Intelligent Voting System with Face Recognition by HAAR Cascade Algorithm

Ajay Singh, Ashish Sharma

Assistant Professor, Bhagwant Institute Technology, Muzaffarnagar, Uttar Pradesh, India

ABSTRACT

*This article presents a human face detection method for voting systems to match features in images accordingly that correspond to lines on the same viewpoint, image. Biometric software that works by matching features of face such as eyes, nose lines, and markings. Facial recognition has always been a very much secure and trusted form of identification. By using this functionality into current voting system, we can enhance the system's abilities to make it safer and less fraudulent. This article provided his one algorithm, HAAR Cascade.. We can also compared performance by classifying images of faces. In our proposed system we have 1900 images. Training set's image have been augmented to further improve their properties. Each and every augmented set consists of 4 and more samples per image. Our completed set consists of 1900*4, or 7600 images. Based on our team's research work, we have founded that our algorithm's accuracy is based on training data. Our training data have consist of 1900 marked images. For further work, we are planning to extend the training data set and apply other exclusive techniques such as deep learning, neural networks etc.*

1:-INTRODUCTION

In present time there are currently two types of voting mechanisms in India, Secret Ballet and Electronic Voting Machines (EVM), but the voting process has some drawbacks. In our proposed system we chose, we propose three levels of validation that is very fruitful to bring down wrong voting scenarios. The first step is to contain the unique ID generation and given to the voter during registration. Then, at the second level of security, the ID card was handed over to an Electoral Commission official, where it was counter-checked by an official, and security is now greatly improved with the new level of verification voters must go through increase, where we match the current facial features of the voter to those in the database. This reduces the chance of incorrect voting and makes the system more secure and accurate. This article describes one of his algorithms used in the face recognition field. We also check the accuracy and efficiency of this algorithm by using it in practice and implement it through a test device.

2:-RELATED WORKS

Present facial recognition system is still an issue today. The major task is to upgrade the perception of presentation when affected by non-linear variations including changes of light, poses, face expressions, occlusion. Descriptions that can output facial images include occlusion, poses, face language, and variable lighting. His 35-subject test in the FERET folder achieved an accuracy of 85.13%. This is comparable to the best results of previous work in presentation languages. This paper presents a strong and powerful real-time problem's solutions for mobile platforms with limitation of computation and luggage space revenues that can compete with PC platforms. Our proposed solution connect some last real-time mobile advertising space implementations and point out the shortcomings of each and every complement. The first implementation give us an online illuminant calibration for the second embodiment that is considered robust to different face position orientations. Real-time results acquired on a true mobile platform demonstration and real-time capabilities of this hybrid facial recognition solution.

3:-EXISTING SYSTEM

There are currently two types of voting solutions in India: the ballet secret role and the second, the electronic selection machine (EVM),but both voting processes have some drawbacks.

4:-PROPOSED SYSTEM

Our project proposes three levels of validation that are highly secure to minimize wrong voting scenarios. The first contains a unique ID generated during registration that is given to voters. Then, at the second level of security, the ID card was handed over to an Electoral Commission official, where it was counter-checked by an official, and security is now significantly increased with the new level of verification that voters must go through. improves to , where we compare the present facial features of the voters with those in database. This reduces the chance of incorrect voting and makes the system more secure and accurate. This article describes one of his algorithms used in the face recognition field. We also checked the efficiency and security of this algorithm by using it in practice and demonstrate it on a test device.

Proposed Project Beneficiaries:

- Wrong voters are easily identified.
- Facial recognition technology can be very helpful in identifying voter fraud and avoiding fake ballots at election commission.
- Voters can vote from anywhere by logging into the proposed smart voting system over the Internet.
- Smart voting system provides updated result at each and every minute.
- Intelligent voting system provides updated results every minute.
- Less effort and less resources required.

Applications

- Facial Recognition in Smart Homes.
- Facial recognition for fraud detection.
- Banking Applications.
- Facial Recognition for Work Management.

5:-RESOURCES NEED FOR THE PROJECT

Hardware System Configuration: -

Processor	-	Dual Core
Speed	-	1.1 G Hz to more
RAM	-	4 GB (min) to more
Hard Disk	-	20 GB
Key Board	-	Standard
Mouse	-	Any Standard
Monitor	-	SVGA

Software System Configuration: -

Technology	-	Python
Front End	-	Tkinter
IDLE	-	Python 2.7 or higher
Database	-	MySQL
Operating System	-	Any Windows

6:-SYSTEM DESIGN

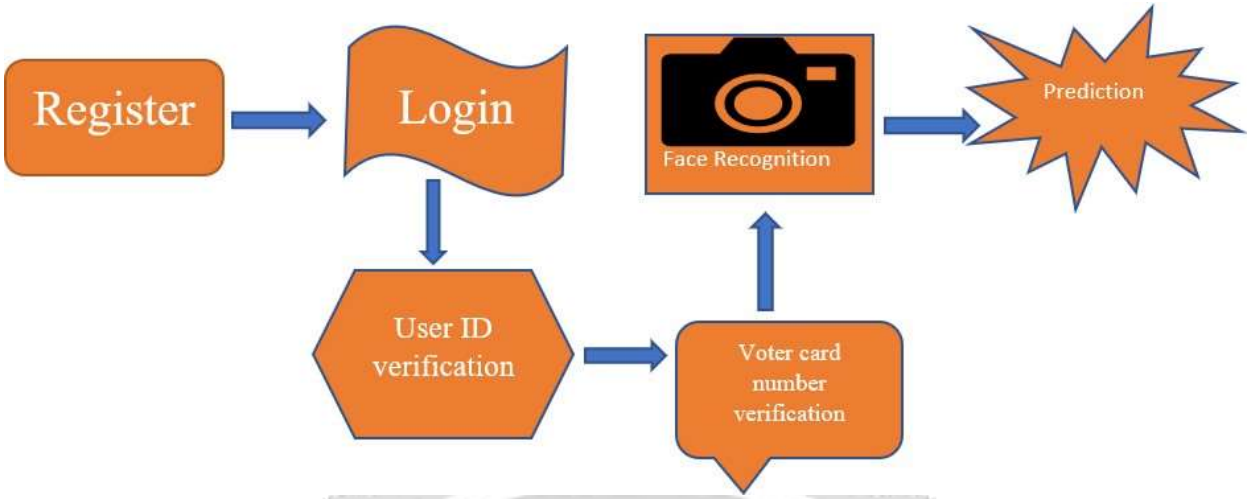

Fig 1: From registration to prediction process

Part of the system design dictates that you must first register on a particular page, website or any voting portal. Then your name and details are registered, you are logged in, your user ID is generated, and verified. Voter card numbers are verified and updated, facial recognition is performed, votes are approved, voters and winners are predicted. Finally, we ran three tests

Fig 2: Detecting the face of the person

Face detection is good enough from start to finish, detecting all edges of the face as well as lines, marks and objects.
Authenticates individuals and allows verification. Facial recognition is the third level of verification and is important in smart voting systems.

List of Modules:

1 Registration Module

2 Login Module

3 Verification Module

4 User Id Verification Module

5 Voter card number Verification Module

6 Face Recognition Verification Module

7:-RESULT

Fig 3: complete screen short of the how the registration to vote calculation process

8:-CONCLUSIONS

Facial recognition system is very safe, efficient and trusted form for identification since its inception. Incorporating this feature into our current voting system has allowed us to improve the functionality of the system, make it safer and eliminate false votes. In this paper, we provided one of his algorithms, Haarcascade. We also compared performance by classifying faces in images. Our training set up have 1900 images. Images in the training set have been expanding to further improve their properties. Each augmented set consists of 4 more samples per image. A complete set consists of 1900*4, or 7600 images. Based on research, we found that the algorithm's accuracy is based on the training data. The training data consisted of 1900 marked images. In

future work, we are planning to extend the training data set and apply other important techniques such as SIFT and deep learning neural networks.

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