

Biometrics and Election Fraud

Shubham Malik

Department of Computer Science, NIET Greater Noida, India

Abstract— As we are moving towards the digital world. Then there is also need for all services to be on digital platform. That's why the people are dependent on the digital platform because digital platform gives more facilities to the people. It reduce the travelling time as well as the waiting time also. As biometrics is very powerful tool now a day. Every where digitization is used know like in the government and private sector. By seeing the demand of this “why should not election be digital?” . Here in this paper we will discuss the need of the advance voting system. By which many things are controlled first and for most there is no any fraud in this method secondly the paper work is reduced and many more things like counting, cost, time all are saved. Biometric have physiolocal as well as behavioural characteristics by which identification of the person is done. Where no two person can have same physiological and behavioral characteristics .By which identification can be done easily. There is no prior need for Voting list generation because every people have there own identity like aadhaar card , driving liecence etc . By the help of these identity they can cast there vote and good accuracy is achieved and voting percentage is achieved. And every person have there right to cate there vote in favour of its representative so that they can get good facilities in future

Keywords— *Biometrics, Election Fraud, voting list.*

I. INTRODUCTION

A human being can be identified or verified with the help of the different physiological and behavioural characters like face, iris, walking, voice and signature etc. Behavioural can be called as soft biometric. They are used for characteristic difference in human being with the help of this we have less discrimination influence as matched to biometric character from the given input .The character for identification depends on different factors.

Biometric is greek word and where

- i. Bio means “ life” as well as
- ii. Metric means “ biological characters” or in other words

ie biometric means , “life charecterstics” or iin other words the application of arithmetical analysis tobiological data.

But now a day,this technology is used most widely because in government and private sectors this technology is used for the identification and for avoiding harm to any organization .Here in this paper we will disccus the problem related to voting system .Presently EVM(electronic voting machine) are used now a day but still there are many issues regarding it. The purpose of this paper is to reduce the work load and

fraud that is caused by the election or voting process. My contribution to this paper is that we advance voting system in which there is no need of voter list preparation that could be done at a time only by the help of different identity proof like aadhaar card, driving licence and voter identity etc. The person who is eligible can caste there vote and rest are not eligible. This help to reduce the work, less time is used, cost is reduced and most and for most fraud that caused in election is neglected.

There are some list of attack

- (a) Client side attack (b) Host side attack (c) Eavesdropping side (d) Repudiation side (e) Trojan side horse attack.

1.2 Classification of Biometrics

1.2.1 Physiological Biometrics

1.2.2 Behavioral Biometrics

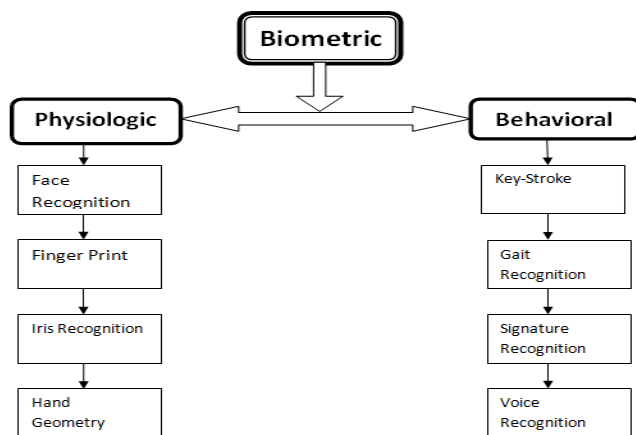


Fig .1.2n: categorization of Biometrics

1.2.1 Physiological Biometrics

Face recognition, finger print, iris knowledge, retina knowledge, hand geometry, or DNA deoxyribonucleic acid etc. are the examples of physiological biometrics.

1.2.1.1 Finger Print Recognition

Presently one day we have various sorts of biometrics yet in Biometric attributes, unique mark is regard as a matter of first importance pragmatic. Unique finger impression acknowledgment need a few activities than client, doesn't take other data like biometrics of the hand, and gives a moderately decent exhibition. Also, unique mark is the most generally perceived accreditation Techniques, in light of the fact that the sensors utilized are ease.

(a) Ridge finishing (b) Bifurcation (c) Short Ridge (Dot)

Essentially, Fingerprint acknowledgment is utilized for recognizable proof in which we separate highlights and Match the thumb mark around the primary concern, as the mesh (curve, circle, lines and so on) end, edge finishing, short edge and bifurcation. Since fingers are so much mileage from cuts and consumes, programming must be fit to do picture reconstructing. The issue of utilizing this framework is capacity of a biometric gadget to be reliable, all things considered, circumstance.

1.2.1.2 Iris Recognition

The person iris is an angular component between black part and cornea. Iris is an inward part of the person's body. In the iris of the human eye, there are five separations of the line like the tissues. These tissues are very complicated and are underlay in different forms.

Iris-based recognition is the most widely used biometrics amongst various biometric techniques by the help of iris scan we can get the user by matching the iris by our data base. Same is used in the aadhaar card.

1.2.1.3 Hand Geometry Recognition

Basically Hand geometry consists of two sides; one is Palm side and Dorsum side or top side or back side of the hand. Hand Geometry recognition is the method of individual authentication is existing from twenty years. To achieve individual authentication, a system may assess either physical characteristics of the fingers or the hands.

It provide three services, Verification, Classification and Identification Without hand geometry we can't make out an individual. The system tries to recognize the individual or reject access.

1.2.1.4 Face Recognition

Face is our primary focal point of identification in social gathering, denotes a significant job in communicating personality and feelings. We can learn a huge number of faces Identify natural countenances initially considerably after a long period of time. Due to the progressions in exhibition, mature age and significant changes in face occurs, for example, specs, facial hair or changes because of enormous changes in phenomenal incitement, neck solid.

The initial phase in recognizing human face is to gain the qualities identified with the face Images. With the goal that someone else could effectively recognize the face. This depends on how the face is highlighted can be estimated. On the off chance that such a volume is conceivable, at that point a PC has been given a lot of highlights, at that point it ought to have the option to perceive the face. Throughout the previous work the result shows that specific facial highlights are utilized by people.

1.2.2 Behavioral Biometrics

Behavioral biometrics is related to behavior, nature and expression of human or, individual like heat of the body.

1.2.2.2 Keystroke Recognition

Keystroke is a method of identification of person, in keystroke people used to type something on console with the help of keyboard. In this method person pressing of key and releasing of key is seen and stored in data base While to generate a profile a client need to type same phrase many time. Future login details are estimated against the profile which, the current case is that it can perceive a similar

client's keystrokes with 99% rightness, utilizing what is recognized is a "social biometric".

1.2.2.3 Signature Recognition

Biometric signature recognition systems will determine the movement of signing. Handwritten signature is one of the widely used methods for identity verification. In the form of a form of permission and authentication, especially in the banks signature place a very important role because by that identification of people is to reduce the risk.

Handwriting is a thing that varies from individual to individuals and consists of alphabetic characters on the surface in relation to a particular word. Signatures of the same individual can be different with situation and state of mind. Handwritten signature is a form of classification for an individual. Signatures are collection of special characters and therefore most of the time they can be unreadable.

1.2.2.4 Gait Recognition

Step is one of the biometrics that is disparate from the conventional biometrics. Gait alludes to a manner by which an individual strolls, and is one of the little biometric attributes that can be utilized to recognize individuals a good ways off. Hence, this trademark is entirely reasonable in perception situations where the uniqueness of an individual can be furtively settled.

In count, it has been found that strides are trademark by which an individual is perceived and that can even uncover a person's sex. Then again, in contrast to biometrics for example, fingerprints and palm-prints, step acknowledgment requires no contact with a catch gadget as a step can be caught in a separation as a low goals picture grouping. Stride acknowledgment is essentially separated into two kinds: (a) Model based and (b) without model acknowledgment. In model-based acknowledgment, specialists use data assembled from the human body, particularly from the joints, to build a model for acknowledgment. All in all, model-based methodology is view and scale invariant. To accumulate these walk data, a high nature of the step groupings is required. In this manner, a portion of the model-based acknowledgment frameworks require multi-camera for gathering the data.

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II. HOW BIOMETRICS COULD HELP IN ENHANCEMENT OF ELECTION SECURITY

Now as demand of the digital things are growing day by day. All the things are moving to the digital platform like E-commerce, E-banking, E-learning etc. In India we have system from 1950's. Firstly we used ballot paper for voting. Now days we are using EVM (electronic voting machine) with the help of EVM many efforts of the people is reduced. Like firstly in ballot paper enormous amount of paper is used for voting but EVM replaced most of the paper work. With the help of the electronic voting machine there is very less need of paper work for voting purpose. But there are still many issues related to electronic voting system.

III. ISSUES RELATED TO E-ELECTION AND PAPER BASED VOTER REGISTRATION

The use of EVM (electronic voting machine) has reduced the cost and man power work for the election system. While there are many issues with the EVM. There is no restriction to voters which means that single voter can cast vote for all the people in the electron list. Where it is right of citizen of India to vote and select their representative for them. To raise their voice in the favour of themselves so that good facility could be provided to them. But still there are many cases where fraud comes in front of people now a days in the electronic voting system. To promote the voting system there are some methods through which fraud of the voting can be stopped and work load is reduced and voting percentage can be increased.

In paper based system only the eligible people can cast vote as citizen of India and should attain age of 18+. After that ballot paper are deposited in the ballot sealed box. Once the election is finished the boxes are opened and counted by the authorized people. All transparency is maintained during this process. But all these things are done by human being.

Human being can undergo different errors like error in counting that is by mistake not by his/her intension that may result in fraud to the other candidate. One person is allowed to caste only one vote of his own in the participation of election work. This is for all the people he may be candidate who is representative or any party member .All the party and people who are involving in election want result in ther favour .These things comes in notice of administrators the EVM came to existence.

IV. PRESENT TECHNOLOGY

In present technology the voter registration or enrollment process is done before the person starts voting. And there are also many issues related like some of there name is wrong, photo appearing in list do not match with the candidate to whom it belong .Like the opposing party want other voter who are not favour of him that there vote would be cancelled. But this is not a correct way .All the people have there own right to vote and choose ther representative .Hence we can use the advance system for it. That will make all the work to flow in a correct way. In advance system there is no need to enroll before the voting that work can be done at the same time with the help of the different identity card which are now in use .Like aadhaar card, driving licence, voting card etc.

V. PROPOSED METHOD

In this method in advance voter registration different organization has to come up with the other organization with the help of this it can be implemented .They should have to share there data with the other organization and maintain the unauthorized access of the data by the unauthorized user. So that data remain unaffected and things remain confidential. Biometrics is the technology with the help of which people physiological character are used to identify the people. Some of the method have been discussed above by which the human can be identified unique. we take example of driving liecence the DL is issued only to the people who attain the age of 18 same for voting system. And a new identity card that is called addhar card work as identifying the person because for every person there is a unique ID associated with it.If the data of both the department is combined then there is no need for the voting enrolement anybody can go and cast there vote. With the help of this paperwork can be reduced to null. Because all of the record is in the computer system and fraud is reduced to zero. Because there is unique ID for all

the people, Due to which only one person can caste only one vote and all the voting process work can be done in effective way. By the help of this all the people can choose there representative and this fraud system can be count to zero.

6.1 FEW STEPS FOR BIOMETRIC TECHNOLOGY CAN BE HELPFUL IN ELECTION

- I. No more than one registration and no duplicate recoard-Biometric identification is unique and cannot be registered again if one's it is registered. Duplicacy becomes out of range. The duplication or fraud is automatically removed by itself.
- II. Multiple voting- Multiple voting cannot be done by any individual because there is only one unique identity given to per person that why more than one vote cannot be casted by a person.
- III. Registration Rate-With the help of the biometric other formalities can be skipped like documents that are needed at the time of registration .With the help of this idea more people can be brought to election process and which would result in the increment of percentage in voting system.

VI. WHY BIOMETRICS FOR ELECTION?

Biometric is a immerging technology that is now implemented from lower level to the higher level security system. Including financial ,military and government system are using these technology .Voter registration is a large scale process because there are many user or people for whome identification is needed .The identification method have three characterstices that is fast, efficient, and reliable. Biometric have all the three characterstics but biometric also have same drawback as well.

7.1.DRAWBACK OF BIOMETRIC

1. People become afraid as there biometric is collected.
2. Voter registration is a costly process in terms of time and resources.
3. People whose identification suffers with injury or disease example scars, skin disease, finger print etc.
4. As use of biometric is more used day by day in bank government and privacy sectors that's why there is chance for losing of data. That can harm the people and organization as well.

VII. WORKING

As we have discussed above that there is no need of preparing voter list. Now with advance voting system we will directly generate the voter list according to the people coming for casting their votes. Firstly we will make the collaboration with the other organization to access the data of people. Then we design a portal to access their database. After that by their unique identity or by biometric feature we will get access to their profile and then allowing them to cast their vote. This can also be done with the help of electronic device as now day people are dependent on electronic work with which they can perform their voting work. This can be done by using his/her unique identity. If he/she is eligible for voting then he/she can cast their vote. By the help of this time, cost and work is reduced.

VIII. CONCLUSION

Due to the arising situation there is increasing need to control the fraud that take place in election. Because every candidate want to win the election that why they want to do fraud with other in such situation this platform is very useful. Because with the help of this platform "No one is able to cast more than one vote". And with this more accuracy is achieved and people have their right to elect/select their own representative. So that their needs can be taken up to the government. And more facilities can be provided to them. This result in high accuracy rate and zero fraud.

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