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Fraud Voters Detection using Smart Electronic Voting Machine

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Abstract

The main aim of this project is to provide secured identification and authentication processes for the voters and candidates by using fingerprint and face detection. The basic idea of this project is to make an electronic voting machine that will help to reduce the manual voting systems and prior versions of electronic voting. This system includes multiple layers of verifications to ensure the reliability of the device. every voter is entered into the system after being diagnosed and checked with the given database of enlisted electorate with together with fingerprint sensor and Pi camera.The final vote is then displayed onto a monitoring system for the satisfaction of voters. The voting problem is still critical in terms of safety and security. This project is about the design and improvement of a machine the use of fingerprint and face detection to offer a high performance with excessive safety to the vote casting gadget. Fingerprint is broadly used for identification. The proposed undertaking displays transparency and also carries the function of being self sustaining during the route of operation. Election is the act of party casting votes to choose on man or woman for some type of function. Election may additionally involve a public or private vote relying on the position. maximum of the positions like local, state, and federal governments are balloting on in a few form of election. An electronic voting system defines valid voting and gives a fast method of counting votes, which helps to conclude a final result. In this project, we propose an idea to avoid fraud voting and increases security about the voting. Lot of methods have been developed to avoid fraudulence in voting systems, but we are not able to reduce it completely. This system is secure, transparent, reliable as well as easy to use for the citizens. We scan the finger print and face of every individual. The scanned finger print is authenticated, If matches the individual is allowed to cast the vote.

Keywords: *Electronic Voting Machine, Raspberry Pi Model B, Pi Camera, Fingerprint Sensor, Monitoring System*

INTRODUCTION

Election is the act of party casting votes to elect on individual for some type of position. Election may involve a public or private vote depending on the position. Most of the positions like local, state, and federal governments are voting on in some type of election. An electronic voting system defines valid voting and gives an fast method of counting votes, which helps to conclude a final result. In paper-based elections, voters can votes to referred candidates by simply depositing their ballots in sealed boxes distributed across the electoral circuits around a given country. When the election period finishes, all these boxes are opened and votes are counted manually in presence of the certified official persons. In this process, there can be error in counting of votes or in some cases voters find ways to vote more than once. Sometimes votes are even manipulated to distort the results of an election in favor of certain candidates. In

order to avoid these drawbacks, the government of India came up with (DRE) voting system which are usually Electronic voting machine (EVM). These devices are simple in design and reliable.

In this paper, the usage of fingerprint following factors are performed:

1. safety: no one evaluate the end result before assertion.
2. Eligibility: simplest eligible persones are allow to vote.
3. strong point: citizens are allowed to vote handiest one time.
4. Accuracy: all the valid votes are mechanically calculated with the aid of the use of this device.
5. Time consumption: The time required to count the vote is less than the existing system.

Table: 1. *Literature Survey*

Sr. No.	Author Name	Paper Title	Paper content	Result and conclusion
1.	D. Ashok Kumar#1, T. Ummal Sariba Begum#2	A Novel design Of Electronic Voting System Using Fingerprint	system based on fingerprint	fingerprints have been one of the most highly used methods for human recognition
2.	Rohan Patel1, Vaibhav Ghorpade2, Vinay Jain3 and Mansi Kambli4	Fingerprint Based e-Voting System using Aadhar Database	system that uses UIDAI or aadhar database as it backend	system prevents multiple votes by the same person and checks eligibility of the voter
3.	M.Thangamani1, S.Shunmathy2,S.Backiyalakshmi3, P.T.Aiswariya4, K.Priyadharshini5	A security based voting system using biometric	system using fingerprint to provide a high performance	Reduce the search time by using the local database instead of using one centralized database
4.	Asif Ahmed Anik, Rayeesa Jameel, Abul Farah Anik, Nowroze Akter	Design of a Solar Power Electronic Voting Machine	solar power system to provide inexpensive continuous power supply which can be greatly beneficial for a developing country like Bangladesh where power source is infrequent	the efficiency of the solar system drops during cloudy and rainy season
5.	X. Ignatius Selvarani, Shruthi.M1,Geethanjali.R1 , Syamala.R1	Secure voting system through SMS and using smart phone Application	system are developed to select their candidate through smart phone application.	It needs mobile network

BLOCK DIAGRAM AND OPERATION

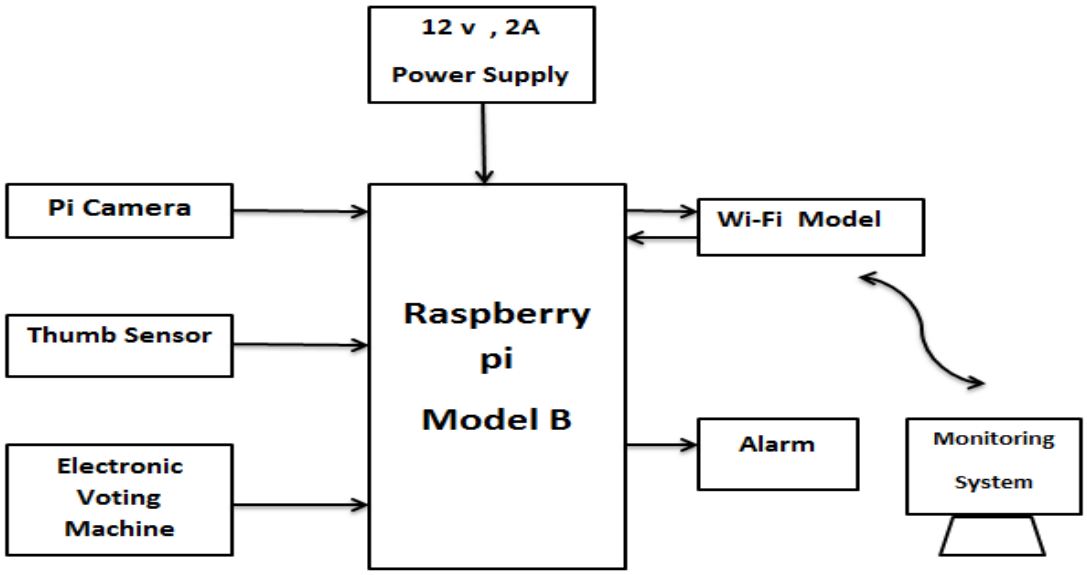

Fig: 1. *Block diagram of project*

Identity Authentication generally involves two stages: the first is Detection and Recognition. Sample of face image and finger print is taken and searched for proper face and finger print in it. Next, an image processing algorithm is applied to clean up image for easier recognition. Second stage is matching where the detected image is matched with existing database. A matching algorithm is applied to verify the person for both matching.

Gabor filter

1. The voter's picture which is captured the usage of a webcam is used because the enter to the face detection algorithm.
2. image to Gabor filters, it is normalize.
   a. enter image is resized to 128×128.
   b. Pixel adjustment, in this step, image Pixel intensities are used, such that the standard deviation of picture Pixel is one.
   c. Borders are smoothed, across band 30 pixels wide and they are weighted via an aspectd= 30, where d is distance of picture area.
3. The proposed machine carried out specific Gabor filters on the photograph to generate forty photographs with unique angles and orientation.
4. maximum depth factors are calculated and marked as facial points. Calculate distance between reduced point the use of distance system.
5. At remaining, the calculated distance is compared with Gabor database.

Pi Camera

It is use to capture the image of voter and matching with the stored database.

Thumb Sensor

The fingerprint is naturally unchangeable throughout life. The representation scheme of the fingerprints either based on global or local information such as ridges ends and ridges branches . In this project matching algorithm combine extracting of local and global information going to be design.

Power supply

The major blocks of power supply are Transformer, Rectifier, Filter, voltage regulator. These blocks will provide the regulated power supply to the unit which is

first converted into 12V AC. 12V AC is converted into DC using rectifier circuit .Finally the voltage regulator provides constant 12V DC supply which will be given to circuit

Alarm

If illegal voting is going on then alarm is give the beep sound.

CONCLUSIONS

In this paper, we have proposed Fraud Voters Detection Using smart Electronic Voting Machine which is better and faster than previous systems. This system prevents get admission to illegal voters, gives ease of use, transparency and continues integrity of the vote casting manner.This system provide secured identification and authentication processes for the voters and candidates by using fingerprint and face detection. The system also prevents multiple votes by the equivalent person and checks eligibility of the voter.

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REFERENCES

1. D. Ashok Kumar#1, T. Ummal Sariba Begum#2 "*A Novel design of Electronic Voting System Using Fingerprint*" international journal of innovative technology & creative engineering (issn:2045-8711) vol.1 no.1 january 2011.
2. Rohan Patel1, Vaibhav Ghorpade2, Vinay Jain3 and Mansi Kambli4 "*Fingerprint Based e-Voting System using Aadhar Database*" international journal for research in emerging science and technology, volume-2, issue-3, march-2015.
3. M. Thangamani1, S. Shunmathy2, S. Backiyalakshmi3, P. T. Aiswariya4, K. Priyadharshini5 "*A security based voting system using biometric*" Pundir Manju Baisoya Int. Journal of Engineering Research and Applications ISSN: 2248-9622, Vol. 6, Issue 3, (Part - 3) March 2016, pp.44-50.
4. Asif Ahmed Anik, Rayeesa Jameel, Abul Farah Anik, Nowroze Akter " *Design of a Solar Power Electronic Voting Machine*" American International University – Bangladesh (AIUB) Dhaka, Bangladesh NSysS 2017. Department of CSE, BUET. 5-8 January, 2017.
5. X. Ignatius Selvarani, Shruthi. M1 , Geethanjali. R1 , Syamala. R1 , Pavithra. S1 " *Secure voting system through SMS and using smart phone Application*" Department of Information Technology, Er. Perumal Manimekalai College of Engineering, Hosur, India.

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