

Online Voting System using Face Recognition based on OTP

¹Assist.Prof.Baliram Deshmukh, ²Vinayak Jadhav, ³Apurva Pawar, ⁴Ronak Durge

¹ Assistant professor Computer Engineering /Trinity academy of Engineering pune/SPPU/India

^{2,3,4} Computer Engineering /Trinity academy of Engineering pune/SPPU/India

Abstract

The basic idea of this system is to create an Online Voting System that will help to suppress deceive of the manual voting system and also the prior versions of online voting by camera for Face Recognition and OTP generation. We are also implementing location free voting system to the voters for whom it is not possible to come at the voting location (hometown). Here we propose a system that includes multiple layers of verification to ensure the reliability of the device which includes face verification and then OTP verification with validation data. Each voter can access to the system only when being recognized and checked with the given database 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.

Keywords: voting, security, Haar cascade, voter, OTP, detection

I. INTRODUCTION

Voting has played a major part within the law based societies. Traditional voting method employs paper-based ballot. However, this approach is expensive, badly arranged and time consuming for voters. Numerous individuals these days favor a more instant way to vote. With the advancement of computer technology, numerous analysts are proposing secure, reliable and helpful electronic voting frameworks as a substitute to the traditional voting strategy. It in this way helps to energize each voter to form utilize of their right to vote. Such frameworks have to be outlined to fulfill the taking after prerequisites

The later a long time, analysts are more centering on developing a unused innovation which can support uncoercibility, receipt-freeness additionally universal-verifiability. Many end-to-end irrefutable frameworks (E2E) are proposed and being broadly utilized. In guideline, E2E voting framework offer assurance to the voters as they cast their vote by dispersing a receipt of their vote which can be utilized for confirmation purpose from the by and large organization of the collected votes. However on the other hand, this receipt cannot be utilized as a verification in vote buying or vote impelling in spite of the fact that all of the receipts will be posted freely in a secured append-only Bulletin Board once the voter wrapped up the voting handle. Subsequently, the E2E system would still secure the voter's protection.

In arrange to achieve the already expressed requirements, many plans have been executed and proposed. Those schemes are for the most part established in one specific field of security - cryptography. In electronic voting component, cryptography is utilized to ensure the information transmitted between the voter and the server to guarantee that it would not be spilled to a third party. Cryptography hypotheses are too connected in each process in the system to form beyond any doubt the genuineness of the voter, the originality of the poll, casted and collected votes, the reliability of the counted votes and the security all through the election. There are numerous cryptography strategies that can be applied, such as dazzle signature plot, homomorphic encryption, unaware signature conspire, bit commitment scheme, Schnorr recognizable proof plot, mixed-net schemes, digital signature conspire, secure multi-party computation, cryptographic hash-function, etc. Be that as it may, in this paper only a few chosen plans would be connected in difference

I LITERATURE SURVEY

Face recognition is a class of biometric security which works by coordinating the facial features. It assists with making sure about the voter, by utilizing the face recognition strategy. In this proposed system, Haar Cascade algorithm is utilized for face recognition which utilizes Haar-Like features to coordinate the face. Elections are fundamental defining characteristics of any democracy that is being governed by the people expressing their choices or articulate opinions in the form of voting. Now the voting mechanism have evolved from leaps and bounds of simple hand written ballots to online voting systems. The process is time-consuming as well. The entirely web-based system enables people to cast their votes from anywhere in the world. Using detection of faces decreases the chance of duplicating a vote and those who are registered prior to the election and are recognized by the system will be allowed to vote. Just like fingerprints, every face also has unique features like the distance between the eyes and eyebrows that remain unchanged with growing age which makes the system more secure

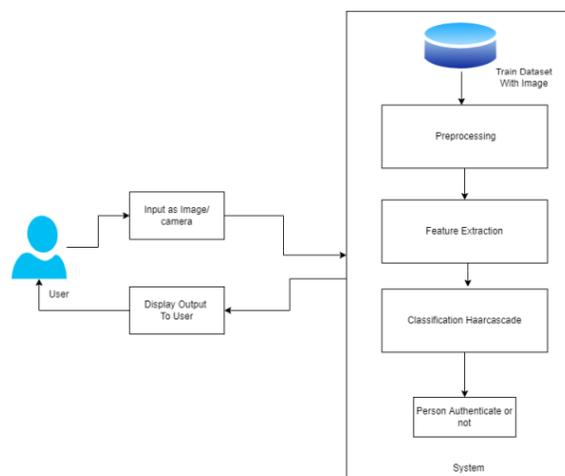
II. SYSTEM MODULES

Admin Module: In this module, the Admin has to log in by using valid user name and password. After login successful he can do some operations such as View All Users and Authorize, View All E-Commerce Website and Authorize, View All Products and Reviews, View All Products Early Reviews, View All Keyword Search Details, View All Products Search Ratio, View All Keyword Search Results, View All Product Review Rank Results

View and Authorize Users: In this module, the admin can view the list of users who all registered. In this, the admin can view the user's details such as, user name, email, address and reauthorizes user

Ecommerce User: this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will be stored to the database. After registration successful, he has to login by using authorized user name and password. Once Login is successful user will do some operations like Add Products, View All Products with reviews, View All Early Product's reviews, View All Purchased Transactions.

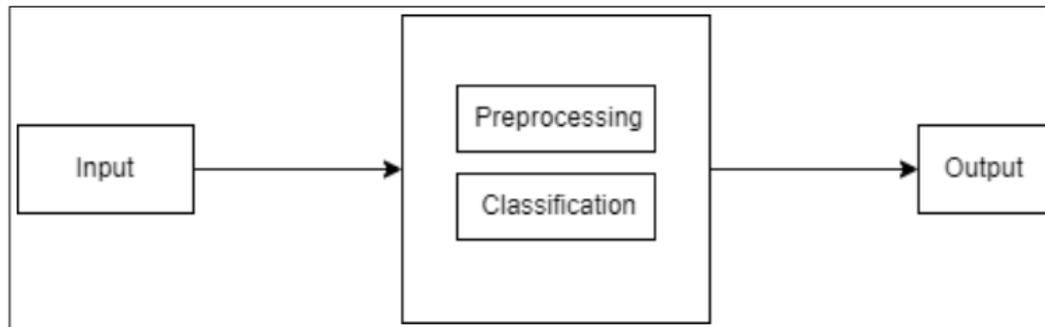
End User: In this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will be stored to the database. After registration successful, he has to login by using authorized user name and password. Once Login is successful user will do some operations like Manage Account, Search Products by keyword and Purchase, View



III. WORKING OF MODEL

In our proposed model first the new user will register with the username and his her email id and password and the user is able to login with the portal for voting then the system will verify the user with the help of image processing algorithm and allowing them to do voting if the person is authorized Proposed Algorithm: Haar Cascade

Haar Cascade is an Object Detection Algorithm used to identify faces in an image or a real time video. The algorithm uses edge or line detection features proposed by Viola . Haar Cascade is a machine learning-based approach where a lot of positive and negative images are used to train the classifier. Get hold of all the important Machine Learning Concepts with the Machine Learning.



IV. CONCLUSION

Our proposed solution is machine learning based with face detection which allows the voter to register and he/she can vote from anywhere irrespective of the location. This system provides security and also avoid casting of the multiple vote by same person. This system is more reliable in which we can vote from multiple locations. It also minimize work, human requirements and time resources.

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REFERENCES

- [1] Prof. KritiPatidar, Prof. Swapnil Jain "Decentralized EVoting Portal Using Blockchain.
- [2] Prof. Shashank S Kadam, Ria N Choudhary, SujayDandekar, DebjectBardhan, Namdeo B Vaidya "Electronic Voting Machine with Enhanced Security
- [3] RahilRezwan, Huzaifa Ahmed, M. R. N. Biplob, S. M. Shuvo, Md. AbdurRahman "Biometrically Secured Electronic Voting Machine"
- [4] avikumar CV.—Performance analysis of HSRP in provisioning layer-3 Gateway redundancy for corporate networks ||, Indian Journal of Science Technology. Vol 9, issue 20, 2016
- [5] Ashwini Mandavkar, Prof. Rohini Agwane, "Mobile based facial recognition using OTP verification for voting system", 2015 IEEE, IACC, pp. 644-649
- [6] Himika Parmar, Nancy Nainan, Sumaiya Thaseen, "Generation of secure onetime password based on image authentication", CS IT-CSCP 2012