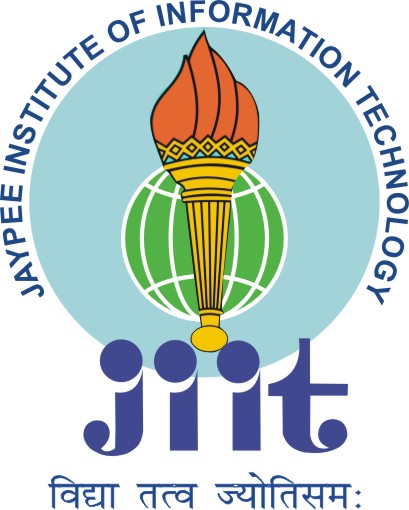
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**Major Project Synopsis Report on**

**Attendance using Face Recognition**

**Submitted to:- Submitted by:**

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**Abstract**

In this project, we propose a framework that takes in account the participation of students for classroom lecture. The proposed system framework takes the participation naturally, using face identification and recognition. This participation is recorded using a camera deployed at the front of the classroom that continuously catches pictures of students, detect the faces, contrasts the distinguished appearances and matches them in the database to mark the attendance.

**Introduction**

Maintaining the attendance is essential in every institution or organization for checking the performance of students/employees. Each organization has its own technique. Traditionally, in institutions, student’s attendance is taken physically by using an attendance sheet, given by the teacher in class. The Current participation stamping techniques are repetitive and tedious. Physically recorded participation can be effortlessly controlled. Besides, it is exceptionally hard to confirm one by one that with so many students in a substantial classroom environment with disseminated branches whether the verified students are really reacting or not.

Therefore, maintaining attendance through face recognition is much easier and effective. The framework is such that it uses face detection and recognition algorithms which automatically detects and registers the student attending the lecture. Face detection and recognition is often referred to as analyses characteristics of a person's face image input through a camera. It measures overall facial structure, distances between eyes, nose and mouth. Hence, this system handles all the issues which occurred in traditional system.

**Working of the proposed system**

The proposed attendance system mainly consists of four phases: Image acquisition, Face Detection, Feature Extraction, Face Recognition. The working of the system is depicted as follows:

1. **Image Acquisition**: The system consists of a camera that captures the images of the classroom and sends it to the image pre-processing. Then that image is sent for face detection.
2. **Face Detection**: This process separates the facial area from the rest of the background image.
3. **Feature Extraction**: Feature extraction is done for distinguishing faces of different student. In this phase eyes, nose and mouth are extracted. Feature extraction is helpful in face detection and recognition.
4. **Face Recognition**: The extracted image is then compared with the stored image. If the extracted image is matched with the stored image then the face is recognized and the attendance for that particular student is marked as present.



**More Applications for the proposed method:**

This face detection and recognition can also be used for matching photos of celebrities. We can take pictures of celebrities from the internet and store it in our database and we can apply face detection on a new picture to identify the celebrity.

We found the attendance system more useful as an attendance system can be used in each and every organization