SMART VOTING SYSTEM

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ABSTRACT

The project is mainly aimed at providing a secured and user friendly Online Voting System. The problem of voting is still critical in terms of safety and security. This system deals with the design and development of a web based voting system using fingerprint and Aadhaar card in order to provide a high performance with high security to the voting system. The proposed Online Voting System allows the voters to scan their fingerprint, which is then
matched with an already saved image within a database that is retrieved from Aadhaar card database of the government. The voting system is managed in a simpler way as all the users must login by Aadhaar card number andclick on his/her favorable candidates to cast the vote by using biometric fingerprint it provides enough securitywhich reduces the dummy votes.The main goal of this paper is to review the available methodologies, presenttrends and discuss thechallenges that are currently available in the studies. Along with these studies, the datasets thatare publicly available and commonly used, the evaluation metrics considered are also discussed. Finally, a comparisonon the performance among the methods and a possible discussion identifying the gaps in the present studies, pros andcons of the methods are elaborated.

Keywords: - *Android Development, Python, Microsoft Azure, SQL, Digital Voting*

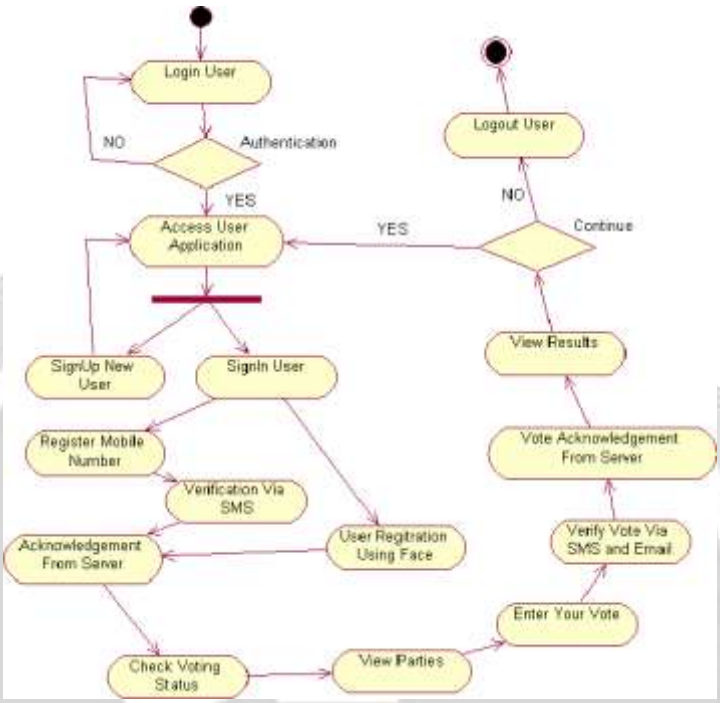
1. INTRODUCTION

Before days there was voting system with papers. Now, this electronic system has no need of ballot papers etc. All the authorized and eligible persons can register through online and can vote by logging into their own systems. There is no time consuming for the users. The major advantage in this system is that the user has no need of coming to the voting halls, as they can vote from anywhere. It has more features as compared to the normal voting system. By this way most the people can cast their votes without missing.

In the new period of trend setting innovation where online framework supports work speed, lessens botches andadvances the age of exact outcomes, having manual race framework turns into an incident. An open decision framework comprises the foundation of a majority rules system where the general population need to choose theirstate's head. India presently utilizes a manual race framework, which causes a few sorts of issues. Because of this paper tally based race framework, a few issues are looked by voters previously or amid races and others are looked by the organization when the casting a ballot.

An online framework, which includes strategies like enlistment of voters, vote throwing, vote checking, and pronouncing results would establish a decent answer for supplant current framework and the proposed framework in this proposition will be useful for the voters by utilizing any assets like their very own framework or orchestrated by Government.

After the industrialization more number of people leave their na tive places and come to the cities for the job sake. But many of them still have their voter ids in the address of their native places. On the day of voting they can'table to go their places so they don't cast their valuable vote. this is the main reason for reduction of voting
percentage in our country. Our government also keep on working to find out a best solution for this circumstance.



In this paper, section 1 contains the introduction to the paper, section 2 has the objective of the study, section 3 containsthe dataset used, section 4 contains the literature review, section 5 has the conclusion of the study and in last we have the references in section 6.

2. OBJECTIVE OF THE STUDY

The main aim of this study is to identify the solutions for reducing the problems while traveling and creating a better budget Security system.

1. To monitor, evaluate and report on the implementation of the Framework and promote women leadership and initiative and showcase best practices for replication. Since at last to identify protect and call on resources to help the one out of dangerous situations. The system consists of pulse and temperature sensor, which when activated, sends values to the training dataset to be compared with per 10sec
2. To advocate for the continental framework's implementation at regional andcontinental level

1. DATASET USED

We mentioned that this paper only focuses on the technological data collected during the experimentations, namelyon the information concerning the performances of the machines and the procedures. Other papers describe the sociological results of the experiment, such as, e.g., the attitude of citizens towards the e-voting systems and how the introduction of new technologies shifts the mea ning of void and blank ballots.

Figure 2 describes the collection and analysis mechanism adopted during the experiment. On the left hand side we have technical support center (upper part) and the polling station (lower part), where the data is produ ced.

On the right hand side we have the data collection and analysis part, conducted after the experiment (in all experiments data has been made available for analysis only after the end of the voting procedures):

• **Requests for Intervention:** As logged by the technical center, that includes the support requests received during the experiments. Such requests might range from procedural questions to technical problems related to the implementation of the procedures for interventions due to malfunctions.

• **Printed Logbooks:** During the elections poll officers were required to compile a pre-formatted printed logbook. The logbook is meant to record the main operations, all the significant events, and the main observations about the system and the procedures.

• **Machine Logs:** The machines produce a log of the activities performed during the election. The log can be used to automate part of the logging activities currently performed on paper (e.g. when the machine was made available for voting) and contain diagnostic information about software and hardware malfunctions. The informationis collected at different levels of details:

3. At the lowest level, the logs collect information about whether the machines have been turned on and off,whether they have been shut-down, whether any critical software or hardware error occurred.

Date	Election	Legal	Cities	Pollig Sites	Machines	Voters	Turnout
May 2005	Municipality	no	5	16	16	15375	6950
Nov 2005	Municipality	no	1	1	2	554	336
May 2006	Municipality	no	1	3	4	1650	1134
Nov 2006	Municipality	no	1	2	4	2334	1361
Nov 2006	School	yes	2	4	4	1392	1207
Nov 2007	Referendum	yes	2	2	4	1082	561
Nov 2008	Provincial	no	39	55	110	44032	16939

[Fig: 02]

Although obvious, it is important to remark that the logs do not collect data that could compromise secrecy and anonymity. This has been achieved by imposing requirements on what data could be collected with the logs and providing separate protection mechanisms for the critical data. For instance, votes are stored in a single, shuffled file, so that no vote has a time stamp associated; the sequence in which votes a re found is not the one in which they have been cast. Moreover, the machines do not have access to any information about the voters; the voters' registeris kept separately.

• **Electronic Election Results**. All experiments have been concluded by determining the candidates elected, according to the results of the electronic votes. From the technological point of view, determining the elected candidates represented the minimum goal to achieve to ensure that all procedures had been conducted to an end.From a different perspective, the results have been compared with those of the elections conducted on paper, toverify whether the electronic voting and the paper voting had the same trends and, thus provide an indirect hint onthe ease of use of the system.

• **Printed Ballots.** All the machines produced printed ballots, that contain a physical, voter verified proof of each vote cast.

1. The paper logbooks and the intervention requests have been analyzed by hand in order to highlight the significant events. Not all the requests of intervention are due to a technical problem, not all the events signalledin the logbook are relevant.

2. the machine logs have been analyzed with a specifically developed tool, called — not surprinsingly — LogAnalyzer, in order to highlight relevant sequences of events (turn-on, turn-off sequences) and information aboutsuch sequences (how long the machine has been available for voting). For certain kind of information (e.g., affluence), the Log Analyzer aggregates the data of each machine to provide total values.

3. The electronic results have been compared with the printed ballots, to make sure no discrepancies arised, that is, That is, each electronic vote corresponded to a printout. Recounting has been performed with a specifically developed tool, called Paper Ballot Counter. The Paper Ballot Counter reads the barcodes printed on the

ballots, show the correspondent ballot on screen and updates the entire votes counter.

4. The electronic results, finally, are compared with the results of the paper election, to verify whether the identical trends emerged. Notice that, since the info about the same phenomenon is collected in different ways, inconsistencies among different data might (and in various cases actually did) result. Inconsistencies, however, aren't surprising and often not even a cause of great concern

5. LITERATURE REVIEW

A. Secure Authentication for Online electoral system : This paper presents non traceability and integrity of the votes, open-end credit has been used to avoid multiple votes cast by users, biometric is getting used for authenticating voters. The author has introduced open-end credit

For biometric authentication and voter ID card to be used at the time of casting vote. They're using smart card and voter ID card at the time of election which is not feasible as anything can happen to those cards, thus relying completely upon cards in not a good idea. And therefore the use of various cards makes the system costly now each and every voter need to have these additional cards. Also, it may take a reasonable amount of time to generate so many cards.

All electoral system generated priory though have met various features, which an electoral system may consist, but the main problem one could find in this system is that little "online" word, despite all techniques they need used to make system robust there is always a chance of malpractice when your system is online.

B. Online electoral system Based on Homomorphic Encryption: This Paper represents the voting system is to encrypt each ballot using the common public key of the distributed ElGamal cryptosystem. This technique is proposed for the private authorities. The system has following certain procedures. The first step is Initialization of election, all authorities need to generate a common encryption key (PK) that can be used by voters in order to encrypt each cast ballot before submission. Each authority (Ai) owns each secret Key pair. It's a combination of the Public key and the secret key. During the common key generation, each authority (Ai) has got to broadcast their public key. The second step is Registration of the voters. To register for the vote, a voter has got to submit his valid ID. Then the ID is verified, after the successful verification, the voter generates a signature key pair. It consists of the Public Key and therefore the Private key. Public key are often seen on public bulletin board. The system requires each voter to sign their ballot using Digital Signature Algorithm (DSA).

Next step is ballot casting, where voter has got to give points to all the candidates and at last the one who gets maximum points, declared because the winner. The sole restriction is that voter can give points, that the total number of assigned points must be equal to the total available points (P). During this system, the main concern is given to the Confidentiality and security of the votes. Here the safety and performance analysis not only confirming the feasibility, but also here demonstrating the improvements achieved within the voting system.

C. Secured electoral system with fingerprint, Face and Iris Verification: this technique provides the highest security to the voting process. At initially, voter has got to give his fingerprint input to the fingerprint scanner. Here FM220 Strete Scanner is that the fingerprint scanner used. It's the capacity that to scan and store the fingerprint. Minutiae matching algorithm is that the algorithm used for the fingerprint scanning. Face are going to be input through the Camera that is inbuilt in the Laptop. Iris is detected from the photo of the face. Viola-Jones is that the algorithm used for the face detection. PCA [Principal Component Analysis] and Adaptive threshold-ing algorithm is employed for Iris matching and feature extraction.

MATLAB is that the software is used for the comparison and verification of the input data and the trained data. All the input file is compared with the already stored database. If verification of anybody stage is unsuccessful, then the system will declare the user has a fake voter. All the stages should be successfully verified, and input file should be matched with stored database. Then the candidate names are going to be displayed and voter can vote to his favourable candidate. Using this technique, security of voting process is enhanced, and it is easy to use. No

need of remembering any IDs and passwords. Best solution for the safety loopholes.

6. CONCLUSION

Online Voting Systems have many advantages over the normal voting system. A number of these advantages are less cost, faster generation results, easy accessibility, accuracy, and low risk of human and mechanical errors. It's very difficult to develop online voting system which can allow security and privacy on the high level. Future development focused to style a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication and processing section. It's easy to use, and it is less time-consuming. It's very easy to debug.

We are employing an Aadhaar database where the person's information like name, age, address, biometric identity, iris information, phone numbers are stored. For the safety purpose we are using a biometric authentication at the initial stage of the voting process, and we were also verifying the age of the voter too. Furthermore, it enables heads to form decides on polls with the goal that voters can't cast invalid votes, nor do they ought to be checked while tallying. The web Voting Platform offers the least demanding and most helpful technique for directors and voters alike. For directors, the way toward fixing a ticket and leading a decision is basic and sensible.

7. REFERENCES

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