User Identification Using Face Recognition System

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***Abstract* —** *Face Recognition is an important role within the field of applied science and Engineering. Face recognition presents a difficult drawback within the field of image process and pc vision, and in and of itself has received an excellent deal of attention over the previous few years owing to its several applications are present in various domains. lots of algorithms and techniques are planned for determination of face rec. Social Networking has become today's way and anyone will simply receive data regarding everybody within the world. it's terribly helpful if a private identity will be obtained from the any device and additionally connected to social networking. Cloud computing technique is a new technology in recent era within the IT trade. In that, characteristic approved user is a major drawback. The user need to access knowledge or services has to be registered and before each access to data or services; his/her identity should be register for authorization. There are many authentication techniques are available which have an various drawback to overcome these drawback we are using Face recognition system using cloud.*

Keywords — *Cloud security, Face Recognition System approved Person.*

I. INTRODUCTION

Cloud computing is that newest technology. The user will access the files or knowledge on clouds from anyplace over the net. It has been found that the utilization of cloud computing has its own advantages, like high convenience, low costs, and so on. On the opposite hand, there area unit some security shortcomings during this field. Akshay et al. (2013) [1] have reportable that one in all them is that the cloud usage time recognition of the approved user, thus, the authentication should be provided for the user access to clouds. Authentication is the method of confirming the identification of the user-provided data.[7]

Computers within the cloud area unit organized to figure along and also the varied applications use the collective computing power as if they're running on one system. Services are unit classified into three types: Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and package as a Service (SaaS). Cloud computing is deployed as three models like Public, Private, and Hybrid clouds [3]. Data storage in the cloud offers such a big amount of advantages to users: It provides world organization restricted knowledge space for storing user's knowledge. Users will access the information from the cloud supplier via web anyplace or anywhere within the world, not on one machine. we tend to don't purchase any memory device for storing our knowledge and don't have any responsibility for native machines to keep up data[2]. There are a unit totally different prob-lems and challenges with every cloud computing technology. During this paper an answer to the safety drawback. to spot the approved person to supply provide cloud services within the cloud surroundings. that's statistics is employed as Associate in authentication whereby the secret is a human being or physiological characteristics. There are various techniques for person identification like Voice Recognition , because the name suggests voice recognition involves authentication with reference to vocal knowledge. Voice recognition is employed to demonstrate the user's identity supported patterns of voice pitch and speech vogue. however, a user's voice will be simply recorded and will use by an unauthorized user. additionally, the voice of a user might be change due to illness, thus creating identification is troublesome. bio-metric identification , biometric identification is employed to demonstrate the user's identity supported the traits of their distinctive signature. individuals might not continuously register a homogenous manner thus confirming a licensed user is trouble. Retinal Recognition , Retinal recognition is for characteristic individuals by the pattern of blood vessels on the tissue layer. however, this system is extremely intrusive and high-priced. Iris Recognition , Iris recognition may be a technique of characteristic individuals supported distinctive patterns at intervals the rounded region encompassing the pupil of the attention. As like tissue layer, this system is additionally intrusive and high-priced. Fingerprint Recognition : Fingerprint recognition refers to the machine-driven technique of confirming a match between 2 human fingerprints. The waterlessness of fingers, bespattered fingers will have an effect on the system and it will show an error.

Hand pure mathematics Recognition :Hand pure mathematics statistics relies on the geometric form of the hand. It includes the dimensions of the palm, length, and breadth of the fingers, etc. however this system has some drawbacks like not ideal for kids like increasing age their hand pure mathematics tend

to alter, constant use of jewelry can result in amendment in hand pure mathematics, not valid for persons plagued by inflammatory disease, since they're ineffectual to place the hand on the scanner properly.

Palm recognition : Palm recognition relies on ridges, principal lines, and wrinkles on the surface of the palm. this system is extremely high-priced and not acceptable for kids as there lines of palm amendment once they're big up. The external body part plays a vital role in our social interaction. automatic face recognition is one in all the well-liked ways of statistics as a result of it's a neutral, non-intrusive,

Literature review-

R.Prema, P. Shanmugapriya, " A Novel Method for User Authentication on Cloud Computing Using Face Recognition System "International Journal of Data Mining Techniques and Applications Volume 5, Issue 1, June 2016, this paper explains There are so many authentication techniques available in biometrics, like password, OTP, Voice recognition, finger recognition, palm recognition etc. but still it has some drawback like at times password techniques are not feasible , password can be easily stolen by hacker or if the user, uses complex password, user may forget that password etc.[1]. In this paper we have proposed Face Recognition System in the cloud computing. It gives good security to the cloud environment to provide service to the user or access the data or service.[6]

Shafagat Mahmudova Institute of Information Technology of ANAS, Baku, Azerbaijan," Analysis of metric Authentication methods of the user in cloud "International Journal of Advanced Engineering and Technology Volume 1; Issue 5; November 2017.This paper highlighted an importance of the use of the biometric authentication techniques for the cloud users in ensuring security. Large volumes of the data stored in these clouds. As in other issues, one of the biggest issues here is the users security. In this paper, and recommended to us different biometric authentication technologies, including face recognition systems to ensure the security of access to cloud in the future. The user of the biometric authentication technologies in clouds can play an important role in the provision of the security of the users, which can lead to increased efficiency of the performance.[7]

Mrs. S. M. Barhate, Dr. M. P, Dhore," User Authentication Issues in Cloud Computing" *IOSR Journal of Computer Engineering(IOSR-JCE)* this paper dealt with different algorithms used for user authentication and authorization in cloud computing. Different algorithms such as RSA, AES, MD5, OTP password generation algorithm, DES, Rijndael encryption Algorithm were studied. RSA Algorithm is deterministic and hence becomes fragile in long run. easy-to-use, which needs minimal physical contact as compared with different statistics systems.[1].Face recognition relies on each the form and site of the eyes, eyebrows, nose, lips, and chin or on the analysis of the face image that represents a face a variety of recognized faces [12]. Face image will be captured from a distance while not touching the person being known, and also the identification doesn't need interacting with the person.[9] Face Recognition System (FRS) permits solely approved users to access knowledge from cloud server.[6]s to access knowledge from the cloud server.[6]

But the other algorithms discussed make the model highly secured. Each of this algorithms discussed were developed to provide best ever possible solution to the user authentication and authorization issues. Different protocols such as LDAP, EAP, & SSO protocols were also studied. Even if some intruder gets access of the data accidentally or intentionally, he will not be able to decrypt it.[8]

Seyed Milad Dejamfar, Sara Najafzadeh ," Authentication Techniques in Cloud Computing: A Review" International Journal of Advanced Research in Computer Science and Software Engineering Volume 7, Issue 1, January 2017 This paper explains A very important part of data security in cloud is authentication, so that unauthorized people will be prevented to enter and merely authorized people will be allowed to enter. Authentication in cloud was fully explained in this paper together with the existing methods and the factors playing a role therein. The advantages and disadvantages of each method were investigated in order for the people who intend to use the cloud service to become aware and the experts of this field to be able to improve security as much as possible in light of the comparisons made.[11]

Prajakta D. Patil , Vaishali B. Bhagat , Pravin D. Soni, Chetan J. Shelke[10]This paper works on Face dection using Iris Recognition This Explains Iris recognition is consider to be the most reliable and accurate biometric idtenfication system present. Iris recognition system Captures an image of an individual eye, the iris is the image is then meant for the segmentation and normalization for extracting its features. The performance of iris recognition systems mainly depends on the segmentation. Segmentation is use for the localization of the correct iris region in the particular region of an eye and it should be done accurately and correctly to remove the eyelids, , reaction and pupil noises present in iris region. Iris images are selected from the Database, then the iris and pupil boundary is detected from rest of the eye image,by removing th noises. The segmente iris region was normalized to compress the dimensional inconsistencies between two iris regions by using Then the features of the encoded by convolving the

normalized iris. The Hamming distance was chosen as a matching metric parameter, which gave the measure of how many bits disagreed between the templates of the iris.

Methodology:

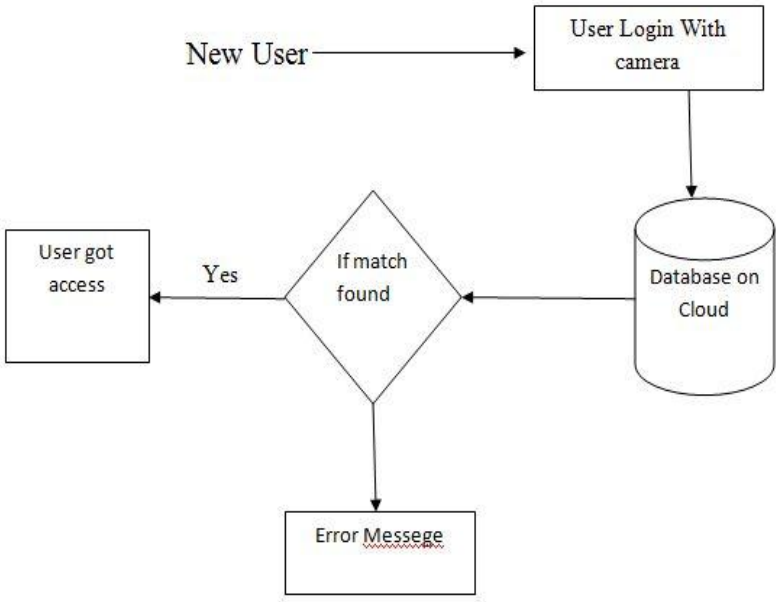

Fig1: Log in diagram for person identification using cloud computing

In face recognition using cloud firstly user have to sign up with face the data sent to cloud database once the sign up complete user can login with the face which is already present in the cloud database if the face captured from web cam or mobile phone is sent over the cloud if the face matched with the existing database of cloud then user will be login with the particular application.

When registered user needs to access resources on the cloud server, then registered user ought to login on to the cloud server. Following area unit the steps to login on to the cloud server. User ought to enter valid username in his login interface that was already provided by the user at the time of registration. And for positive identification user's face is captured by web camera. Face recognition system checks the username and password(face image) provided by the user. once matching the username and face image as a positive identification, face recognition system provides access of cloud services to the user. If username and password(face image) doesn't match then face recognition system displays **a** retry message

CONCLUSIONS

Cloud computing is very important area in user identification. The protection of user data security is extremely important and considerable because if user identification is not protected, the cloud will practically lose its meaning. Therefore, security solutions in this system are constantly updated. A very important part of user identification in cloud is authentication, so that unauthorized user will be prevented to enter and merely only authorized user will get chance to access. Authentication in cloud was fully explained in this paper together with the existing methods and the factors playing a role therein. The advantages and disadvantages of each method were investigated in order for the people who intend to use the cloud service to become aware and the experts of this field to be able to improve security as much as possible in light of the comparisons made.

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