Implementation of Online Voting System

Prof. Suhas Kothawale, Ankush Patil, Megha Landge, Bhausaheb Chavan, Rupali Kale
Department of Computer Engineering, ICOER Wagholi, Pune, Mahrashtra, India.

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 controller and biometric device for thumb Recognisation. We also implement location free voting system to the voters who are not possible to the 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- Raspberry pi, controller, Thumb device, IoT, Voting System, MySQL.

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 of 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

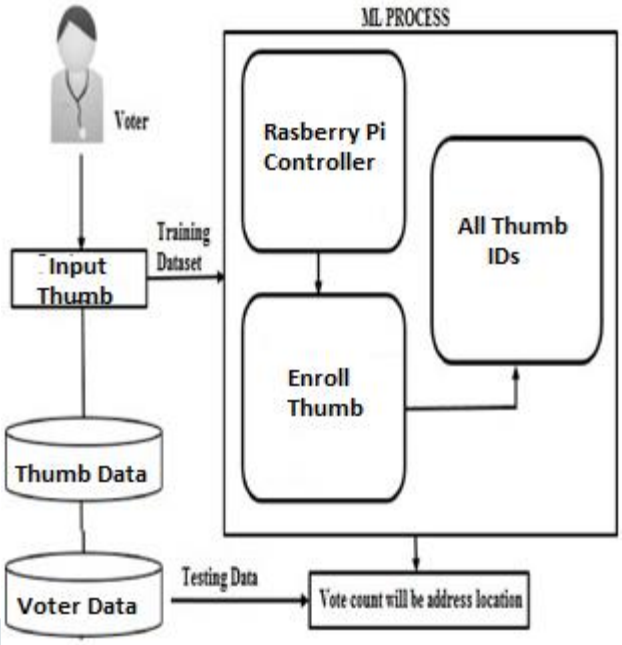

Fig 1. System architecture

A. System flow:

1. All records of voter can maintain.
2. Then verify his thumb using biometric device and detect with help of IoT processing.
3. Also, identity is according voter data.
4. After, he is allowed to cast his vote by pressing the corresponding button on the machine.
5. Finally, corresponding vote will be send to the respective area where the voter will be registered by online.

B. Mathematical Model:

Input-Output:
U= {I, O, f, S, F}
Where,
I= {I1, I2,I3}
I1= {l1,l2…... ln} where n thumb input
I2= i.e. thumb device scan
I3= i.e. thumb id

O= {O1,O2,O3}
O1= Thumb Preprocess
O2= Authentication
O3= Thumb id Analysis
O4= Thumb Detect
O5 =Vote will calculate

S: Success:
Thumb detection process successfully and vote will count.
Thumb detected properly.

F: Failure:
Algorithm not working properly.
Vote will not generate.

C. Hardware Description:

1. A Raspberry Pi

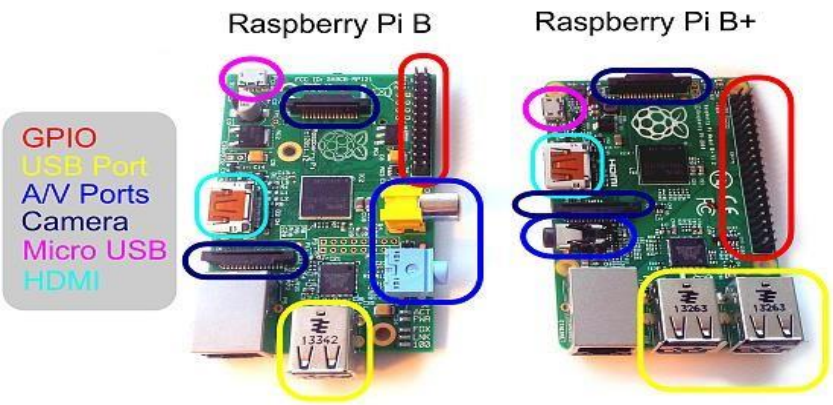

Fig 2. Raspberry pi

SD Card

- We recommend an 8GB class 4 SD card.

Display and connecting cables

- Any HDMI/DVI monitor or TV should work as a display for the Pi.
- For best results, use one with HDMI input, but other connections are available for older devices.

Keyboard and mouse

- Any standard USB keyboard and mouse will work with your Raspberry Pi.

Power supply

- Use a 5V micro USB power supply to power your Raspberry Pi. Be careful that whatever power supply you use outputs at least 5V; insufficient power will cause your Pi to behave unexpectedly.

Internet connection

- To update or download software, we recommend that you connect your Raspberry Pi to the internet either via an Ethernet cable or a WiFi adaptor.

Sound

- Headphones, earphones or speakers with a 3.5mm jack will work with your Raspberry Pi.

2. Biometric device

Fig 3. Biometric Device

Optical Fingerprint Scanner Module with JST SH Connector is a high-performance fingerprint scanner. Which is useful for to access control, security, identification, and convenience. This optical sensor module is designed for easy integration into applications with serial interface (UART). We need two wires are for TX and RX and two wires for power supply (5V).

IV. RESULT

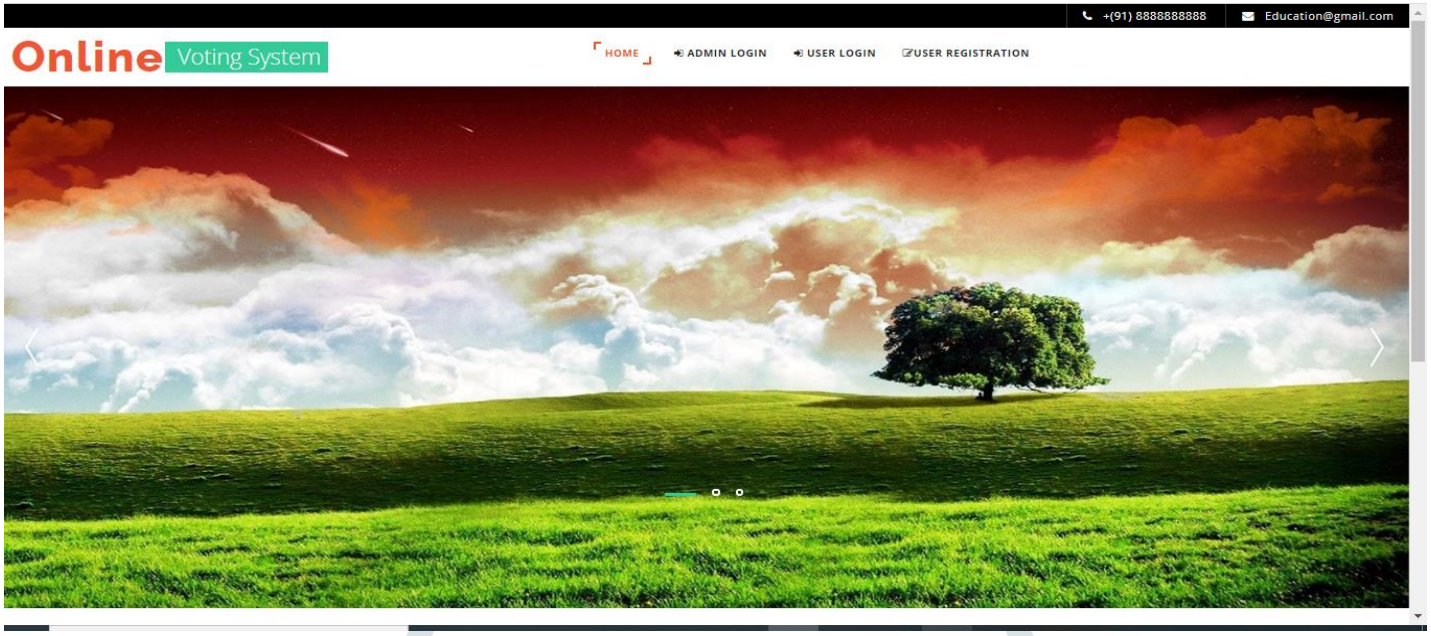

Fig 4. Home Page

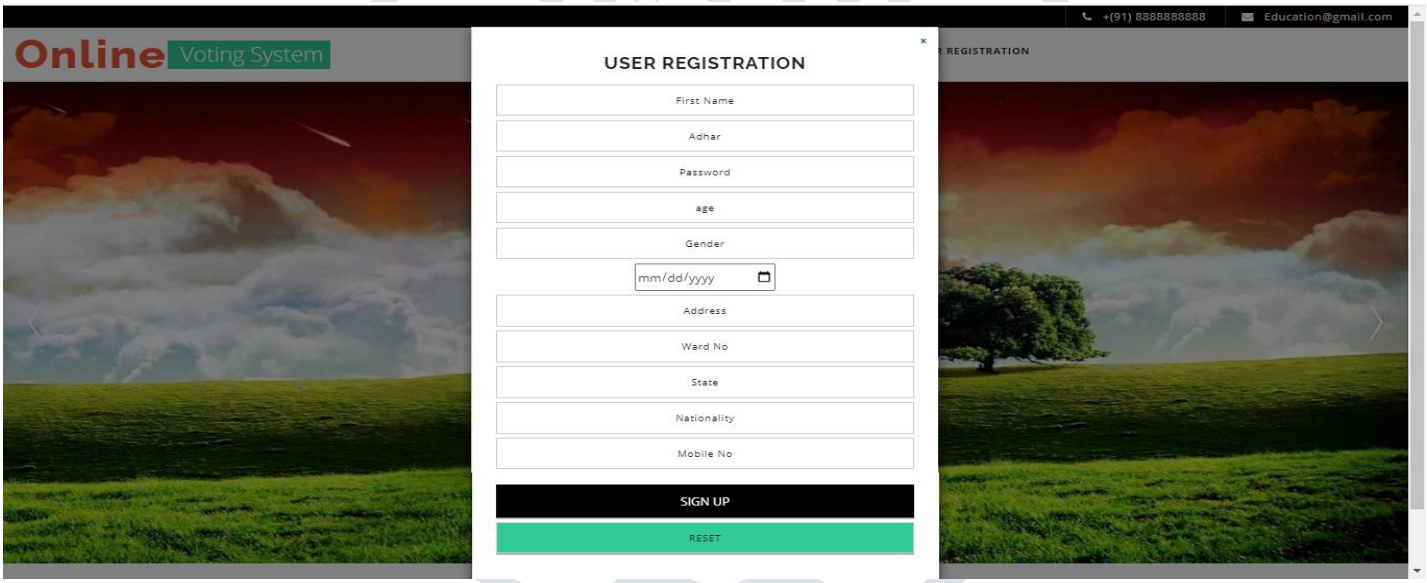

Fig 5. Registration Process

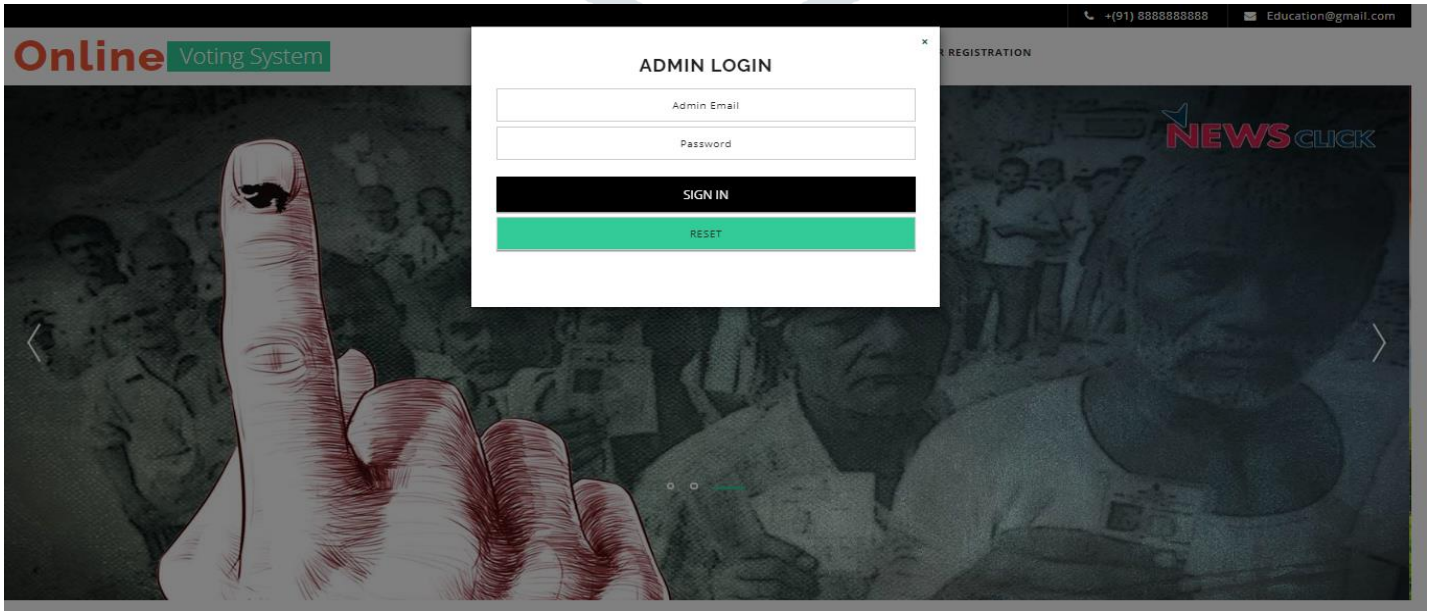

Fig 5. Login Page

V. CONCLUSION

Our proposed solution is raspberry pi based with biometric device which allows the voter to register the vote anywhere through the IoT. 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.

VI. REFERENCES

[1] Prof. Uttam Patil, Vaibhav More, Mahesh Patil,"Online Election Voting Using One Time Password" ,National Conference on Product Design (NCPD 2016), July 2016.

[2] Prof. Anisaara Nadaph, Ashmita Katiyar, Tushar Naidu, Rakhi Bondre, Durgesh Kumari Goswam, "An Analysis of Secure Online Voting System", International Journal of Innovative Research in Computer Science & Technology (IJIRCST) ISSN: 2347-5552, Volume-2, Issue-5, September2014.

[3] Emanuela Marasco and Arun Ross ," A survey on antispoofing schemes for fingerprint recognition systems" ,ACM Computing Surveys, Vol. 47, No. 2, Article 28, November 2014.

[4] Harshad Velapure, Saurabh Rai, Saransh Sharma, Preetam Naiknavre, Pranali Jadhav, Kalyan Bamane ,"Android Based E-Voting", International Journal of Advance Foundation and Research in Computer (IJAFRC) Volume 2, Special Issue (NCRTIT 2015), January 2015. ISSN 2348 – 4853.

.