"E voting using Face Detection"

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Abstract

Currently balloting system during the world is carried out the usage of Electronic Voting Machines. Though this machine is extensively followed, there are many drawbacks of the system. People have to journey to their assigned ballot sales space stations, wait in long queues to forged their vote, face pointless issues and so on. It turns into challenging for working occupation human beings or elderly/ ill humans to solid their vote due to this system. This calls for a exchange in device which can be executed if balloting procedures in performed online. Few developed international locations are making an attempt to put in force on-line balloting device on small scale and have been profitable in doing so. We endorse a gadget which overcomes obstacles of present on line gadget which makes use of bio-metric applied sciences and as an alternative use One Time Password device which is greater tightly closed and accurate.

Keywords: Face detection, OTP ,. bio metric, time-synchronized

Introduction

E voting System is the software aimed at of providing a wide range access to the and administrator in managing monitoring the requirement registered

1.1 Overview

Online balloting device is a internet primarily based application. Online vote casting device is an on-line vote casting method in which human beings who are Indian residents and age is above 18 years and are of any intercourse can forged their vote barring going to any bodily polling station. Online balloting gadget is a software program utility via which a voter can forged votes via filling types themselves which are disbursed in their respective ward. All the data in types which has to be entered by means of information entry operators is saved in database. Each voter has to enter his all primary data like name, sex, religion, nationality, crook document etc. successfully in shape taken from ward. Online balloting machine mission is carried out in java platform the usage of Mysql database as again end. Main purpose of on-line balloting gadget is to advance an on-line utility like on line reservation system, for residents who are above 18 years of age to vote via online. Using these device residents of India can vote thru on line except touring polling booth. A centralized database is maintained by using election fee of India the place residents statistics is maintained on every occasion citizen is the use of on line balloting machine his/her facts is authenticated with the information existing in database if person is no longer in the listing he can't use on-line balloting system.

Users are furnished with a on line registration structure earlier than balloting consumer must fill on-line shape and post small print these important points are in contrast with important points in database and if they suit then consumer

is furnished with username and password the usage of this facts person can login and vote. If prerequisites are now not right entry will be

canceled. Also given voter ID .when registration of consumer is done person receives sms with his aadhar ID and voter ID.

Motivation

The common election turnout over all 9 phases for 2014 Lok Sabha election was once round on-line is a viable idea. Indias cellular smartphone subscriber base crested the 1 billion customers mark, as per statistics launched currently through the country's telecom regulator. People of all age team have to willingly workout their proper to vote besides feeling any kind of dissatisfaction. Currently forty two percentage of net customers in India have an common net connection pace of above four Mbit/s, 19 percentage have a pace of over 10 Mbit/s, and 10 percentage experience speeds over 15 Mbit/s. The common net connection pace on cellular networks in India used to be 4.9 Mbit/s. Online Voting overcomes a range of different issues confronted at some stage in election procedure such as growing focus amongst rural areas and youths, fee reduction, security, etc.

Objective

Implementation of secure and invulnerable on line device software which will make casting votes from home/office/institutes feasible and for that reason heading off waste of time with the aid of standing in lengthy queues, nullifying traveling time and fee to go to given vote casting center, averting the hazard of being manhandled and different associated troubles and in flip allow most voters flip out.

Existing System

The common election turnout over all 9 phases for 2014 Lok Sabha election was once round on line is a viable idea. India's cellular cellphone subscriber base crested the 1 billion user's mark, as per facts launched currently through the country's telecom regulator. People of all age team need to willingly exercising their proper to vote barring feeling any type of dissatisfaction. Currently forty two percentage of net customers in India have an common web connection pace of above four Mbit/s, 19 percentage have a velocity of over 10 Mbit/s, and 10 percentage experience speeds over 15 Mbit/s. The common web connection velocity on cellular networks in India was once 4.9 Mbit/s. Online Voting overcomes a number of different troubles confronted all through election system such as growing focus amongst rural areas and youths, price reduction, security, etc.

Literature Survey

2.1 Advance Online Voting System -

Pallavi Divya, Piyush Aggarwal, Sanjay Ojha (School Of Management, Center For

Development of Advanced Computing (CDAC), Noida

In this paper authors propose an approach for e actively user-friendly application for all users. This system is being developed for use by everyone with a simple and self-explanatory graphical user interface (GUI). The GUI at the server's end enables creating the polls on behalf of the client.

2.2 Online Election Voting Using One Time Password-

Prof. Uttam Patil, Asst.Prof. at Dr.MSSCET. Computer Science branch Vaibhav More,

Mahesh Patil ,8th Sem at Dr.MSSCET. Computer Science branch.

Authentication technique proposed is - One Time Password (OTP). One Time Password principle produces pseudorandom password each time the user tries to log on. This OTP will be send to voters mobile phone. An OTP is a password that is only valid for single login session thus

improving the security. The system takes care that no voter can determine for whom anyone else voted and no voter can duplicate anyone elses vote.This technique is imposed to ensure that only the valid person is allowed to vote in the elections.

2.3 Electronic Voting System Using Aadhar Card -

C. Tamizhvanan, S. Chandramohan, A. Mohamed Navfar, P. Pravin Kumar, R. Vinoth

Assistant Professor, B.Tech Student Department of Electronics and Communication

Engineering Achariya College of Engineering Technology, Puducherry, India Electronic voting system provides improved features of voting system over traditional voting system such as accuracy, convenience, edibility, etc. The design of the system guarantees that no votes in favor of a given candidate are lost, due to improper tallying of the voting counts.

Proposed Work

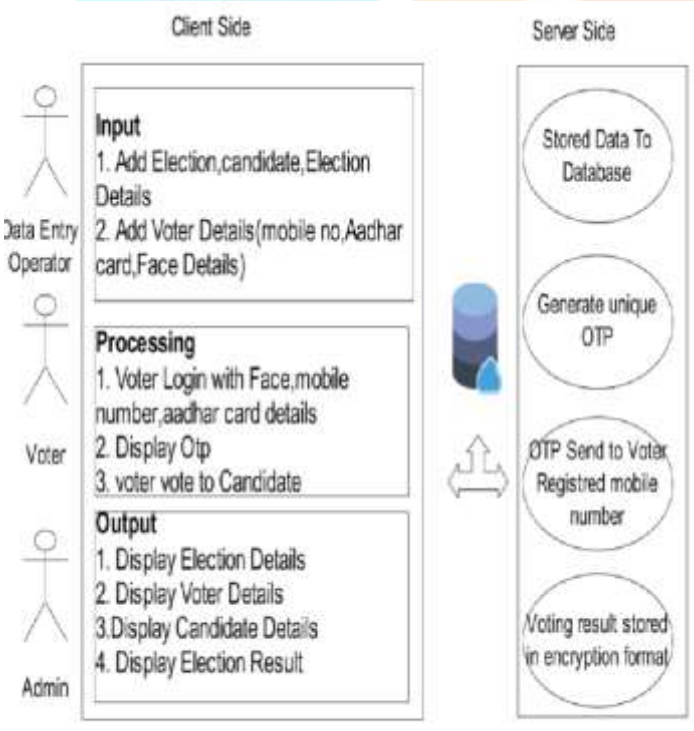
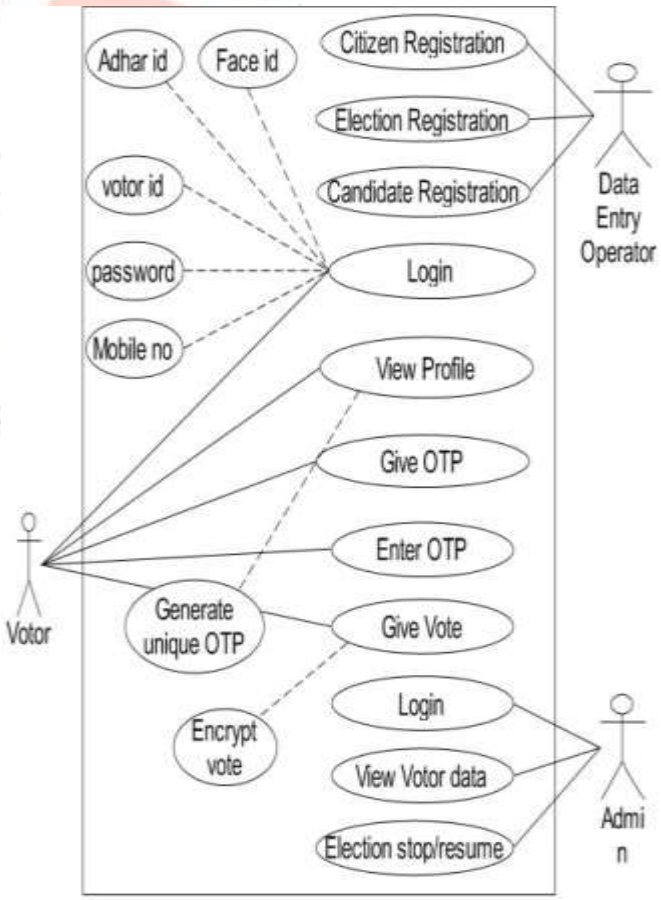


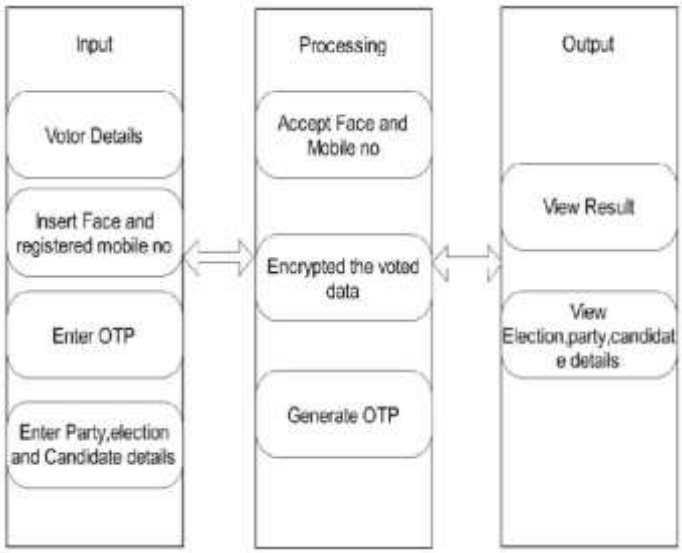
Fig 1:Architecture Diagram

The above diagram shows that the voter needs an active mobile network and internet connection to start interacting with the system. Once the voter logs in using any of the latest browsers i.e. Chrome, Firefox or Internet Explorer, the recall of system protects the voter. A recall is a system designed to prevent unauthorized access to or from a private computer network. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet. The interactive GUI will help users navigate through system. For logging in the system, the voter has entered all the valid credentials, and then only he/she can access other features of system. All the details are checked on database which is connected to server. For voter to cast vote, he/ she has to enter Election ID, first name, password and mobile number. If all entries are correct, then Generate OTP button will show. On clicking it an OTP of 4 or 6 digits will be sent to users mobile number, which when entered will allow voter to cast vote.

Use Case Diagram



Block Diagram



5.1 Overview

A Smart Voting System (SVS) is a rather secured, biometric authentication device alongside with OTP based totally verification device which is used to enhance the vote casting method at some point of election. Further the vote casted by means of a person is encrypted earlier than storing in database. SVS makes use of Aadhar quantity of customers for identification and verification of voter. With clever vote casting system, voter can solid their vote with cell cellphone and keep away from all sort of queues at polling booth. At first the person need to punch in his Aadhar range in the SVS, it then makes use of the Aadhar range to authenticate the person thru OTP which will be acquired on their registered Aadhar linked cellular number. People barring Smart telephones can vote thru SVS with an extra step of authentication via rather state-of-the-art Aadhar primarily based biometric

authentication. Smart Voting System efficaciously lets in human beings to vote the usage of clever telephones therefore reduces the queues piled up at polling booth. Also, it presents a noticeably dependable biometric authentication mechanism for human beings who do now not choose vote the usage of clever telephones accordingly stop electoral fraud.

5.2 Mathematical Model

- Let S be a system that describes voter details. S={..}
- Identify input as I S={I,..}Let I ={i} The input will be voter Face.
- Identify output as O S = I,O, O= The receiver will receive the Voter all details like Name, Address, Mobile No, Age etc.
- Identify the processes as P S={I,O,P,..} P={E,D} E={parameter, Voter Details.}D=parameter, Availability, Face details}
- Identify failure cases as F S={I,O,P,F,. F=Failure occurs when the data is accessed by an unauthorized user. Identify success as s. S={I,O,P,F,s,} s=When data is accessed by authorized user.
- Identify the initial condition as Ic S={I,O,P,F,s,Ic,}Ic=Voting access.

Problem Statement:

EVENT 1
Group member will make registration on Encryption Server and Storage Server.

Let f(U) be a function of User
Thus, f(U) →{Es Ss}

EVENT 2
Group member will Login to both the server.
Let f(U) be a function of User

Thus, f(U) →{Es Ss}

EVENT 3
Documents and search index are encrypted using AES and stored on cloud.

Let f(Es) be a function of Encryption Server Thus, f(Es) →{K1,K2,.....Kn}Ɛ K

EVENT 4
Key Exchange with group members
Let f (Un) be a function of n Users
Thus, f(Un)→{Es}Ɛ U

EVENT 5
Key management using RSA Algorithm.

Let f(Un) be a function of n Users.
Thus, f(Un)→ {Es}Ɛ U

EVENT 6
Data will be decrypted using AES Algorithm after sending search index and get the document.
Let f(DE) be a function of Decryption Server.
Thus, {(DE) → {K1,K2,K3.K}Ɛ K.

Algorithm

OTP

A one-time password or pin (OTP) is a password that is valid for only one login session or transaction, on a computer system or other digital device. OTPs avoid a number of shortcomings that are associated with traditional (static) password-based authentication; a number of implementations also incorporate two factor authentica- tion by ensuring that the one-time password requires access to something a person has (such as a small keyring fob device with the OTP calculator built into it, or a smartcard or specific cellphone) as well as something a person knows (such as a PIN). The most important advantage that is addressed by OTPs is that, in contrast to static passwords, they are not vulnerable to replay attacks. This means that a potential intruder who manages to record an OTP that was already used to log into a service or to conduct a transaction will not be able to abuse it, since it will no longer be valid. A second major advantage is that a user who uses the same (or similar) password for multiple systems, is not made vulnerable on all of them, if the password for one of these is gained by an attacker. A number of OTP systems also aim to en- sure that a session cannot easily be intercepted or impersonated without knowledge of unpredictable data created during the previous session, thus reducing the attack surface further.

OTP Generation OTP generation algorithms usually make use of pseudo randomness or random- ness, making prediction of successor OTPs by an attacker difficult, and also hash functions, which can be used to derive a value but are hard to reverse and therefore difficult for an attacker to obtain the data that was used for the hash. This is neces- sary because otherwise it would be easy to predict future OTPs by observing previous ones. Concrete OTP algorithms vary greatly in their details.

Various approaches for the generation of OTPs are listed below:

A time-synchronized OTP is usually related to a piece of hardware called a security token (e.g., each user is given a personal token that generates a one-time password). It might look like a small calculator or a keychain charm, with an LCD that shows a number that changes occasionally. Inside the token is an accurate clock that has been synchronized with the clock on the proprietary authentication server. On these OTP systems, time is an important part of the password algorithm, since the generation of new passwords is based on the current time rather than, or in addition to, the previous password or a secret key. This token may be a proprietary device, or a mobile phone or similar mobile device which runs software that is proprietary, freeware, or open-source. An example of time-synchronized OTP standard is Time-based One-time Password Algorithm (TOTP). Example of this technology is the new security key that Google has started to use for last couple of years.

7.3 Methodologies

The online voting system will be having many people/ users interacting with it. These mainly consist of voters/ citizens, administrators and candidates. Let us discuss these users in brief-

1. Voters/ Citizens
This user class will consist mainly of all the people who are eligible for voting i.e citizens above 18 years of age and have election id sanctioned by Election Commission Of India. The voters will login the system using their registered details and will be able to cast the vote. the voters will

also be able to view their pro les that are uploaded on the website.

2. Administrator

This user class will mainly consist of all the admins that are chosen by the Elec-tion Commission Of India (ECI). The admin will have privileges like adding new voter, candidates, etc. or discarding any voter/ candidate if any discrepancies are found in the data lled by them.

The admin will have a di erent username, id and pass key assigned to them by ECI. Once logged in the admin can monitor the voting process, generate result and aslo start/ stop the voting process at given time.Candidate

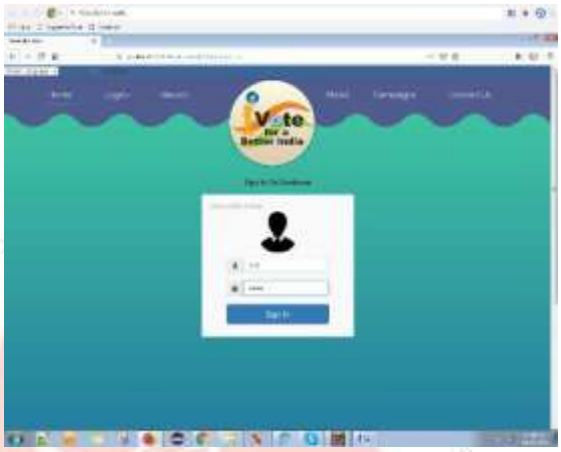
This user class will consist mainly of all the candidates that are contesting from their respective or allotted wards/ areas. It will contain details such as candidate name, his/ her party, education details, criminal records, address and contact number of their o ce, etc

Result

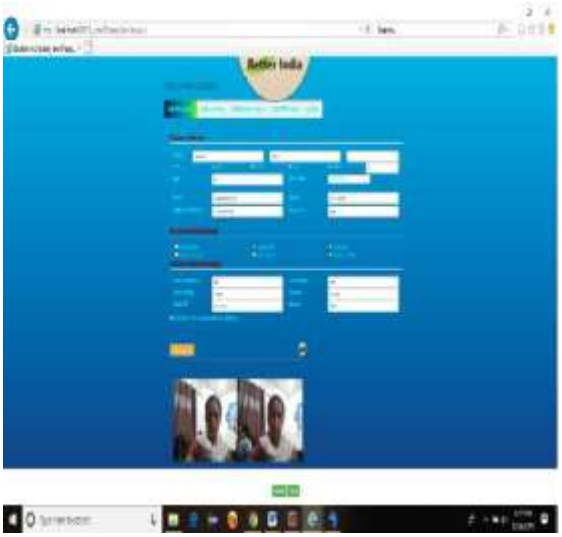
In this System we can handle evoting system using biometric validation like face authorization and otp generation.

1.Home Screen

2. Data Entry Operator Login



3.Data Entry Operator add citizen Data



4. NRI Registration

5.Admin Login

6. Admin Home

7.Add Election Details

7.View Registred Voters

8.View Party Details

9. View Active Voting Result screen

10 View result

Tools and Technologies Used:

This application is mounted on the

Internet, to user has to make sure that the

machine, which he is using, is connected to

Internet through Lease Line, Telephone

line or Cable.

Also, Microsoft Internet Explorer 4.0 and

above or Netscape Navigator 4.74 and

above must be installed on the machine.

Conclusion

This Online Voting device will control the Voters statistics via which voter can login and use his balloting rights. The gadget will comprise all facets of Voting system. Its grant the equipment for keeping voters vote to each and every party and it be counted complete no. of votes of each party. There is a DATABASE which is maintained by way of the ELECTION COMMISSION OF INDIA in which all the names of voter with entire statistics is stored.

In this the user, who is above 18 years register his/her data in the database by way of filling the shape accessible in ward numbers and when he/she favor to vote he/she has to login with the aid of his/ her identity and password and can vote to any party solely single time. Voting element save in database and the end result is displayed by using calculation. By on line balloting device share of balloting is increases. It decreases the value and time of vote casting process. It is very handy to use and It is differ much less time consuming. It is very effortless to debug.

Future Scope

This system can enhance the application by linking it to the Aadhar Card database

in order to retrieve more details of the license/vehicle owner.

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