

A Survey on Secured Online Voting System Using Face Recognition

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Abstract— Now a day, voting for any social issue is important for modern democratic societies. The manual voting system is implemented for election from many years in our country. We are using face recognition to secure the system. The image captured at the time of registration as well as login phase is stored into the cloud database. The converted images are then matched by applying matching criteria which will be we decide. If match is found then and then only the user can proceed for voting Otherwise, the user is considered as invalid user or voter. For confirmation of voting, SMS will send to the voter from server to indicate voting is done successfully.

Keywords—Face Recognition, Cloud Database, Web-Cam, Security

I. INTRODUCTION

As we seen there are many disadvantages of the manually voting system which is preferred now a day in India. Every person who wants to give vote has to stand in queue at the election booth. This will be more time as well as energy consuming process. To solve these problems we are proposed online voting system. To make the system more secured the method introduced biometrics technique like face recognition for voter's authentication. To store the voter's data the cloud database is used which would make voting process more effective at large scale.

In this proposed system, the image captured at the time of registration as well as login phase and it is converted into gray-scale. The captured images are created as share1 and share2. Share1 is stored into cloud database and share2 is stored on voter's email-id and after registration the system generated user-name and password is sent on voter's mobile number. That means the images will be black and white. The converted images are then matched by applying matching criteria which will be we decide. If match is found then and then only the user can proceed for voting Otherwise, the user is considered as an invalid user or voter. For confirmation of voting SMS will send to the voter from server to indicate voting is successfully done.

The counting of the votes to check the results is also done in less time so the results of the election is declared earlier than manual voting system as the vote counting is very hectic in manual voting system. By using the online voting system the voters can give vote to the right candidate and the frauds which are done at the time of election can be reduced. The purpose of this system is to reduce complexity and to improve the reliability towards the democracy.

II. EXISTING SYSTEMS

A. In the India, the manual voting system is still preferred which is accomplished in a single day, so the security of our valuable vote is not as much as considered. The huge amount of man power is required to maintain this security. The poll allocation is done in advance by the election commission. Normally the polls are the schools or the community halls. Voters have to come to know the time, place and location of the about the location of voting. On the day of election polls are opened at least 8 hours [1].

At the first the voter need to reach at polling booth, then identity verification, carried out by an associated officer who is on the duty, then officer makes mark of ink on the voter's left forefinger, then voter has to sign the register which is inside the voting compartment. To give a vote, a voter has to press blue candidate button on EVM machine against the name and symbol of voter's choice. The red lamp will glow against the symbol with beep sound, when button is pressed which indicates that vote is successfully recorded [1]. This process needs to be repeated every time. The disadvantages of this system can be said as:

- More time consuming process.
- Percentage of voting is low.
- Tendency of people is to bunk voting and celebrate voting's day as a holiday.
- Distance between polling booth and the voter is more.
- Voters being out of station in emergency.

B. In 2010, Washington [2], D.C. proposed an Internet voting which was intended to allow absent voters can also give their vote by using a website. To deploy this system a

trial taken at the district level: randomly anyone was invited to check the system and attempt to check its security. There were also some disadvantages with this system and they are as follows:

- The software failure issue is arises.
- Access of internet could be insecure.
- Voter must be familiar with internet.

C. For the voter's authentication thumb impression is also used. By using Steganography and Cryptography we can provide a security to the voters. For steganography main object is image and for cryptography there are keys. But this system has also some disadvantages and they are [3]:

- The cost of required hardware to take thumb impression is more.
- The managing keys in cryptography are bit difficult.

D. Kevin Daimi et al. [4] proposed in his paper which gives a solution to stakeholder's needs for an online voting system. This helped us to design and implement robust, accurate, secure and quality-based system.

E. Kirti Autade et al. [5] proposed a method that focused on the E-voting analysis and development on an android platform. The specification and requirements for E-Voting using an Android platform is discussed in this paper.

F. Rubin A.D et al. [6] proposed a method that focused on Security parameter using Cryptographic algorithm based which is the on an android platform.

III. PROPOSED SYSTEM

We proposed the Online Voting System using face recognition to provide more security for our valuable vote in election of leaders for our country.

In this system we are overcome many drawbacks of the existing system such as, the security is given by the face recognition, this system takes less time and energy of the voters, the voter can give his/her valuable vote from anywhere in the country, the percentages of voting will be increased, the cost of the required hardware (i.e. web-camera) is less, as we are using the cloud database to store the voters as well as candidates information software failure problem is not arises.

The online voting technology is growing up now a day so everyone has the knowledge of internet. Counting of vote can provide improved accessibility for voters. Among biometric sign face recognition shows the most promising future in real-world applications as everyone has different face parameters.

IV. PROPOSED SYSTEM ARCHITECTURE

In this system there are three phases and they are as follows:

- 1) Registration Phase
- 2) Log-in Phase
- 3) Authentication Phase

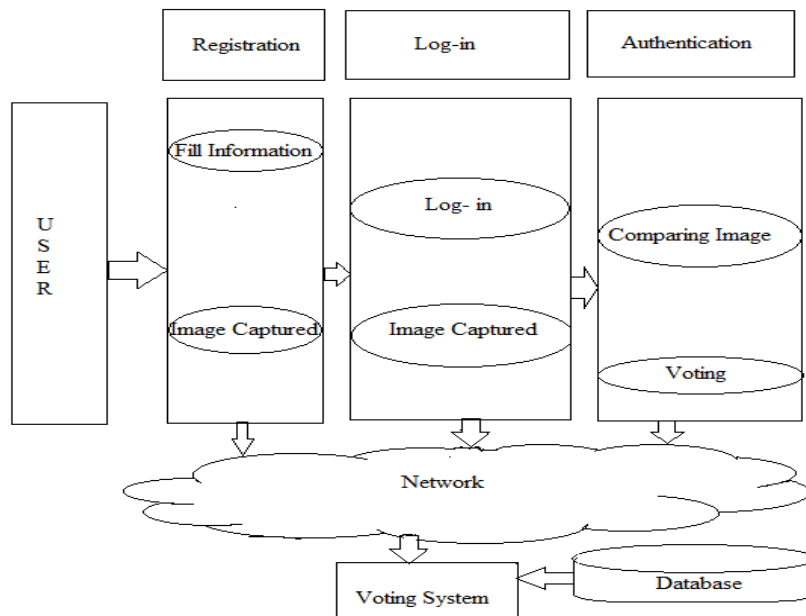


Figure 1: Architecture of online voting system using face recognition

First voter must register themselves, then they are valid voter to choose their leader after log-in to online voting system using user's session ID, user name and system generated password. To use voter's voting rights from anywhere in country. The online voting system enables this feature which contains:

- Voter's details as well as image captured by web-cam in database.
- Candidate's details in database.
- Collection of total number of votes to produce result.

V. CONCLUSION

In this system we have proposed a method of highly Secure Online Voting System. The security level of our system is greatly improved by the new idea of matching real time captured image on the basis of matching criteria. If it will use in real life election process the usability will be very high. By using this system, the voting process will not be very time consuming, so it will definitely helpful to voters who wants to give a vote to the correct candidate.

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