluster. When any user leaves, the group manager will update users' private keys except for those who have been revoked. Additionally, CP-ABE scheme has heavy computation cost, as it grows linearly with the complexity for the access structure. To reduce the computation cost, we outsource high computation load to cloud service providers without leaking file content and secret keys. Notably, our scheme can withstand collusion attack performed by revoked users cooperating with existing users. We prove the security of our scheme under the divisible computation Diffie-Hellman (DCDH) assumption. The result of our experiment shows computation cost for local devices is relatively low and can be constant. Our scheme is suitable for resource constrained devices.*

Keywords: Cloud computing, attribute-based encryptions outsource decryption, user revocation, collusion attack.

I. INTRODUCTION

In this project, we provide a cipher text-policy attribute based encryption (CP-ABE) scheme with efficient user revocation for cloud storage system. The issue of user revocation can be solved efficiently by introducing the concept of user group. When any user leaves, the group manager will update users' private keys except for those who have been revoked. Additionally, CP-ABE scheme has heavy computation cost, as it grows linearly with the complexity for the access structure. To reduce the computation cost, we outsource high computation load to cloud service providers without leaking file content and secret keys.

With the increasing of sensitive data outsourced to cloud, cloud storage services are facing many challenges including data security and data access control. To solve those problems, attribute-based encryption (ABE) schemes [2-4] have been applied to cloud storage services. Sahai and Waters [1] first proposed ABE scheme named fuzzy identity-based encryption which is derived from identity-based encryption (IBE) [4]. As a new proposed cryptographic primitive, ABE scheme not only has the advantage of IBE scheme, but also provides the characteristic of "on e-to-m an y" encryption . Presently, ABE mainly includes two categories called ciphertext -policy ABE (CPABE) and key-policy ABE (KP-ABE) [4]. In CP-ABE, ciphertexts are associated with access policies and user's private keys are associated with attribute sets. A user can decrypt the ciphertext if his attributes satisfy the access policy embedded in the ciphertext. It is contrary in KPABE. CP-ABE is more suitable for the outsourcing data architecture than KP-ABE because the access policy is defined by the data owners. In this article, we present an efficient CP-ABE with user revocation ability.

II. RELATED WORK

Boldyreva et al [6] presented an IBE scheme with efficient revocation, which is also suitable for KP-ABE. Nevertheless, it is not clear whether their scheme is suitable for CP-ABE.

Although ABE has shown its merits, user revocation and attribute revocation are the primary concerns. The revocation problem is even more difficult peculiarly in CP-ABE schemes, because each attribute is shared by many users. This means that revocation for any attribute or any single user may affect the other users in the system. Recently, some work [6] has been proposed to solve this problem in efficient ways. Boldyreva et al. [6] presented an IBE scheme with efficient revocation, which is also suitable for KP-ABE. Nevertheless, it is not clear whether their scheme is suitable for CP-ABE. Yu et al. [7] provided an attribute based data sharing scheme with attribute revocation ability. This scheme was proved to be secure against chosen plaintext attacks (CPA) based on DBDH assumption. However, the length of ciphertext and user's private key are proportional to the number of attributes in the attribute universe. In the key generation, encryption and decryption stages, computation involves all attributes in the attribute universe. Yu [7] provided an attribute based data sharing scheme with attribute revocation ability. This scheme was proved to be secure against chosen plaintext attacks (CPA) based on DBDH assumption. However, the length of cipher text and user's private key are proportional to the number of attributes in the attribute universe. Yu [7] designed a KP-ABE scheme with fine-grained data access control. This scheme requires that the root node in the access tree is an AND gate and one child is a leaf node which is associated with the dummy attribute.

In the existing scheme, when a user leaves from a user group, the group manager only revokes his group secret key which implies that the user's private key associated with attributes is still valid. If someone in the group intentionally exposes the group secret key to the revoked user, he can perform decryption operations through his private key. To clarify this attack, a concrete instance is given. Assume that the data is encrypted under the policy "professor AND cryptography" and the group public key. Suppose that there are two users: user1and user2 whose private keys are associated with the attribute sets {male, professor, cryptography} and {male, student, cryptography} respectively. If both of them are in the group and hold the group secret key, then user1can decrypt the data but user2can't. When user1is revoked from the group, he can't decrypt alone because he does not have the updated

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A Novel Approach for Reliable High Speed Data Transmission Technique Using Light Fidelity (LiFi)

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May 22, 2018

Abstract

Today, in the current era, there is of need high speed of data transfer. But the same time demand of the data is increasing almost double every year. To get cope up with the need we have something better than the radio frequency waves. So here is the new upcoming technology known as LIFI. The name LIFI implies Light Fidelity. Lifi uses light emitting diodes (LEDs) for data transmission which comes under a wireless optical networking technology. Communication medium for the Li-Fi is light. It uses the only white LED light for communication. In LIFI the data is transfer at the speed of light. As we know the speed of light is 299792458 m/s. LiFi is related to visible light communication (VLC) offers lots of specific benefits, and operative elucidations to the many problems of wireless communication. The current paper summarizes the research that the effect of the distances on the communication, where in presented paper we have implemented the data transmission using lifi for audio and text data where the speed of the data transmission is at high speed. As the future prospects

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Detection and Prevention of Gray Hole Attack by Using Reputation System in MANET

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ABSTRACT: A mobile ad hoc network (MANET) is a persistently self-arranging, infrastructure-less networkof mobile devices connected remotely. Each device in a MANET is allowed to moveindependently in any path, and will therefore change its links to other devices frequently.Each must forward traffic irrelevant to its own utilization, and therefore be a router. Theessential test in building a MANET is preparing every device to continuously maintain theinformation required to appropriately route traffic. While mobile ad hoc networks havebecome a mature globally adopted technology due to its wide range of applications. Suchenvironment has some basic differences in comparison to wired networks. Due to theselittle differences the MANETs are more prone to interception and manipulation. This furtheropens possibilities of insecure routing. For the efficient and conveyance of informationCRCMD&R (Cluster and Reputation based cooperative malicious node Detection and Removal)strategy is proposed in this paper. CRCMD&R proposes arranging the MANET into various clusters and every node in the network has a particular prime number whichacts as Node Identity. CRCMD&R utilizes Legitimacy value table and Reputation level tablemanaged by every node in the network to select and use a safe route between a source anddestinations. The cornerstones of our work are the various metrics which can be furthercalculated by the values collected in Legitimacy value table and Reputation level table.Depending upon these metrics the cluster head nodes exclude or include the nodes fromthe discovered route and select the most reliable route to a specific destination. Contribution work is sending message in encrypted format for data security.

KEYWORDS: Mobile Ad-Hoc Networks, Black Hole, GrayHole Attack,Warm-Hole Attack,Denial-of-Service, Prime Number, Cluster, Security, Routing, Wireless Network, Packet Drop

I. INTRODUCTION

Mobile Ad hoc Networks (MANETs) comprised of autonomous and self-organizing mobile computing devices which do not have a fixed infrastructure but rather they use Adhoc routing protocols for data transmission and reception. The existing routing protocols are more susceptible to malicious nodes. These malicious nodes may some drops or corrupt the packets from the list of packets instead of forwarding them properly. This type of malicious nodes called packet dropping attack. Some of the other routing attacks like black-hole attack, Gray-hole attack and warm-hole attacks.The Gray Hole Attack is the major risks in the Ad Hoc Network as an attacker makes faulty route by responding fake network information to the information source, and intercepts data through faulty route they made. In this project, an Ad Hoc Network is to be constructed, and analyze the results from the simulation of the Black and Gray Hole Attack.

Ad hoc on demand distance vector (AODV) is an IP reactive routing protocol which is optimized for MANETs and it can also be used for other wireless ad-hoc networks. Nodes in network cannot perform route discovery or maintenance functions itself. This problem is resolved by using AODV as it computes the routing distance from sending node to receiving node at preset intervals.

Packet loss happens when at least one of the packets of data travelling across a mobile ad hoc networkfail to reach their destination. Packet loss is commonly caused by network congestion.Packet loss is estimated as a percentage of packets lost with respect to packets sent.

The Transmission Control Protocol (TCP) identifies packet loss and performs re-transmissionsto guarantee reliable message transformation. Packet loss in a TCP connection is further used to tolerate congestionand hence

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SURVEY ON ACCESS CONTROL SYSTEM IN PUBLIC CLOUD

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ABSTRACT:

The new worldview of outsourcing information to the cloud is a twofold edged sword. On one side, it arranges for information proprietors from the specialized administration, and is less demanding for the information proprietors to share their information with expected beneficiaries when information are put away in the cloud. On the opposite side, it realizes new difficulties about security and security insurance. To secure information classification against the legit yet inquisitive cloud specialist organization, various works have been proposed to help fine-grained information get to control. Nonetheless, till now, no effective plans can give the situation of fine-grained get to control together with the limit of time-delicate information distributing. In this paper, by implanting the system of planned discharge encryption into CP-ABE (Cipher-text- Strategy Attribute-based Encryption), we propose TAFC: another time and quality components consolidated access control on time sensitive information put away in cloud. Broad security and execution investigation demonstrates that our proposed plot is exceptionally effective and fulfills the security necessities for time-delicate information stockpiling out in the open cloud. The proposed plot includes the accompanying accomplishments: 1) the key escrow issue could be unraveled by without escrow key issuing convention, which is developed utilizing the protected two-party calculation between the key age focus and the information putting away focus, what's more, 2) fine-grained client disavowal per each characteristic should be possible as a substitute encryption which exploits the particular quality gathering key dispersion over the ABE. The execution and security investigations show that the proposed conspire is proficient to safely deal with the information appropriated in the information sharing framework.

KEYWORDS: Cloud Storage, Access control, Time-sensitive data, Fine granularity. Data sharing, attribute-based encryption, revocation, access control, removing escrow.

Enriching Information Security in Educational Data Mining Using Big Data

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Abstract— **Presently, educational institutions compile and store huge volumes of data, such as student enrolment and attendance records, as well as their examination results. Mining such data yields stimulating information that serves its handlers well. Rapid growth in educational data points to the fact that distilling massive amounts of data requires a more sophisticated set of algorithms. This issue led to the emergence of the field of educational data mining (EDM). Traditional data mining algorithms cannot be directly applied to educational problems, as they may have a specific objective and function. This implies that a preprocessing algorithm has to be enforced first and only then some specific data mining methods can be applied to the problems. One such preprocessing algorithm in EDM is clustering. Many studies on EDM have focused on the application of various data mining algorithms to educational attributes. In this paper, to view the privacy issues related to data mining from a wider perspective and investigate various approaches that can help to protect sensitive information. In particular, we identify four different types of users involved in data mining applications, namely, data provider, data collector, data miner, and decision maker. For each type of user, we discuss his privacy concerns and the methods that can be adopted to protect sensitive information. We briefly introduce the basics of related research topics, review state-of-the-art approaches, and present some preliminary thoughts on future research directions. Besides exploring the privacy-preserving approaches for each type of user.**

IndexTerms— **Data mining, clustering methods, educational technology, systematic review.**

I. Introduction

EDM as an emerging discipline, concerned with developing methods for exploring the unique types of data that come from educational settings, and using those methods to better understand students its aim is to develop models to improve learning experience and institutional effectiveness. While DM, also referred to as Knowledge Discovery in Databases (KDDs), It refers to collecting similar objects together to form a group or cluster. Each cluster contains objects that are similar to each other but dissimilar to the objects of other groups. An educational institution environment broadly involves three types of actors namely teacher, student and the environment. Interaction between these three actors generates voluminous data that can systematically be clustered to mine invaluable information.

Data clustering enables academicians to predict student performance, associate learning styles of different learner types and their behaviors and collectively improve upon institutional performance. Various methods have been proposed, applied and tested in the field of EDM. It is argued that these generic methods or algorithms are not suitable to be applied to this emerging discipline. It is proposed that EDM methods must be different from the standard DM methods due to the hierarchical and non-independent nature of educational data [5]. Educational institutions are increasingly being held accountable for the academic success of their students [4]. Notable research in student retention and attrition rates has been conducted by Luan [1]. For instance, Lin [9] applied predictive modeling technique to enhance student retention efforts.

The e-commerce websites use recommender systems to collect user browsing data to recommend similar products. There have been efforts to apply the same strategy in the educational information system. One such successful system is the degree compass.

Data mining has attracted more and more attention in recent years, probably because of the popularity of the ``big data'' concept. Data mining is the process of discovering interesting patterns and knowledge from large amounts of data [6]. As a highly application-driven discipline, data mining has been successfully applied to many domains, such as business intelligence, Web search, scientific discovery, digital libraries, etc.

The term ``data mining'' is often treated as a synonym for another term ``knowledge discovery from data'' (KDD) which highlights the goal of the mining process.[10]

II. Educational Data and Clustering Method

EDC is based on data mining techniques and algorithms and is aimed at exploring educational data to find predictions and patterns in data that characterize learners' behavior. The system has clustered various research works that have been conducted exclusively within educational attributes related to clustering algorithms. The system will now provide a detailed analysis on various aspects of educational attribute collated with the application of clustering algorithms to help improve the education system.

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Detection and Elimination Scheme for Data Reduction with Low Overheads in Multi Cloud Storage

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ABSTRACT: ecently data reduction or trimming has become more and more important in cloud storage systems due to the explosive growth of digital data in the world that has ushered in the big data era. One of the main challenges facing large-scale data reduction or trimming is how to maximally detect and eliminate redundancy at very low overheads. We design DARE, a low-overhead deduplication-aware resemblance detection and elimination scheme that effectively exploits existing duplicate-adjacency information for highly efficient resemblance detection in data deduplication based backup/archiving storage systems. The main idea behind DARE is Duplicate-Adjacency based Resemblance Detection (DupAdj), by considering any two data chunks to be similar (i.e., candidates for delta compression) if their respective adjacent data chunks are duplicate in a deduplication system, and then further enhance the resemblance detection efficiency by an improved super-feature approach. In existing system Deduplication technique is used only in-house computer, in our proposed system you can use DARE Deduplication technique in cloud storage also and you can perform DARE Deduplication technique on encrypted data. Our experimental results based on real-world and synthetic backup datasets show that DARE only consumes about 1/4 and 1/2 respectively of the computation and indexing overheads required by the traditional super-feature approaches while detecting 2-10 percent more redundancy and achieving a higher throughput.

KEYWORDs: Data deduplication, Delta compression, Storage system, Index structure, Performance evaluation, Multi cloud, File fragmentation.

I. INTRODUCTION

THE amount of digital data is growing explosively, as evidenced in part by an estimated amount of about 1.2 zettabytes and 1.8 zettabytes respectively of data produced in 2010 and 2011. As a result of this "data deluge", managing storage and reducing its costs have become one of the most challenging and important tasks in mass storage systems. According to a recent IDC study [3], almost 80 percent of corporations surveyed indicated that they were exploring data deduplication technologies in their storage systems to increase storage efficiency. Data deduplication is an efficient data reduction approach that not only reduces storage space by eliminating duplicate data but also minimizes the transmission of redundant data in low-bandwidth network environments In general, a chunk-level data deduplication scheme splits data blocks of a data stream (e.g., backup files, databases, and virtual machine images) into multiple data chunks that are each uniquely identified and duplicate-detected by a secure SHA-1 or MD5 hash signature (also called a fingerprint). Storage systems then remove duplicates of data chunks and store only one copy of them to achieve the goal of space savings. While data deduplication has been widely deployed in storage systems for space savings, the fingerprint-based deduplication approaches have an inherent drawback: they often fail to detect the similar chunks that are largely identical except for a few modified bytes, because their secure hash digest will be totally different even only one byte of a data chunk was changed. It becomes a big challenge when applying data deduplication to storage datasets and workloads that have frequently modified data, which demands an effective and efficient way to

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Relevant Information Retrieval using SBIR Algorithm

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Abstract: *IR acts with illustration, storage, organization and access to data things. The data would like is expressed by the user as a question. Documents that satisfy the user's questions are afore said to be relevant. The documents that aren't involved with user's question are afore said to be irrelevant. Associate degree IR engine uses the question to classify the documents during an assortment, returning to the user a set of documents that satisfy bound classification criteria. There are repositories containing giant amounts of unstructured type of text information. Many search engines are gift that access these repositories. Not like such search engines, the task of accidental data retrieval is, finding documents among a corpus that are relevant to the user. Typically the relevant documents might not contain the required keyword. Even supposing, given term isn't gift within the document, the document is also relevant, as quite one terms will be semantically similar though they're lexicographically totally different. In our project "Semantic primarily based mathematician data Retrieval" (SBIR) is employed to retrieve the documents with semantically similar terms. Primarily this algorithmic program improves the essential "Boolean data Retrieval" (BIR) by up its recall and preciseness. The documents within the corpus ought to be pre-processed so keep in info like MySQL from wherever the documents associated with users' question are retrieved. Users' question could be a short term. Therefore victimisation SBIR algorithmic program variety of relevant documents retrieved from info is a lot of as compared to straightforward BIR algorithmic program.*

Keywords: - Information Retrieval, Semantic WordNet, Stemming Algorithm, Boolean Information Retrieval.

I. INTRODUCTION

Abundant info associated with numerous fields is offered on-line now-a-days, which might be utilized by users additionally as computers, nonetheless we tend to face difficulties because of selection and quantity of information obtainable. one in all the core issues faced by search engines is to search out out whether or not a bit of knowledge has relevancy to user or not. There area unit numerous different issues concerned like, users typically use queries that doesn't entirely describe their wants, or queries while not keywords, or ambiguous queries. In most of the present systems, solely those documents that match the question lexicographically area unit retrieved. However if a document doesn't contain the word gift in user's question, that doesn't mean that, that document is orthogonal to user. There area unit three basic models of IR, vector IR, Boolean IR, and probabilistic IR. Our project history is bothered with "Boolean info retrieval", as our planned system is its increased version. BIR is most generally used IR model, and is tried to be economical. In our system associate increased version of BIR is planned. BIR is already an efficient, economical and wide used IR model. However until currently, additional stress was given on solely lexicographically similar words. In our system lexicographically additionally as semantically similar documents to the users question area unit retrieved. thus the algorithmic rule is called as "Semantic mathematician info Retrieval system" (SBIR).Many a times it happens that, the documents satisfy the user's question, however keywords entered by user area unit absent within the documents. Here mistreatment SBIR, linguistics search is performed that helps to retrieve such documents. The most purpose of our project is to retrieve the documents that each semantically and lexicographically satisfies the user's question. In Section a pair of, describes previous add mathematician info model and in info retrieval mistreatment WordNet. Section three defines the task of planned work, its framework and algorithmic rule alongside the steps used. Section four contains the analysis. Finally, the conclusion and future work is given in Section 5.

II. RELATED WORK

Boolean Queries are common in professional search due to historic and technical reasons. Commercial IR systems use Boolean Queries to decide whether a document is relevant or not. The significance of Boolean Information Retrieval (BIR) has been revealed in many retrieval systems because of its simplicity [9]. The number of studies over the years has shown that Keyword Queries are often significantly more effective [6]. However, Boolean Queries are self-descriptive helps professionals to precisely define their needs. WordNet gives us semantically similar words. In most cases morphological variants of words have similar semantic interpretations and can be considered as equivalent for the purpose of IR applications [1]. Stemming is a process of reducing words to its root or base form. Removing suffixes is an important process in the field of IR. The Porter Stemmer is a context-sensitive suffix removal algorithm [1]. WordNet is also used for Document Expansion over the documents having minimal textual information.

[1] E. George Dharma Prakash Raj And R. Thamarai Selvi "An Approach to Improve Precision and Recall for Ad-hoc Information Retrieval using SBIR Algorithm", March 2014.

Information Retrieval is a process of finding the documents in a collection based on a specific topic. The information need is expressed by the user as a query. Documents that satisfy the given query in the judgment of the user are said to be relevant. The documents that are not of the given topic are said to be non-relevant. An IR engine may use the query to classify the documents in a collection, returning to the user a subset of documents that satisfy some classification criterion. There are several search engines to find information in the given repositories containing large amounts of unstructured form of text data.

[3] Deepika Sharma, "Stemming Algorithms: A Comparative Study and their Analysis", 2012.

Stemming is an approach used to reduce a word to its stem or root form and is used widely in information retrieval tasks to increase the recall rate and give us most relevant results. There are number of ways to perform stemming ranging from manual to automatic methods, from language specific to language independent each having its own advantage over the other. This paper represents a comparative study of various available stemming alternatives widely used to enhance the effectiveness and efficiency of information retrieval.

[4] Youngho Kim yhkim, Jangwon Seo, W. Bruce Croft Automatic Boolean Query Suggestion for Professional Search, 2011.

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Thumb Based Document Retrieval Using Cloud System

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Abstract: - *Personal health record (PHR) is relate rising patient-driven model of health information trade, that is regularly outsourced to be hang on at an outsider, similar to cloud providers. Notwithstanding, there square measure wide protection worries as Personal health learning is presented to those outsider servers and to unapproved parties. To guarantee the patients' administration over access to their own particular PHRs, it is a promising philosophy to engrave the PHRs before outsourcing. However, issues like dangers of security introduction, quality in key administration, adaptable access and conservative client repudiation, have remained the premier vital difficulties toward accomplishing fine-grained, cryptographically actualized information get to administration. Amid this paper, we tend to have a tendency to propose a particular patient-driven structure and a gathering of instruments for learning access administration to PHRs hang on in semi-confided in servers, to accomplish fine-grained and adaptable information get to administration for PHRs. we tend to tend to use property based for the most part Fingerprint Authentication strategies to write every patient's PHR document entirely unexpected from past works in secure information outsourcing, we tend to tend to focus on the numerous information proprietor situation, and gap the clients among the PHR framework into different security spaces that significantly lessens the key administration many-sided quality for householders and clients. A high level of patient protection is secured at consistent time by misusing multi-specialist Fingerprint Authentication. Our subject to boot allows dynamic alteration of access approaches or record traits bolsters practical on-request client/characteristic renouncement and break-glass access underneath crisis circumstances. Intensive logical and trial comes about region unit gave that demonstrate the health, quality and productivity of our arranged topic.*

Keywords: - electronic health record (EHR), personal health record (PHR), cloud based file management, clinical document architecture (CDA), meaningful use (MU).

I. INTRODUCTION

As characterized by the Office of the National Organizer for Health Information Technology (ONC), the significant utilize [1] of electronic wellbeing record can profit clinical organizations as well as the overall population from various perspectives – the progress from clinician focused to quiet focused. On account of the interoperable electronic wellbeing record (EHR) framework–agreeable to the important utilize criteria; taking control of our own medicinal record is never again a impractical reasoning. Notwithstanding, genuine just access to our possess EHR has constrained advantages since there is no real way to report our own particular wellbeing condition amid specialist visits. Unrecorded individual medicinal information, for example, observable manifestations, current meds, restorative occasion (e.g. substantial harm), and so forth might be disregarded effectively and not be imparted to clinicians, which brings about genuine illness later on. Once a patient is determined to have a malady, he or on the other hand she needs to experience agonizing method to cure the malady. In the United States, around 100,000 patients kicked the bucket each year and more than 1.5 million are influenced due to the therapeutic mistakes. This substantial number can be essentially diminished by drawing in data innovation in sharing therapeutic information (e.g. individual medicinal history what's more, supporting reports, therapeutic treatment). For this reason, there have been developing interests in the outline and advancement of proper PHR frameworks [2, 3, 4].

In this way, we propose an individual wellbeing record (PHR) framework that enables a person to screen and offer the information with the clinicians. Regarding the important utilize, both EHR and PHR must be interoperable with each other by means of the consistence to all material restorative norms, for example, ICD-9-CM, SNOMED CT, LOINC, furthermore, HL7. Our paper is sorted out as takes after: segment 2 examines about the foundation of electronic wellbeing record. In Area 3 clinical report design is presented what's more, clarified. Area 4 presents individual wellbeing record framework model and area 5 finishes up our talk.

II. RELATED WORK

Yeong-tae Song, Sungchul Hong,[2] Jinie Pak have chipped away at "Engaging Patients utilizing cloud based individual wellbeing record framework", proposed an individual wellbeing record system(PHRS) that is to self-screen and control individual wellbeing. Not at all like clinical establishment focused electronic wellbeing record, whole restorative information is overseen and controlled by person – patients or their gatekeepers. The PHRs are helpful at home care, nursing home, or private mind office where consistent checking and control are required. They have utilized portable application to gather therapeutic information and put away in HL7 CDA arrange for interoperability. The cloud based storehouse might be imparted to the clinicians when required. The proposed PHR fulfills critical properties, for example, openness and accessibility, dependability, secrecy, also, unwavering quality. The PHRS planned to manufacture long haul individual medicinal history.

Roopali and raj Kumari[3], heve chipped away at "An Efficient Data Offloading to cloud Mechanism For Smart Health Care Sensors", The proposed demonstrate separates the patient information based on the criticalness or criticality of the information. It totals the ordinary information and offloads it to the cloud continuously. Collection helps in lessening activity on the system as the ordinary information of all the typical patients in the system is sent through a solitary parcel.

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Authority Identification Using Keystroke

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ABSTRACT: This paper worked of choosing a correct input for performing keystroke Dynamics authentication.The pulse dynamics is the study to identify / authenticate a person based on their typing rhythms, which are inferred from key press events such as key press and key release. In this document we address the question. In this system we will work on alphabetic character with entering sentences that are generated by system and get the speed by keystroke dynamics.If user is performing typing speed according to his stored speed that he will access the system or his account.Proposed system will work for user authentication for his data.

KEYWORDS: Featureextraction,keystroke dynamic, Random Number.

I.INTRODUCTION

Keystroke authentication can be classified as either static or continuous. The first refers to keystroke analysis performed only at specific times, for example during a loginprocess, while the analysis of the typing rhythm is performed continuously during a whole session when the latter is applied, thus providing a tool to also detect user substitutionafter a successful login. The effectiveness of keystroke dynamics as an authentication characteristic for traditional computer keyboards has been deeply investigated. In modern times all the information is stored and shared using computers or mobile devices. With increased use of mobile devices the risk of theft of sensitive data has also increased. To protect data we use password but these passwords can be easily cracked by the hackers. For better security, measures like finger scan, retina scan etc. are used which are a form of physical biometric. But these measures are very costly to implement. Keystroke dynamics is a behavioral biometric method which identifies the user on the basis of his/her typing pattern . This system works by extracting features from the collected data. Then a classifier is used to build up the user profile. The same process is repeated while testing and if the profile matches the one in the databaseThe user is authenticated otherwise not. The deployment of keystroke dynamics for authentication does not include any extra cost as you just require a keyboard for typing which is an integral part of computer system. There are two types of authentication in keystroke dynamics: fixed text and free text. In fixed text the input text is predefined and the user has totype the same text during enrolment and authentication time. In free text the user is free to type any text according to his liking during enrolment and authentication time, thus eliminating the need to remember passwords.

II. REVIEW OF LITERATURE

[1]This paper introduces a novel approach for free-text keystroke dynamics authentication which incorporates the use of the keyboard's key-layout. The method extracts timing features from specific key-pairs. The Euclidean distance is then utilized to find the level of similarity between a user's profile data and his/her test data. The results obtained from this method are reasonable for free-text authentication while maintaining the maximum level of user relaxation. Moreover, it has been proven in this study that flight time yields better authentication results when compared with dwell time[1].

[2] This paper provide a basic background of the psychological basis behind the use of keystroke dynamics. We also discuss the data acquisition methods, approaches and the performance of the methods used by researchers on standard computer keyboards also find use and acceptance of this biometric could be increased by development of standardized databases, assignment of nomenclature for features, development of common data interchange formats, establishment of protocols for evaluating methods, and resolution of privacy issues[2].

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Survey on Use of Crowd sourced User Preferences for Visual Summarization of Image Collection

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Abstract—**We present an algorithm for selecting suitable images for inclusion in visual summaries. This technique is designed on the basis of insights regarding how human perform visual summarization. For this purpose we use Amazon Mechanical Turk online Crowdsourcing Service. This algorithm use content and context of images, image sentiments, aesthetic features. We present a new solution based on text summarization and machine translation. We utilize pair wise ranking algorithm Rank.SVM for better performance. The studies conducted on a collection of geo-referenced Flickr image collections demonstrate the importance of our image selection approach.**

IndexTerms— **Crowdsourcing, aesthetic features, user-informed image selection**

I. INTRODUCTION

Quick growth of social networking and content sharing websites has given rise to amount of digital data. There is need of powerful mechanism for representation, summarization, analysis and abstraction of data for more efficient browsing and retrieval. Summarization technique gives a concise representation of multimedia data document or data collection. Based on requirement summaries may consist of text, images, and video segments. In this paper we concentrate on visual summaries. Visual summaries contribute to abstract a video, set of videos, an image collection, video segments. Existing techniques of visual summarization have been guided by representativeness, relevance, diversity of information included in summary. Exact information on how humans perform visual summarization has rarely been considered while developing summarization technique. The insights obtained are insufficient to provide guide-lines for developing a strong visual summarization technique. There is a necessity of the specific criteria reflecting the user's perception of the summarization quality must be identified and applied to guide the summarization algorithm. We can say that this summarization algorithm should be created in such a way that user can easily understand it, and after that it will be successful. We use generation visual summaries of geographical places as trial use case to show the potency of the proposed user-informed picture selection concept. The paper makes the following benefits:

- This paper present a new approach based on how humans select images for visual summaries, which was collected with a large-scale crowd sourcing study, as the basis for a novel method for automatically selecting images for visual summarization.

II. RELATED WORK

Summarizing Tourist Data Using Bidirectional Similarity

In [6] We present a new technique to summarization of visual information such as images or video based on similarity measure. This technique depends on optimization of similarity measure. Visual data can be images, videos, etc. Summary should capture essence of input data. It should not produce new visual artifacts. Bidirectional similarity measure satisfies both the properties. Two signals are measured as visually similar only if all the patches of 1st image are present in 2nd image and vice versa. We can use this methods for solving more problems like synthesis and completion of visual data, image collage, reshuffling of images and many more.

Generating diverse and representative search results for landmarks

In [9] we conjecture tag data and images explicit and implicit metadata, image analysis to extract meaningful features from community-contributed datasets such as Flickr. We use tags i.e. text information associated with images by users and location metadata to detect tags and location that represent landmark or geographic features. We perform clustering on the landmark images into visually similar groups by using various image processing methods, as well as generate links between those images that contain the same visual objects. Based on the clustering and on the generated link structure, we identify canonical views, as well as select the top representative images for each such view.

Summarizing tourist destinations by mining user-generated travelogues and photos

In [1] we represent a structure of summarizing tourist destinations by leveraging the rich textual and visual information in large amount of user-generated travelogues and photos on the Web. The structure first discovers location representative tags from travelogues and then selects relevant and representative photos to visualize these tags. The learnt tags and selected photos are finally arranged appropriately to provide an informative summary which describes a given destination both textually and visually. Experimental results based on a large collection of travelogues and photos shows the potency of destination summarization approach.

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3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during year 2017-18

Sr. No	Title of paper	Name of the author/s	Name of journal	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	Protection of Distribution Transformer by Using Concept of VAG	Ranjit M. Zende	Protection of Distribution Transformer by Using Concept of VAG	Peer Reviewed
2	Protection of Distribution Transformer By Using Variable Reluctance Method	Ranjit M. Zende	Protection of Distribution Transformer By Using Variable Reluctance Method	Peer Reviewed
3	Performance Evaluation of Dynamic Voltage Restorer Based on Transformer-based Z Source Inverter	Prof. Chinmay V. Deshpande Prof. Chaitanya V. Deshpande	Performance Evaluation of Dynamic Voltage Restorer Based on Transformer-based Z Source Inverter	Scopus
4	High Step-Up Converter Voltage Multiplier Module For Photovoltaic System	Prof. B. S. Kunure	High Step-Up Converter Voltage Multiplier Module For Photovoltaic System	Peer Reviewed
5	Monitoring and detection of short circuit fault in transformer	Prof. B. S. Kunure	Monitoring and detection of short circuit fault in transformer	Peer Reviewed

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Protection of Distribution Transformer by Using Concept of VAG

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***Abstract*— In power system distribution sector is very important section as per protection purpose. Because maximum faults are occurred at distribution level because human mistake as well as environmental condition. Protection of Distribution transformers is very important role in power system. The distribution networks throughout the world of modern power systems. In this invention, the fault-current-limiting capability is enabled in power transformers by accepting the theory of virtual-air-gap (VAG) in electromagnetics. The concept of VAG is nothing but the saturate a certain portion of the magnetic core to change the reluctance of magnetic loops. VAG is not an actual air gap but a saturated portion of the magnetic core, which restricts the magnetic flux to follow through it. In distribution transformers, electric power is transferred between electric windings through the magnetic core interface. By changing the dc current, the redistribution of magnetic flux and isolation between the electric windings can be achieved. The power rating of the power electronics drive in VAG can be much smaller than the power rating of power transformers, which would greatly reduce the cost of device.**

I. Introduction

In power system number of section are divided such as generation, transmission, distribution. In that we study about the distribution system. In distribution system we use number of equipment for distribute the electric power. But in that transformer is very important component of distribution system. This distribution transformer is used to step down the voltage of power system. The voltage is step up to application rating. Whenever transformer is not live in circuit then we can't able to step down the distribution voltage. In case short circuit fault occurs on distribution system then very high amount of current is flowing through the transformer. To reduce the high quantity of current through power system we use reactor in series with the faulty section. But in this method more losses occurs at the time of fault in reactor winding. To avoid this losses we use one method i.e. VAG method.

What is VAG method? The VAG method is nothing but virtual Air Gap method. In this method we create virtual air gap in core of transformer. This not a actual air gap its only magnetic saturated portion of core. In this method we use relation between current and flux. The relation is directly proportional. As current increases then flux also increases and vice-versa. So we produces constant flux in core against main flux. Because of this operation constant flux will oppose to main flux and magnitude of secondary or load side current will decreases. In this method we use number of component for the protection of transformer. Listed below and shown in block diagram.

II. Block Diagram

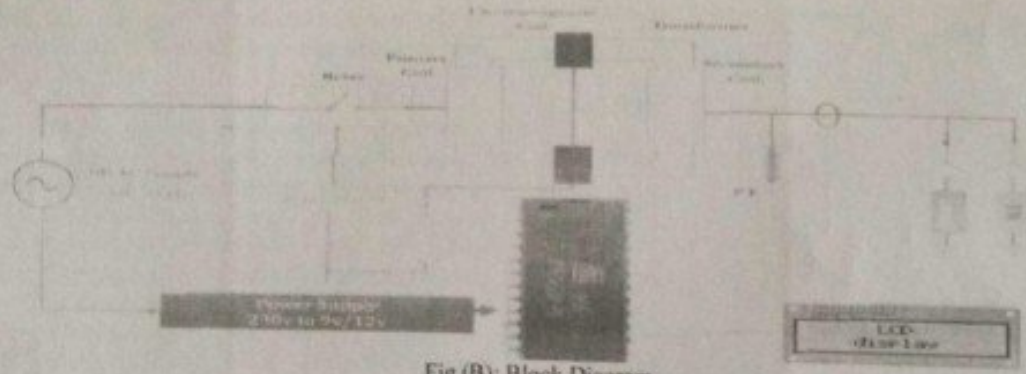

Fig (B): Block Diagram

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Protection of Distribution Transformer By Using Variable Reluctance Method

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Abstract - : *Distribution transformers are the widely installed and most commonly applied power device in transmission and distribution networks throughout the world of modern power systems. In this invention, the fault-current-limiting capability is enabled in power transformers by accepting the theory of virtual-air-gap (VAG) in electromagnetics. The concept of VAG is nothing but the saturate a certain portion of the magnetic core to change the reluctance of magnetic loops. VAG is not an actual air gap but a saturated portion of the magnetic core, which restricts the magnetic flux to follow through it. In distribution transformers, electric power is transferred between electric windings through the magnetic core interface. By changing the dc current, the redistribution of magnetic flux and isolation between the electric windings can be achieved. The power rating of the power electronics drive in VAG can be much smaller than the power rating of power transformers, which would greatly reduce the cost of device.*

Key Words: Virtual airgap, fault, transformer, flux

1. INTRODUCTION

Now a day's importance of electricity increases day by day so we need to distribute electricity for utilization. So we use distribution transformer for distribution of electricity. But protection of distribution transformer is also very important. Because when fault occur on distribution system will be harmful for human life. That's why protection of transformer very important.

In this project we provide protection of distribution transformer by using virtual air gap concept. In this method we control secondary side current by controlling main flux in transformer core. The virtual air gap concept is used to control inrush current in transformer. The auxiliary winding used to produce opposite flux to main flux because of this principle reluctance of core increases and reluctance is inversely proportional to the flux and flux is directly proportional to the current. As a flux decreases current automatically.

2. CALCULATION

A. NOMENCLATURE

Apparent Power - Q

Primary Voltage - V_1

Secondary Voltage - V_2

Frequency - F

Design coefficient - k

Maximum flux density - B_m

Current density - D

E: Induced emf in Winding in volt

N_1: Primary no. of turns

N_2: Secondary no. of turns

I_1: Current in primary winding in Amp

I_2: Current in Secondary winding in Amp

d: diameter of conductor

H: height of winding in m

Φ_m : maximum flux in weber

A_c: Area of conductor in mm^2

B. SPECIFICATION

Q: 300 VA

V_1: 230 volt

V_2: 230 volt

F: 50 Hz

K: 0.59

B_m: 1 mwb

D: 3.3 amp/mm^2

C. CALCULATIONS OF TRANSFOMER DESIGNING:

1) EMF/TURN

$$E_t = k*Q^{1/2}$$

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Performance Evaluation of Dynamic Voltage Restorer Based on Transformer-based Z Source Inverter

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ABSTRACT

In this paper, latest technology is introduced in substitution to conventional voltage and current type inverter with Transformer based impedance (Z) source inverter in voltage sag assessment and mitigation and compared with voltage source inverter based dynamic voltage restorer. Transformer based impedance source inverters (Trans-Z source inverters) are newly proposed inverters that can be used to overcome downside of voltage source inverter, current source inverter and impedance source (Z-source) inverter. T-Z source inverter consists of transformer with high frequency and low leakage inductance along with low reactive component compared with conventional Z source inverter. In case of T-Z source inverter, voltage stress throughout Z-source capacitor is reduced along with inrush current limitation at startup. This paper presents modeling of T-Z source inverter based dynamic voltage restorer using MATLAB/SIMULINK software along with its THD analysis which is compared with VSI based dynamic voltage restorer. Here abc to dq0 control algorithm is employed. The control technique which is employed for simulation shows excellent results for voltage sag and swell compensation.

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1. INTRODUCTION

Constant voltage is prime requirement of any customer. Most of the lodes connected to system are sensitive to voltage variation. [1] It is risky to operate the equipment below certain voltage limit. In order to supply continuous power to sensitive loads which are connected to system, number of series connected devices can be used [2]. The primary role of these devices is to supply continuous power in order to prevent it from financial losses. The device that can be used to supply constant voltage to the sensitive loads connected to system irrespective of faults and load switching and restores the voltage quickly in seconds is Dynamic Voltage Restorer [3].

Generally DVR is designed in association with voltage source inverter, current source inverter or Z source inverter. The Z source inverter is single stage power converter which provides both buck and boost facility [3]. In order to enhance reliability of system, both the power switches from same leg can be switch on simultaneously without causing problem of short-circuits which is not possible in case of conventional voltage and current source inverter. For this purpose, two capacitors and two inductors connected in unique X shape constitutes impedance part of Z source inverter [4]. But current drawn from source is discontinuous in case of conventional Z source inverter. Also voltage across Z source capacitor is more than input voltage, which results in use of high capacitor voltage capacitors which are more expensive [5].

To solve demerits in concerned with conventional Z source inverter, newly developed transformer based impedance source inverter is used along with dynamic voltage restorer which provides higher voltage gain and compact voltage stress. The proposed system along with T-Z source inverter gives less THD and

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HIGH STEP-UP CONVERTER VOLTAGE MULTIPLIER MODULE FOR PHOTOVOLTAIC SYSTEM

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ABSTRACT—**A novel high stride up high-proficiency interleaved converter with voltage multiplier module for sustainable power source framework, is proposed in this paper. A new voltage multiplier module made which is having exchanged capacitors and coupled inductors, with its blend a regular interleaved help converter acquires high stride up pick up without working at outrageous obligation proportion is composed. This proposed converter diminishes the present anxiety and furthermore lessens compels the info current swell, which diminishes the conduction misfortunes what's more, protracts the lifetime of the information source. Subsequently, substantial voltage spikes over the fundamental switches are lessened, and consequently the proficiency will be moved forward. Indeed the low voltage stretch makes the low-voltage-evaluated MOSFETs be embraced for diminishments of conduction misfortunes and cost. The proposed circuit planned with 10-V input voltage, 98.5-V yield. The most astounding effectiveness is 97.1%.**

File Terms—Boost–flyback

Keywords: Boost flyback converter, voltage multiplier module, High step-up, photovoltaic system.

Introduction

Due to the large use of conventional sources for electricity production has produced a target environmental hazards. This has given rise to the use of renewable energy sources such as wind,solar and tidal energy. Among this solar energy and wind energy are used on a large scale. The voltage output give by these renewable energy sources is very low thus a high dc-dc step-up converter are extensively used in these renewable energy sources. Photovoltaic system is gaining a large importance in producing electricity in recent years. In this system light energy is converted into electrical energy. This energy output can be converted in high voltage using step up dc-dc converter using grid by grid inverter or storage energy in battery. A typical photovoltaic system that consists of a solar module, a high stepup converter, a charge-discharge controller, a battery set, and an inverter. The high step-up converter performs importantly among the system because the system requires a sufficiently high step-up conversion.

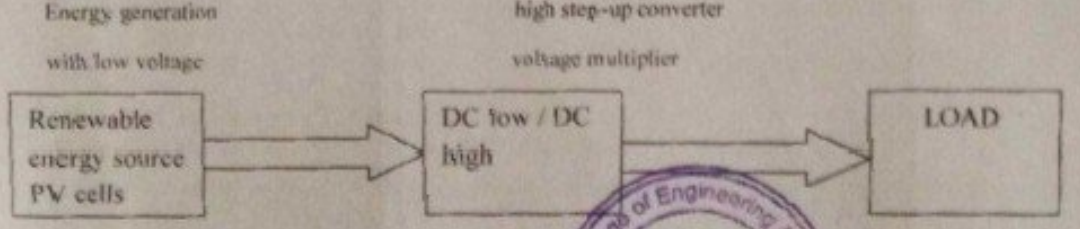
Literature review:

This system helps us use the renewable energy resources for our day to day need of electricity and thus reduces pollution and thus indirectly keeps the environment clean. This system uses PIC 16F877A. A voltage multiplier module is presented in this system for converting the low voltage output of renewable energy sources in a high voltage level so that the energy can be used for proper functioning of the equipments. The low output restricted the use of the renewable sources this system gives advantage that the sources can be used as the output can be converted into high voltage level.

PROPOSED SYSTEM:

In this paper, a deviated interleaved high stride up converter that joins the upsides of the previously mentioned converters is proposed, which consolidated the benefits of both. In the voltage multiplier module of the proposed converter, the turns proportion of coupled inductors can be intended to expand voltage pick up, and a voltage-lift capacitor offers an additional voltage transformation proportion.

BLOCKDIAGRAM:



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Monitoring and Detection of Short Circuit Fault in Transformer

Kshitija Patole, Sheetal Pawar, Shweta Kumthekar, Neha Panpatte

Abstract – In the power system it is very difficult and important to find out the short circuit faults occurring in the transformer. These internal faults are very dangerous it may damage the whole system temporary or permanently. It is more difficult to detect internal fault in small rating of transformer. Now a days we have a one conventional method i.e. buchholz relay but this method is depends upon the formation of gases produced after occurring of a fault, hence we are using this method. In these method we are using the search coil to identify the turn-to-turn fault location in power transformer by core flux based technique in which we are using turns which are isolated as pursuit loops (search coils) must be wrapped around the transformer legs to detect the related passing flux. These search coils will not change the structure of transformer. Since going equivalent flux through a transformer center leg in ordinary condition actuates parallel voltages demonstrates the blame occurrence in that stage .Changes in the core flux indicates that the turn to turn fault is occurred. This can be done by some simulation process and experimental tests and obtain result show that this method is more suitable for short circuit faults, identify the phase and region in which fault is occurred.

1. INTRODUCTION

The power transformer is the main equipment for the generation and distribution process. For every transformer protections and windings are the most basic component. The main fault occur on transformer is short circuit of turns due to the failure of insulation which may produce harm in winding on transformer including winding. Insulation is the most important part of the transformer in case of safety.Failure of insulation system causes breakdown in insulation and creates inter turn faults. Internal turn-to-turn faults are the most dangerous types of faults which is found in the transformer. If short circuit fault has not been detected as earlier as possible it causes more critical faults in the transformer. Such as phase-to-phase or phase-to-ground fault. That's why, immediate indication of short circuit fault is important to provide safety for whole power system.[1]

following are three methods categorized for turn-to-turn fault detection-

i. Current and voltage components based
ii. Frequency characteristic based
iii. Flux based

Since we are using the method which is based on measuring the core flux by the search coils . Mostly a short circuit found on few turns of transformer ending will result in severe short circuit in other neighboring turns. As experimental results the differential relay used in transformer is not so far efficient to found such turn to turn fault. Therefore fast and reliable method for detection of turn to turn fault is difficult work in entire electrical system.[2]

Search coil is more reliable and simple sensor for that detects the turn to turn fault by sensing the flux in transformer.

In search coil faradays law of electromagnetic induction principle is used. When fault occurs in winding the flux in conductor coil get change and voltage will generate which is related with changes occurred in the fluxes. The sensing device is used to show the magnetic flux which is too small as 20fT (2*10^-5 nT) there is no limitations for their sensitivity range their proper frequency range from 1 Hz to 1 Mhz.[3]

The method used in [4.5]is based on leakage flux .this method is used during turn to turn faults in winding for sensing the leakage flux in these method some sensing device are placed next to HV winding.(it can be proximity sensor) leakage flux occurs during TTFs. In this TTF detection the gap between HV winding and sensing elemene should be allowable. If it affects the whole construction of tank and transformer then it is important to change a design. In case of online problem the circuit used for detection of TTF is get protected from high voltage surge and all not able to found faulty location of abnormal condition at winding.

In [6] Search coil method . The search coil is placed near the HV winding in transformer is used to detection of turn to turn fault .In normal condition of search coil, core flux and particular part of leakage flux are passing through the search coil .In search coils during TTF there is drop of fault in the particular part and rise in flux leakage where it results that decreasing in the magnetic flux line that are travel through the search coil, due to these the generated voltage in respective search coil will drop out. These structure has been presented in this paper is for up to 2.5 KVA transformer therefore it is mandatory to provide a insulation layer between the search coil in HV winding which is used for online application where high voltage power transformer get permanently installed .somewhere for small TTF travelling flux cannot be changed which is also enable to change. Therefore the high sensitivity does not get effectively by this method.

HARDWARE'S FOR SYSTEM DESIGN

3 phase Transformer

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DEPARTMENT OF MECHANICAL ENGINEERING

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3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during year 2017-18

Sr. No	Title of paper	Name of the author/s	Name of journal	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	"Simulation of Rocket Stove Geometrical Aspects for its performance improvement"	Gandigude A.U.	Journal of Material Today: Proceeding 5 (2) (2018) 3903-3908(Scopus).	Scopus
2	A Review of Performance Evolution for Biomass Cook-stove Models	Gandigude A.U.	Material Today Proceeding, Elsevier	Scopus
3	Review of Rocket Cook-Stove Geometrical Aspects for its Performance Improvement	Gandigude A.U.	Material Today Proceeding, Elsevier	Scopus
4	Enhancing Performance of Solar Line Concentrator System Using Variable Concentration Ratio	Dr.Kulkarni C.N.	Material Today Proceeding, Elsevier	Scopus
5	Design and Manufacturing of Portal Axle Gear Box	Lakhan Mali	International Research Journal of Engineering and Technology (IRJET)	Scopus
6	Performance Evaluation of Solar Parabolic Trough Collector Using Two Fluids Water and Ethylene Glycol	Prof. Patil K.S.	National Conference Recent Innovations in Science and Engineering (NC-RISE 17) ISSN: 2321-8169 Volume: 5 Issue: 9	Scopus
7	Intra-Laminar Fracture toughness of Glass Fiber Reinforced polymer by Experimentation and FEA	Prof. Tanpure K. S.	IOP Conference Series: Materials Science and Engineering	Scopus

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ICMPC 2017

Simulation of Rocket Cook-Stove Geometrical Aspect for its Performance Improvement

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Abstract

The inefficient traditional three-stone fire cook stoves are used as benchmark for performance comparison in many of developing countries for every improved cook stove. In order to improve energy security in developing countries many modern cooking fuels and technologies are introduced. Even though there are geometrical parameters that can be considered to improve the efficiency of these cook stoves, this paper focus its study based on the comparison of simulation results for its height to predict its performance in terms of desired flow and heat distribution. This study will be useful for the manufacturing of stove with modified height to get desired performance.

Selection and/or Peer-review under responsibility of 7th International Conference of Materials Processing and Characterization.

Keywords: Rocket Cook Stove, CFD, simulation, and chimney.

Introduction: Biomass Cooking Stoves

1.1 Biomass Cooking:

It is estimated that about half the world's population more than 3 billion people cook over an open biomass fire. This energy source is especially prevalent in rural areas of developing countries, where an estimated 90% of households rely on biomass fuels for cooking [1]. Combustion of solid biomass fuel is especially prone to incomplete combustion, often resulting in harmful emissions. These emissions, when combined with poor ventilation.

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Selection and/or Peer-review under responsibility of 7th International Conference of Materials Processing and Characterization.

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ICMPC 2017

Review of Rocket Cook-Stove Geometrical Aspects for its Performance Improvement

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Abstract

The inefficient traditional three-stone fire cook stoves are used as benchmark for performance comparison in many of developing countries for every improved cook stove. In order to improve energy security in developing countries many modern cooking fuels and technologies are introduced. This paper reviews studies of such technologies studied by researchers for performance improvement. Even though there are several factors that can be considered to improve the efficiency of these cook stove, this paper highlights many geometrical design principles of the stoves in order to increase heat transfer efficiency and reduce emissions. This study can be used as a basis of design for kinetic modeling and modification of existing cook stove model for better performance.

Selection and/or Peer-review under responsibility of 7th International Conference of Materials Processing and Characterization.

Keywords: Cook Stove, bio-mass, performance, efficiency, emission.

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ICAAMM-2016

Enhancing Performance of Solar Line Concentrator System Using Variable Concentration Ratio

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Abstract

The present line concentrator system with constant concentration ration exhibits rise in temperature of working media, however if the difference between outlet and inlet temperature of working media is large then they exhibit lower efficiency. Also the rate of fall of efficiency with increase in s temperature difference is high. To overcome this problem it is proposed to have a variable concentration ratio concentrator system. The variable concentration ratio is achieved by employing receiver consisting of the pipes having different diameters; with the larger diameter pipe at start followed by small diameter receiver. The present paper describes the theoretical analysis carried out for the newly proposed circular line concentrator with variable concentration ratio. The results obtained from the theoretical analysis are verified experimentally.
In the present case a 3-CR receiver system offers better results as compared with single CR receiver system. The heat loss is a function of receiver diameter and receiver temperature. With lower CR used for low temperature gives lower heat loss. As the receiver temperature increases the losses go on increasing and a higher CR by offering lower heat transfer area keeps the losses at optimum level. Thus it is recommended to use variable concentration ratio in case of situation where the difference between the out let and inlet temperature of working fluid is high so as to obtain the higher efficiency.

Selection and Peer-review under responsibility ofthe Committee Members of International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016).

*Keywords:*Variable concentration ratio, heat transfer area,intercept factor,efficiency.

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Selection and Peer-review under responsibility ofthe Committee Members of International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016).

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Intra-Laminar Fracture Toughness of Glass Fiber Reinforced Polymer By Using Theory, Experimentation and FEA

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[4] Assistant Professor, Birla Institute Technology,offshore Campus,RAK , UAE

Abstract. Fiber reinforced polymer (FRP) composites are widely use in aerospace, marine, auto-mobile and civil engineering applications because of their high strength-to-weight and stiffness-to-weight ratios, corrosion resistance and potentially high durability. The purpose of this research is to experimentally investigate the mechanical and fracture properties of glass-fiber reinforced polyester composite material, 450 g/m^2 randomly distributed glass-fiber mat also known as woven strand mat with polyester resin as a matrix. The samples have been produced by the conventional hand layup process and the specimens were prepared as per the ASTM standards. The tensile test was performed on the composite specimens using Universal testing machine (UTM) which are used for the finite element simulation of composite Layered fracture model. The mechanical properties were evaluated from the stress vs. strain curve obtained from the test result. Later, fracture tests were performed on the CT specimen. In case of CT specimen the load vs. Displacement plot obtained from the experimental results was used to determine the fracture properties of the composite. The failure load of CT specimen using FEA is simulated which gives the Stress intensity factor by using FEA. Good agreement between the FEA and experimental results was observed.

Keywords Fiber reinforced Polymer, Stress intensity Factor,FEA

1. Introduction

The modernization in material science and development of high strength to weight ratios composite materials capture the eye of industrial, Medical, Defence and Space application. Excessive use of composite leads to the research in the field of failure and fracture of composite material

The Intra-laminar and Intra-Laminar Fractures are two basic failures found in laminated composite material. If the crack is present in between two laminates of composite material that failure is called as Inter-laminar failure, most commonly it is known De-lamination [1, 2, 3]. Intra-laminar fracture in Mode I is also known as trans-laminar fracture, Trans-laminar fracture is characterized by a crack which passes through the laminates across fibers which has not been addressed to a great degree. Extensive research was carried out to determine failure criterias of inter-laminar fracture of FRP by using theoretical and experimental Techniques.For mode I failure of inter-laminar composite, double-cantilever beam test [4, 5] is used and for mode II end-notched flexure test [6] while for mixed-mode bending test. The matrix cracking or a crack apparently running parallel to fibers (Intra-laminar) through the thickness is also one of the

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Use of Analytic Hierarchy Process Methodology for Criticality Analysis of Thermal Power Plant Equipments

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Abstract

The Analytic Hierarchy Process (AHP) method is used to prioritize plant assets according to their criticality. The Analytic Hierarchy Process (AHP) method allows the decision makers to model the problem into hierarchical structure with relationship between goal, objectives and alternatives. This paper describes an application of Analytic Hierarchy Process (AHP) applied for identification of critical equipments of thermal power plant. For this AHP based analysis, four criterion are considered for criticality analysis viz. Effect on failure of equipment on power generation, environment and safety, frequency of failure and Maintenance Cost. The major equipments of thermal power plant have considered for this study viz. Turbine, Generator, Induced Draft fan, Forced Draft Fan, Primary Air fan, Boiler feed pump, Cooling water pump, Condensate Extraction Pump, HT motors of mills.

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*Keywords:*Criticality anlysis, Analytic Hierarchy Process,Effect on power Generation,Environment and safety,Frequency of failure,Maintenance Cost

1. Introduction

Thermal power is the largest source of power in India. About 65% of electricity consumed in India is generated by thermal power plants. In order to make Thermal Power Plants (TPPs) economical, the maintenance functions should be optimized by carefully selecting and planning the maintenance strategies that will address the maintenance needs of the plant at the least cost. Identification of critical equipments from thermal power plant is major and important step for defining maintenance strategy and making decisions. The earlier researchers have used Multi-Criteria Decision Making methods for making decisions with multiple criterions. The Multi-Criteria Decision Making methods helps to improve quality of decisions by making them more explicit, rational and efficient[1].The Multiple criteria decision-making (MCDM) methods provides the best alternative under various criteria. The Multiple criteria decision-making (MCDM) methods are Analytic Hierarchy Process (AHP), Technique of Order Preference by

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3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during a five year 2017-18

Sr. No	Title of paper	Name of the author/s	Name of journal	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	Implementation On Data Security Approach In Dynamic Multi Hop Communication	Dr. S. A. Ubale	International Journal of Computer Science and Information Security 2018	Other

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Survey on Data Security Approach in Dynamic Multi Hop Communication

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ABSTRACT: In remote sensor arrange messages are exchanged between different source and goal matches agreeably such way that multi jump parcel transmission is utilized. These information bundles are exchanged from middle of the road hub to sink hub by sending parcel to goal hubs. Where each hub over hear transmission close neighbor hub. To dodge this we propose novel approach with proficient steering convention i.e. most brief way directing and conveyed hub steering calculation. Proposed work additionally concentrates on Automatic Repeat Request and Deterministic Network coding. We spread this work by end to end message encoding instrument. To upgrade hub security match shrewd key era is utilized, in which combined conveying hub is allocated with combine key to make secure correspondence. End to end. We dissect both single and numerous hubs and look at basic ARQ and deterministic system coding as strategies for transmission.

KEYWORDS: SINR, Mesh Network, Sensor Deployment.

I. INTRODUCTION

In multi jump remote system parcel transmission by safeguarding privacy of transitional hubs, with the goal that information sent to a hub is not shared by some other hub. Additionally in which secrecy is a bit much, it might be not secure to consider that hubs will dependably remain uncompromised. In remote system hubs information secret can be seen as a security to stay away from a traded off hub from getting to data from other uncompromised hubs. In a multi bounce organize, as information parcels are exchanged, middle of the road hubs get all or part of the information bundle through straightforwardly transmission of system hub by means of multi jump arrange mold, while exchanging classified messages. Proposed work alludes productive calculations for secret multiuser correspondence over multi bounce remote systems. The metric we use to quantify the privacy is the shared data spillage rate to the transfer hubs, i.e., the equivocationrate. We require this rate to be self-assertively little with high likelihood and force this in the asset allotment issue by means of an extra limitation. We consider down to earth postpone necessities for every client, which wipes out the likelihood of encoding over a discretionarily long piece.

II. LITERATURE SURVEY

This system proposed private and public channels to minimize the use of the (more expensive) private channel in terms of required level of security. This work considers both single and multiple users and compares simple ARQ and deterministic network coding as methods of transmission [1].This paper design secure communications of one source-destination pair with the help of multiple cooperating intermediate nodes in the presence of one or more eavesdroppers. Three Cooperative schemes are considered: decode-and-forward (DF), amplify-and-forward (AF), and cooperative jamming (CJ). For these schemes, the relays transmit a weighted version of a re encoded noise-free message signal (for DF), a received noisy source signal (for AF), or a common jamming signal (for CJ)[2].This paper considers secure network coding with non uniform or restricted wiretap sets, for example, networks with unequal link capacities where a wire tapper can wiretap any subset of links, or networks where only a subset of links can be wiretapped [3].The scheme does not require eavesdropper CSI (only the statistical knowledge is assumed) and the secure throughput per node increases as we add more legitimate users to the network in this setting. Finally, the effect of eavesdropper collusion on

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1.	KNN- A Machine Learning Approach to Recognize a Musical Instrument	Dr. Suresh D. Shirbahadurkar	Internatoinal Journal of Advance Research, Idea and Innovations in Technology	Other (Google Scholar)
2.	Design of sliding mode controller with PI sliding surface for robust regulation and tracking of process control systems	Dr. A.A.Khandekar	Journal of Dynamic Systems, Measurement and Control.	Web of Science and Scopus
3.	HWFusion: Holoentropy and SP-Whale optimisation-based fusion model for magnetic resonance imaging multimodal image fusion	Dr. Suresh D. Shirbahadurkar	The Institution of Engineering and Technology	Web of Science and Scopus
4.	A Survey on Methods of TTS and Various Test for Evaluating the Quality of Synthesized Speech	Dr. Suresh D. Shirbahadurkar	International Journal of Development Research	Other (Google Scholar & ResearcherID Thomson Reuters)
5.	Concatenation of syllable by anchor frame to improve Naturalness in speech synthesis for Marathi language (India)	Dr. Suresh D. Shirbahadurkar	International Journal of Pure and Applied Mathematics	Scopus

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KNN- A Machine Learning Approach to Recognize a Musical Instrument

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Abstract: ***The integrated set of functions written in Matlab, dedicate to the extraction of audio tones of musical options connected to timbre, tonality, rhythm or type. A study on feature analysis in today's atmosphere, most of the musical information retrieval algorithmic programs square measure matter based mostly algorithm so we have a tendency that cannot able to build a classification of musical instruments. In most of the retrieval system, the classification is often done on the premise of term frequencies and use of snippets in any documents. We have a tendency to gift MIR tool case, associate degree for recognition of classical instruments, using machine learning techniques to select and evaluate features extracted from a number of different feature schemes was described by Deng et al. The performance of Instrument recognition was checked using with different feature selection and algorithms.***

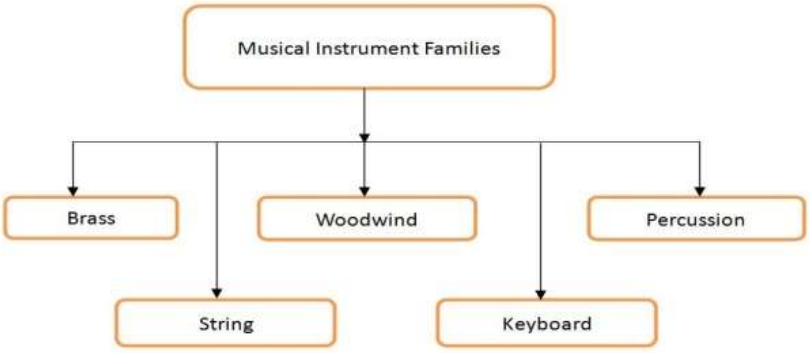
Keywords: ***Musical Instrument Recognition, Mel Frequency Cepstral Coefficient (MFCC), Fractional Fourier Transform (FRFT), Machine Learning Technique (KNN).***

1. INTRODUCTION

Recognizing the objects in the environment from the sound they produce is the primary function of the auditory system. The aim of Musical instrument recognition is to identify the name and family of musical instrument from the sound they produce. Many attempts were made for musical instrument identification and classification. The statistical pattern-recognition technique for classification of some musical instrument tones with few features based on log-lag correlogram.

1.1Musical Instrument Classification

Depend on their shape, method of playing an instrument, the sound they produce: Musical Instruments are classified as follows:



An outline of the set of options which will be extracted with MIR tool cabinet, illustrated with the outline of 3 explicit musical options. The tool cabinet additionally includes functions for applied math analysis, segmentation and bunch. The event of the tool cabinet is to facilitate investigation of the relation between musical options and music-induced feeling.

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Design of sliding mode controller with PI sliding surface for robust regulation and tracking of process control systems

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ABSTRACT

This paper deals with design of Sliding Mode Controller (SMC) with proportional plus integral sliding surface for regulation and tracking of uncertain process control systems. However, design method requires linear state model of the system. Tuning parameter of SMC has been determined using Linear Quadratic Regulator (LQR) approach. This results in optimum sliding surface for selected performance index. Matched uncertainty is considered to obtain the stability condition in terms of its upper bound. A conventional state observer has been used to estimate the states. The estimated states are then fed to controller for determining control signal. The simulation study and experimentation on real life level system have been carried out to validate performance and applicability of the proposed controller.

1 Introduction

Process control systems, possess properties such as, higher order, non-linearity, slow dynamic behaviour, time delay and external disturbances. These properties makes designing of the controller difficult. Thus, general practice of controller design for process control systems needs mathematical model. Determination of accurate model is almost impossible. Hence, working model of the plant is obtained using various techniques of system identification. These working models always introduce parametric uncertainty. This leads to necessity of ensuring robustness in addition to stability of the controller to achieve tight control performance.

Due to simplicity in design and implementation, Proportional Integral Derivative (PID) controllers are used in process control applications [1]. Among the PID design/tuning methods reported in literature, most of the PIDs are designed using lower order linearised process models [2–5]. This leads in additional parametric uncertainty, resulting due to model order reduction. However, very few PID designs are based on higher order model [6, 7]. But, still issue of robustness remains unsolved, if the robustness measures are not considered in design process.

Sliding Mode Control (SMC) is one of the robust control technique, which possess inherent properties such as, invariance to parametric uncertainty and disturbance rejection [8–12]. The stability of SMC can be ensured by generating stability conditions. Also, desired dynamic performance can be achieved by proper selection and designing of sliding surface [9].

Time delay is another important issue in controller design for process control systems. Since, very few SMC design methods have incorporated time delay in designing process. The common approaches to consider delay in design are, approximating delay by first order Taylor series or Pade's approximations [13, 14], Smith Predictor [15] or delay ahead

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HWFusion: Holoentropy and SP-Whale optimisation-based fusion model for magnetic resonance imaging multimodal image fusion

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Abstract: Image fusion is becoming a promising technique for obtaining a more informative image by combining various source images captured by multimodal imaging systems. The technique finds application in several fields, such as medical imaging, material analysis, satellite imaging, including defence and civilian sectors. This study presents a model, named holoentropy-whale fusion (HWFusion), for the image fusion. Two different multimodal images from magnetic resonance imaging (T1, T1C, T2, FLAIR) are fed into the wavelet transform to convert the images into four subbands. The wavelet coefficients are then fused using a weighted coefficient that utilises two factors, entropy and whale fusion factor, which are calculated using holoentropy and the proposed SP-Whale optimiser, respectively. SP-Whale is an algorithm designed by modifying whale optimisation algorithm with self-adaptive learning particle swarm optimisation and is used for the optimal selection of whale fusion factor. Inverse wavelet transform converts the fused wavelet coefficients obtained by the averaging of fusion factors into fused image. In a comparative analysis, the performance of HWFusion is compared with that of four existing techniques using, mutual information, peak signal-to-noise ratio, and root mean-squared error (RMSE), where it could attain mutual information of 1.8015, RMSE of 1.1701, and peak signal-to-noise ratio of 40.6575.

1 Introduction

Innovations in medical imaging modalities, such as ultrasound, computed tomography (CT), X-ray, magnetic resonance imaging (MRI), positron emission tomography (PET), electrocardiography and so on, have added to the visual response from these devices regarding interpretation and diagnostic analysis [1]. The radiologists analyse and extract these imaging modalities that provide a large quantity of meaningful information to detect and diagnose the diseases for the treatment. Various image processing techniques, namely image enhancement, deblurring, denoising etc. are also employed to improve the visual information obtained from the imaging modalities [2]. Enhancement techniques that are employed to improve the contrast in CT/MRI scans are restricted after a limit, as there exist different issues in examining various modalities in parallel which necessitates the integration of both useful and complimentary information of images into an image using fusion techniques for the analysis and diagnosis. Image fusion [3], which is the process of combining several image features into a single image, is one of the precise and promising diagnostic methods used till date in medical imaging. The fused images obtained from various imaging modalities or instruments are important in several applications, such as medical imaging, remote sensing, microscopic imaging, robotics, computer vision etc. The key concept of medical image fusion is to attain a high-resolution image which has more details as possible for the purpose of diagnosis. Therefore, two images of the similar organ are fused then the fused image has significantly large amount of information for diagnosis of that organ, as compared to the non-fused images.

Image fusion techniques are classified into two groups, namely (i) spatial domain fusion method and (ii) transform domain fusion. In spatial domain fusion method, the pixel values are utilised to attain the required result. It includes high pass filtering-based method, hue intensity saturation-based methods, principal component analysis (PCA), averaging, and Brovey method. The spatial domain technique generates the spectral distortion and spatial distortion in the fused image. In transform domain fusion methods, initially, the image is transferred into other domain, like frequency domain and all the fusion operations are carried out on the transform of the image then, the inverse transform is performed to obtain the resulting image [4].

The fusion process can be executed at several levels of information representation, four of which are, signal, feature, symbolic, and pixel levels [5]. Fusion at symbol-level helps in using the information obtained from multiple images at the highest level of abstraction. Here, the input images are processed individually for the extraction and classification of information. Some of the fusion techniques at the symbolic level are weighed decision techniques, Dempster–Shafer's approach, Bayesian inference, classical inference and so on. Based on the factors such as data sources, applications and tools available, the appropriate level for the fusion process are selected. Through image fusion, it is possible to reduce the storage capacity by bringing together the information in two images into one fused image, improving the accuracy in diagnosis such that the redundant information is avoided. Traditional fusion approaches require registration of the source images and pixel-level fusion methods are often preferred than the feature-level or decision-level fusion techniques. In medical imaging, a fusion of multimodal medical images is an important approach to attain information from various multimodalities of medical images.

The fusion approaches for multimodal images can be classified into three: pixel level, decision level, and feature level. The transformation of the pixels can be avoided using pixel-level fusion preserving the information obtained, whereas the decision-level approach is concerned with feature selection using techniques, such as fuzzy logic, forecast, and voting. The feature-level approaches concentrate on highlighting the edges, textures and fine details of the images. Multiscale transforms like pyramid transform and discrete wavelet transform (DWT) [6] are broadly used for image fusion at pixel-level over the years. DWT-based fusion techniques can perform fusion better than the methods using pyramid transform [7]. Other techniques of image fusion include transforms such as complex wavelet, contourlet, and curvelet, which have directional selectivity and shift-invariance property better than that of DWT, maximal gradient wavelet, morphological wavelet, and multiwavelet. However, DWT-based fusion approach is still preferable for fusion due to its less computational complexity and

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A SURVEY ON METHODS OF TTS AND VARIOUS TEST FOR EVALUATING THE QUALITY OF SYNTHESIZED SPEECH

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ABSTRACT

The main objective of the paper is give an ideal about different methods of the text to speech synthesis for quality of synthesized speech for Marathi Language. A system converting textual information into speech is usually called as Text to speech (TTS). Speech is surely the most natural mode of communication in human's community. [Quartier, 2002]. This information can be evaluated at several non-exclusive stages of description. At the acoustic level, speech is considered as a mechanical wave that is an oscillation of pressure. The main claims of Speech Processing can be categorized as follows, Speech Recognition, Speech Synthesis, Speaker Recognition, Voice Analysis, Speech Enhancement, and Speech coding [Dutoit, 1997]. Out of the many application in this paper, speech synthesis is one of the discussion topic, Speech Synthesis: In Speech Synthesis, also called Text-to-Speech (TTS), the goal is to produce the speech, typically expressed in terms of naturalness and intelligibility of the produced voice.

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INTRODUCTION

Marathi language usually use to spoken by the native people of Maharashtra. Marathi is the group of Indo-Aryan languages which are a part of the larger group of Indo-European languages, all of which can be traced back to a common root. Among the Indo-Aryan languages, Marathi is the southern-most language. Matathi languages originated from Sanskrit. From Sanskrit, three different Prakrit languages, was developed which is simpler in structure. These are 1. Saurseni 2. Magadhi and 3. Maharashtri. Word was formed using Vowels are combined with consonants in forming syllables which ultimately form a word. A syllable is a element of organization for a order of speech sounds. For example, the word Marathi is composed of three syllables: *Ma,*ra and thi. A syllable is typically made up of a syllable nucleus (most often a vowel) with optional initial and final margins (typically, consonants). Syllables are habitually considered the phonological "building blocks" of words. It gives the influence the rhythm of a language, and its prosody, and stress arrays of word. In this paper, a sensible effort is made collective framework for building synthesis systems for Marathi languages. Speech synthesis is the artificial production of human speech by using text. A computer system used for this purpose is called a Speech Synthesizer, and can be implemented using different software or hardware.

Implementation method of text to speech Marathi and other language

Articulatory Synthesis*:* In this method of speech synthesis, computer and its hardware are used to mimic humans like speech using text. In this system the human speech production model based on human vocal tract and the articulation processes occurring there. These model uses the vocal and nasal tracts are treated as tubes that are attached with closures for articulators such as the tongue, jaw, and lips. A arifical arrangement was done which is same like vocal tract and speech is created by digitally simulating the flow of air through the representation of the vocal tract. Due to

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Concatenation of syllable by anchor frame to improve Naturalness in speech synthesis for Marathi language (India)

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Abstract

Speech synthesis is the method to convert text in to speech waveform. Current state-of-the-art text-to-speech systems for Indian language produce intelligible speech but lack the prosody of natural utterances using concatenation speech synthesis. It can be useful for various application, car navigation, announcements in railway stations, response services in telecommunications, and e-mail reading.it has been observed that widely used approach for speech synthesis is based on concatenation of segment, this approach is called as concatenation technique. This method uses the pre-recorded unit of speech, which preserve the naturalness and intelligibility of the Marathi language. The quality of the synthetic speech is the direct function of the