

Automatic Attendance Provision using Image Processing

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Abstract - Automatic face recognition (AFR) technologies have made many improvements in the changing world. Smart Attendance using Real-Time Face Recognition is a real-world solution which comes with day to day activities of handling student attendance system. Face recognition-based attendance system is a process of recognizing the students face for taking attendance by using face biometrics based on high-definition monitor video and other information technology. In my face recognition project, a computer system will be able to find and recognize human faces fast and precisely in images or videos that are being captured through a surveillance camera. Numerous algorithms and techniques have been developed for improving the performance of face recognition but the concept to be implemented here is Deep Learning. It helps in conversion of the frames of the video into images so that the face of the student can be easily recognized for their attendance so that the attendance database can be easily reflected automatically.

with the ones we think are best for a variety of tertiary institution.

2. EXISTING PROBLEM

- The Existing System introduces face detection method using the Voila and Jones algorithm and recognition using correlation technique. The system will record the attendance of the students in class room environment. This system is fully automated. User gets an authentication to upload the image containing file and also to view the attendance.
- **Drawbacks:**
 - Only 1-2 faces are recognized.
 - Can't be easily deployable.

3. PROPOSED SOLUTION

- In our proposed system human faces are automatically detected using motion sensor and the detected faces are recognized using some face recognition algorithms and techniques.
- Our system also helps to improve the drawbacks of existing system i.e. our system can recognize minimum of 3 faces at a time and it can be easily deployable.

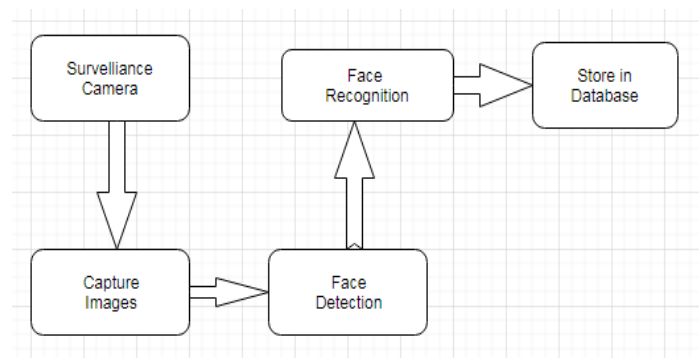
Key Words: Face Recognition, Attendance

1. INTRODUCTION

Traditionally, student's attendance is taken manually by using attendance sheet given by the attendant during tutorials and leisure time, which is time consuming. Moreover, it is very difficult to verify all students are present or not. Using face recognition, it proposes a method to automatically take the attendance of the students in a class. The system stores the details of each student as well as their facial features in the database and it compares the new patterns with the previously stored patterns as per the requirements.

Time and attendance system provide many benefits to the institutions. Manual systems are also eliminated. It is an efficient way to record and manage the attendance in the class. There is also advantage of time saving and speed making of the attendances. An automated system reduces the risk of errors that are common in a manual system and allows the workforce to be more productive instead of wasting time on administrative tasks. We have researched and reviewed dozens of attendance systems and came up

4. IMPLEMENTATION



5. CONCLUSIONS

This project is done in order to eliminate the challenges and limitations of the current manual attendance systems and e-attendance system. This project is centered on how to enhance attendance marking.

The essential benefit of automated student was highlighted. We went further by investigating how face recognition can solve the disturbing challenges manual attendance systems. Based on the knowledge, it was safely concluded that implementing the proposed system at the college lab will not only eliminate the challenges that are faced by the college but will also provide a rich, sound and more flexible environment that will have a positive effect on attendance during tutorial session and exams.

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