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Online Voting System Using Face Recognition and OTP

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ABSTRACT

Our paper deals with online voting system that facilitates user(voter), candidate and administrator (who will be in charge and will verify all the user and information) to participate in online voting. our online voting system is highly secured, and it has a simple and interactive user interface. The proposed online portal is secured and have unique security feature such as unique id generation that adds another layer of security (except login id and password) and gives admin the ability to verify the user information and to decide whether he is eligible to vote or not. It also creates and manages voting and an election detail as all the users must login by user name and password and click on candidates to register vote. Our system is also equipped with a chat bot that works as a support or guide to the voters, this helps the users in the voting process.

Keywords: HTML, CSS, Java Script, PHP, MYSQL, phpMyAdmin, XAMPP.

INTRODUCTION

[1]OVERVIEW: As per the records of TOI 24 Jan, 2009 11 lakhs fake votes were observed in Delhi. Then according to India News June 2013 : 30000 illegal voters were found in election commission under Sheila Dikshit constituency. Another news which was alleged by LJP(Lok Janshakti Party) Chief, Ram Vilas Paswan saying that Bihar election were having 30

Motivation: Electronic voting technology intends to speed the counting of ballots, reduce the cost of paying staff to count votes manually and can provide improved accessibility for disabled voters. Also in the long term, expenses are expected to decrease. Results can be reported and published faster.

Objective: Secure Online Voting System with Multi Security the usage of Biometric and Steganography, the simple concept is to merge the name of the game key with the duvet picture on the premise of center picture. The end result of this technique produces a stego picture which appears pretty just like the duvet picture. The center picture is a biometric measure, which include a fingerprint picture. The stego picture is extracted on the server facet to carry out the voter authentication function. It used mystery message with 288 bit length. As the real mystery key's by no means embedded with inside the stego picture, there can be no danger of predicting mystery key from it.

SYSTEM REQUIREMENTS

EXTERNAL INTERFACE REQUIREMENT
User Interface Application Based Online voting system using face recognition and otp.
Hardware Interfaces:
RAM : 8 GB As we are using Machine Learning Algorithm and Various High Level Libraries Laptop. RAM minimum required is 8 GB.
Hard Disk : 40 GB
Data Set of CT Scan images is to be used hence minimum 40 GB Hard Disk memory is required. Processor : Intel i5 Processor
Spyder IDE that Integrated Development Environment is to be used and data loading should be fast hence Fast Processor is required .
IDE : Spyder
Best Integrated Development Environment as it gives possible suggestions at the time of typing code snippets that makes typing feasible and fast.

Coding Language : Python Version 3.5
Highly specified Programming Language for Machine Learning because of availability of High Performance Libraries.Operating System : Windows 10
Latest Operating System that supports all type of installation and development Environment.

Software Interfaces Operating System:
Windows 10 IDE: Spyder Programming Language : Python

NON FUNCTIONAL REQUIREMENT

Performance Requirements :The performance of the functions and every module must be well. The overall performance of the software will enable the users to work evidently. Performance of encryption of data should be fast.Performance of the providing virtual environment should be fast.

Safety Requirement: The application is designed in modules where errors can be detected and fixed easily. This makes it easier to install and update new functionality if required.

Software Quality Attributes Our software has many quality attribute that are given below:- Adaptability: This software is adaptable by all users.

Availability: This software is freely available to all users. The availability of the software is easy for everyone.

Maintainability: After the deployment of the project if any error occurs then it can be easily maintained by the softwaredeveloper.

Reliability: The performance of the software is better which will increase the reliability of the Software. User

Friendliness: Since, the software is a GUI application; the output generated is much user friendly in its behaviour.

Integrity: Integrity refers to the extent to which access to software or data by unauthorized persons can be controlled.

Security: Users are authenticated using many security phases so reliable security is provided.

Testability: The software will be tested considering all the aspects.

SYSTEM ARCHITECTURE

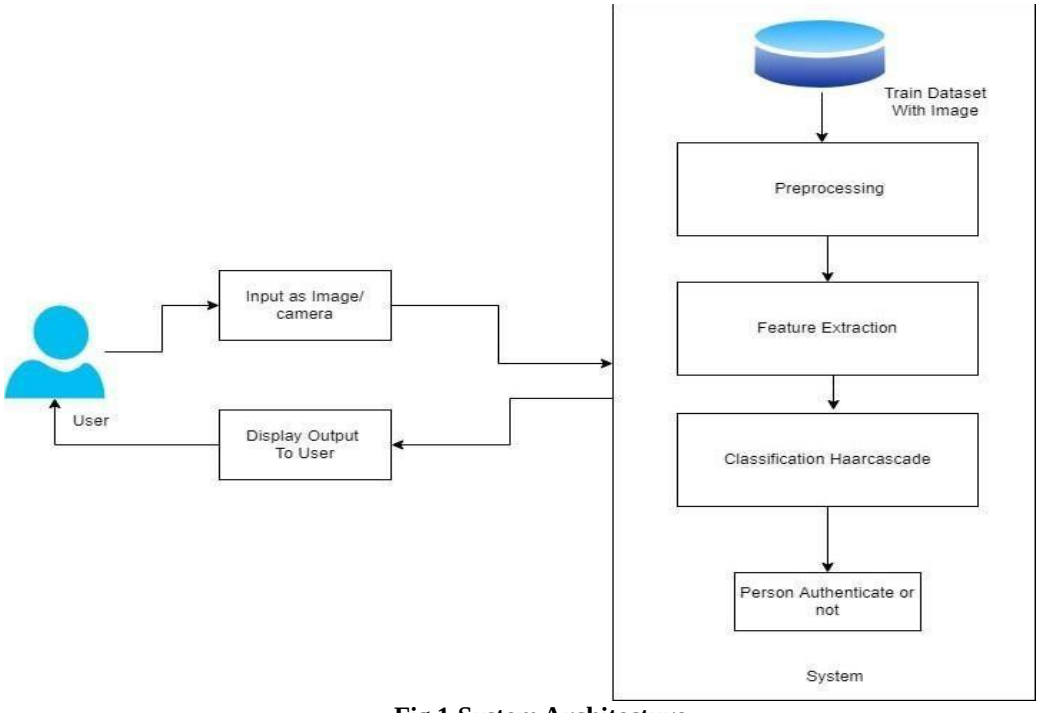

Fig.1 System Architecture

METHODOLOGY

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 Foundation Course at a student-friendly price and become industry ready.

FUTURE SCOPE

Face recognition solutions are expected to be present in 1.3 billion devices by 2024. Powered by AI, face recognition software in mobile phones is already being used by companies like iProov and Mastercard to authenticate payments and other high-end authentication tasks.

Face recognition systems can be used to identify people in photos, videos, or in real-time. Face recognition is a category of biometric security. Other forms of biometric software include voice recognition, fingerprint recognition, and eye retinaor iris recognition.

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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