ATTENDANCE SYSTEM USING THE FACE AUTHENTICATION

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Abstract

Now a days the smart attendance management system using face detection techniques. Daily attendance marking is a common and important activity in schools and colleges for checking the performance of students. Manual Attendance maintaining is difficult process, especially for large group of students. Some automated systems developed to overcome these difficulties, have drawbacks like cost, fake attendance, accuracy, intrusiveness. To overcome these drawbacks, there is need of smart and automated attendance system. We are implementing attendance system using face recognition. Since face is unique identity of person, the issue of fake attendance and proxies can be solved. The system uses local binary pattern face recognition technique as it is fast, simple and has greater success rate. Also, it has pro-vision to deal with intensity of light problem and head pose problem which makes it effective.

Keywords : Face Authentication, Vailo and Jones, LBPH Algorithm, SMS.

1.Introduction:

 In many Institution and Organization the attendance is a very important factor to maintain the record of lectures, salary and work hours etc. Most of the institutes and organizations follow the manual method using old paper and le method and some of them have shifted to biometric technique. The current method that colleges use is that the professor passes a sheet or make roll calls and mark the attendance of the students and this sheet further goes to the admin department with updates the nal excel sheet. This process is quite hectic and time consuming. Also, for professors or employees at institutes or organizations the biometric system serves one at a time. So, why not shift to an automated attendance system which works on face recognition technique? Be it a class room or entry gates it will mark the attendance of the students, professors, employ-ees, etc. This system uses Viola and Jones algorithm for detecting and recognizing the faces. The main elements of this technology are as follows :

2**.** Literature Survey

1.   Paper Name: Algorithm for Efficient Attendance Management: Face Recognition based approach.
Author Name: Naveed Khan Balcoh, M. Haroon Yousaf, Waqar Ahmad and M. Iram Baig.

Description: Students group action within the room is incredibly necessary task and if taken manually wastes tons of your time. There square measure several automation methods on the market for this purpose i.e. biometric group action. All these strategies additionally waste time as a result of students have to be compelled to build a queue to the touch their Paper Name: Study of Implementing Automated Attendance System Using Face Recognition Technique.

2.Author Name: Nirmalya Kar, Mrinal Kanti Debbarma, Ashim Saha, and Dwijen Rudra Pal.

Description: Authentication may be a important issue in system control in laptop based mostly communication. Human face recognition is a very important branch of biometric verication and has been wide utilized in several applications, like video monitor system, human-computer interaction, and door control system and network security. This paper describes a method for Students group action System which is able to integrate with the face

recognition technology mistreatment Personal Component Analysis (PCA) rule. The system can record the group action of ththumb on the scanning device
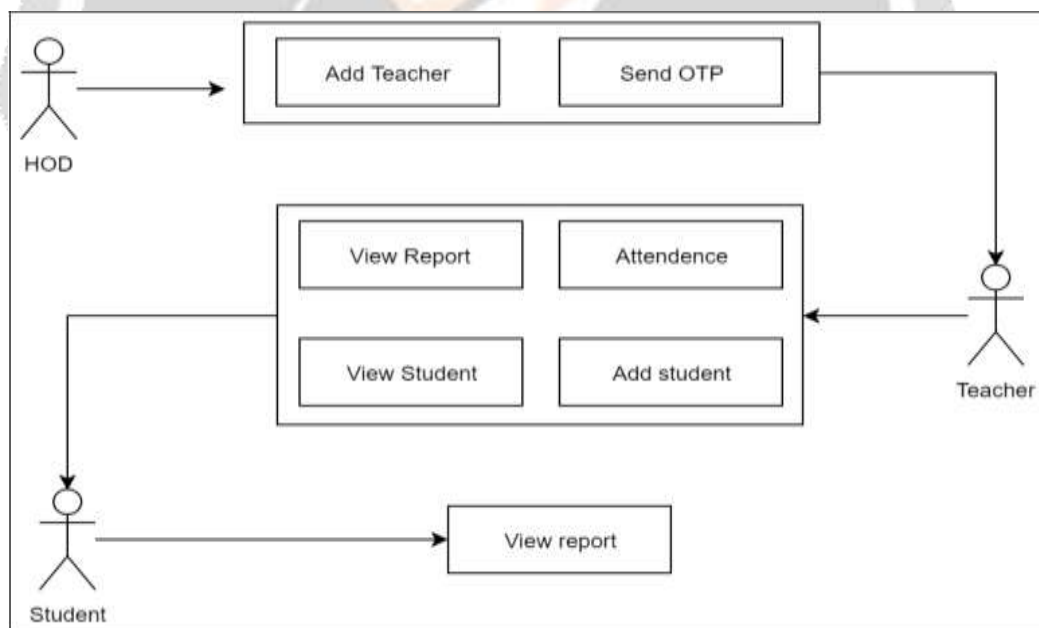
3.Methodologies of Problem solving

Some problems are small and can be resolved quickly. Other problems are large and may require significant time and e ort to solve. These larger problems are often tackled by turning them into formal projects. Whether the problem you are focusing on is small or large, using a systematic approach for solving it will help you be a more effective project manager .there are five problems. 1. Define the problem, 2.Determine the causes 3. Generate ideas,4.select the best solution.

Once you have defined the problem, you are ready to dig deeper and start to determine what is causing it. You can use Case diagram to help you perform a cause and effect analysis. If you consider the problem as a gap between where you are now and where you want to be, the causes of the problem are the obstacles that are preventing you from closing that gap immediately. This level of analysis is important to make sure your solutions address the actual causes of the problem instead of the symptoms of the problem. If your solution a symptom instead of an actual cause, the problem is likely to reoccur since it was never truly solved.

4.System Architecture

The system allows easy attendance management using the Face Detection, which is one of the most acceptable techniques. The teacher needs to carry a Digital Image Capturing Devices to the lecture room and take a picture of the students. The teacher then needs to log-in to the computer using his/her login credentials. The web page provides a medium to upload the image to the computer. System also consists of database which includes images of all the students and their personal details. The database also keeps record of details of teachers of the respective classes. After the image is uploaded to the system, faces of students are detected from the image stored. These images are then compared with the images of students stored images in the database using face recognition algorithm and record of attendance is kept. The computer then returns a copy of html page to the teacher with attendance of each student. This is how record of attendance is kept in our system.

5.Conclusion:

In recording student attendance, conventional methods are still adopted in some institutions, where the instructors call out the student names one by one or by taking signature from each student to determine their presence. Nowadays, better methods are also employed, i.e. by relying on a system to record the attendance of students in semi-auto manner, e.g. RFID or biometrics based systems. Such systems are absolutely excellent as a solution to existing problems, but one obvious drawback is the additional cost of hardware and maintenance. Hence, it was our target to develop an attendance system that will require minimal hardware cost, setup and maintenance. i.e. by having the application to run on the instructor existing Android mobile device. Besides that, to prevent data loss, an online database will be used especially to store the recorded stu-dents attendance.

6.Reference:

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