

Voter authentication for remote voting system with the help of Iot

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ABSTRACT

The basic idea of this system is to create an electronic voting machine that will help to eradicate defrauding of the manual voting system and prior versions of electronic voting by using Raspberry Pi, camera for Face Recognition and biometric for thumb authentication for online voting. We also implement location free voting system to the voters who are not possible to come at voting location (hometown). Here propose a system that includes multiple layers of verification to ensure the reliability of the device with include the face verification with validation data. Each voter is entered into the system only after being recognized and checked with the given data base of enlist voters, once the corresponding face is matched with the information provided, the voter will be allowed to proceed for choosing their preferred candidate from the panel of buttons.

Keywords- Image Processing, Python, Voting System, Face Recognition, MySQL, Biometric Device

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I. 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 position in the local, state, and federal governments are voting on in some type of election paper based on election. Voters cast their votes by simply depositing their ballots in sealed boxes distributed across the electoral circuits around a given country, when the election period ends, all these boxes are opened and votes are counted manually in presence of the certified officials.

Problem Statement:

In India when the election period ends, all these boxes are opened and votes are counted manually in presence of the certified officials. In this process there can be error in counting of votes or in some cases voters find ways to vote more than once. Sometimes the voter's facing the problem of location. For example, overseas voters at other location and voting

are hometown so; due to the office work voter not go to the particular location so voting is not consider.

II. LITERATURE SURVEY

[1] Online Election Voting Using One Time Password Prof. Uttam Patil and Asst.Prof. at Dr. MSSCET 2016, in this paper author proposed a method that the Admin will load the databases of all voter so that he can add/delete/edit candidates, parties and voters. He registers each voter with valid E-mail ID and corresponding information.

[2] An Analysis of Secure Online Voting System, Prof. Anisaara Nadaph, Ashmita Katiyar, Tushar Naidu, Rakhi Bondre, Durgesh Goswam, 2014 in this proposed method that system is a two fold system comprising of SMS voting system and website voting. The voter can use either of the two ways as per his

convenience. In this paper, a new approach of voting breaks the limitation of traditional voting and focuses on the security and feasibility of the voting.

[3] A survey on antispoofing schemes for fingerprint recognition systems Emanuela Marasco and Arun Ross 2014 Proposed a method that will reduce vulnerabilities in biometrics, including those due to spoof attacks using finger print sensing and antispoofing methods for fingerprints which can be hardware or software based.

[4] Android Based E-Voting Harshad Velapure, Saurabh Rai, Saransh Sharma, Preetam Naiknavre, Pranali Jadhav, Kalyan Bamane 2014 Proposed an Android e-Voting application on smart phone user gives voter facility to vote, an application with an Admininter face for consultation to a dynamic web page offers the main question to be answered (voted), and together to this page are available the buttons to send the votes: Yes, No. The Android platform that will enable people to vote securely from anywhere.

III. PROPOSED SYSTEM

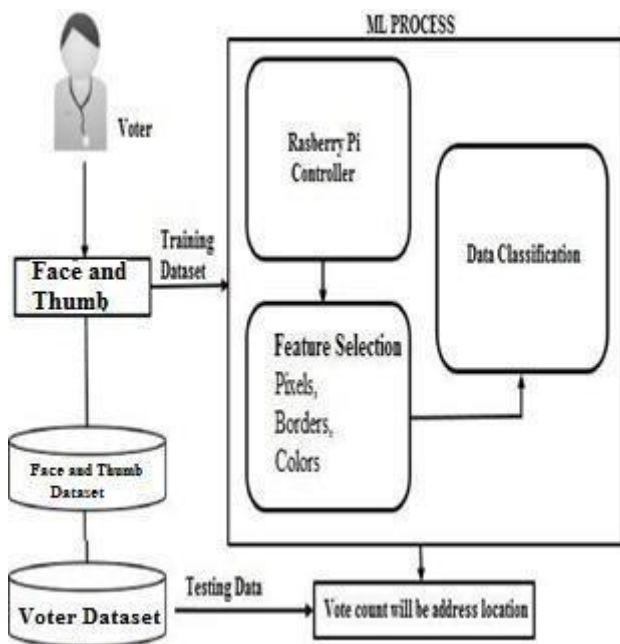


Fig 1. System architecture

System flow:

1. All records of voter can maintain.
2. Then verify his face using camera and detect with help of image processing.
3. Another verify process using biometric thumb authentication once thumb matches

from server then voting will be count particular voter.

4. Also, identity is according voter data.
5. After, he is allowed to cast his vote by pressing the corresponding button on the machine.
6. Finally, corresponding vote will be send to the respective are where the voter will be registered by online.

IV. HARDWARE SPECIFICATION

1.Raspberry pi 3 model:



Fig 2. Raspberry pi

1.4GHz 64-bit quad-core processor, dual-band wireless LAN, Bluetooth 4.2/BLE, faster Ethernet, and Power-over-Ethernet support (with separate PoE HAT)

2.Camera:



Fig 3. USB camera

3.Fingerprint Module:

We are going to use GT511c3 fingerprint module contains the optical scanner for fingerprint reading

and can store the images by using identification number.

V. CONCLUSION

Our proposed solution is raspberry pi based with face detection and biometric thumb authentication which allows the voter to register the vote anywhere through the machine learning. This system is secured, authentic and able to avoid multicasting of the vote. This system is more reliable in which multiple voters can vote from multiple locations. It also reduces workload, human and time resources.

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