# Automatic Attendance Monitoring System

**P.Padma Rekha[1], D.Amudhan[2], V.Narendhiran[3], N.Pavithra[4], S.Ramya[5]**

[1, 2, 3, 4, 5] K.S.Rangasamy College of Technology, Tiruchengode, Tamil Nadu

*Abstract-* *The attendance is taken in every organization. Traditional approach for attendance is, professor calls student name & record attendance. For each lecture this is wastage of time. To avoid these losses, we are about to use automatic process which is based on image processing. In this project approach, we are using face detection & face recognition system. The first phase is pre-processing where the face detection is processed through the step image processing. It includes the face detection and face recognition process. Second phase is feature extraction. Step by step execution of these techniques (Image Processing) helps to achieve the final output. The working of this project is to detect and recognize the face and mark the attendance for the corresponding face in the database. Input of this project is face detection and recognition and output is to mark the attendance. Our project is being presented as a solution for the Automatic Attendance Marking System. It is designed to be reliable and low power. The Automatic face detection and recognition proposed to attendance marking in database acts as the solution for the automatic attendance marking system..*

*Keywords:-* Micro bots, Tech-savvy, Sophisticated, Germ-free environment

## I. INTRODUCTION

Organizations of all sizes use attendance systems to record when student or employees start and stop work. Some organizations also keep detailed records of attendance issues such as who calls in sick and who comes in late. It is important to take the attendance of the students in the classroom automatically.

The attendance monitoring system was created and it changed the way attendances were marked. The attendance monitoring system has made the lives of teachers and employers easier.

When it comes to schools and universities, the attendance monitoring system is a great help for parents and teachers both. Parents are never uninformed of the dependability of their children in the class if the university is using an attendance monitoring system. The registers could easily be exploited by students and if information was mailed to the parents, there were high chances that mails could be made to disappear before parents even saw them. With the monitoring system in place, the information can easily be printed or a soft copy can be sent directly to parents in their personal email accounts.

By continuously observing the face information, this approach can solve low effectiveness of existing face detection technology and improve the accuracy of face recognition.

## II. METHODOLOGY

**A. Block diagram**
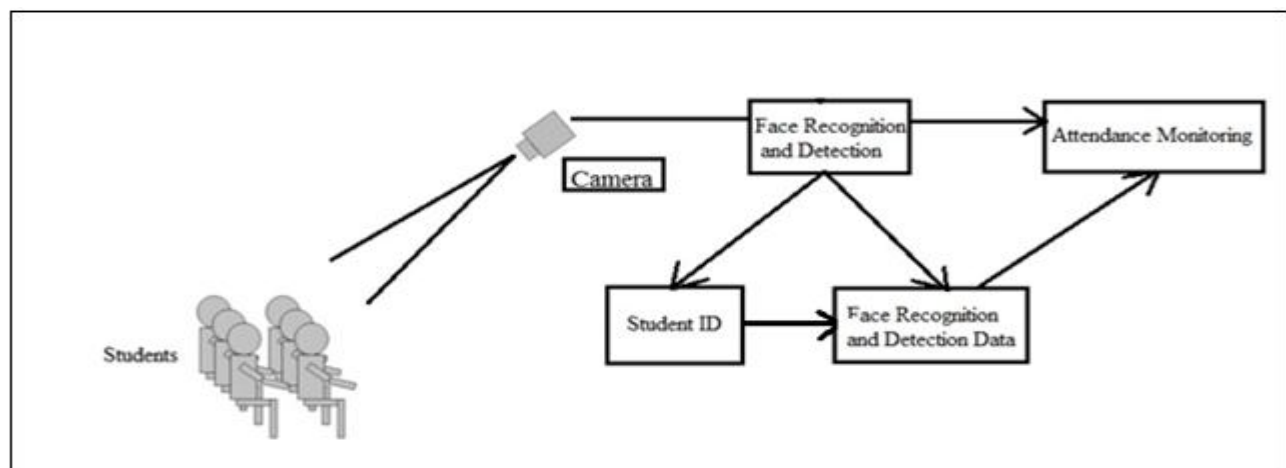
**B. Construction**

In this paper, our framework comprises of a couple of cameras. One camera is mounted simply over the entryway so it can detect and catch the images of students entering the class. Other camera is mounted on the opposite side of the entryway in the same as it can detect and catch the images of active students.

### III.PROJECT DESCRIPTION

1. The initially called as passage cam is mounted simply over the entryway so it can detect the students entering in the class. It detects and clicks images of the students entering class through the entryway. Students might enter one by one or in gatherings. it just taps the picture as it detect an understudy in its sensor.

2. The second camera is called exit cam as it denote the active students by tapping the images of students leaving the class.

3. The framework forms every one of the images out of sight. The camera are identified with just clicking pictures. From these images, the faces are detected and prepared further for acknowledgment process.

4. The images are prepared and changed over into gray scale to take just essential information out of the picture i.e. face attributes. The acknowledgment module now coordinates the faces with all other present as of now in the database. The picture which get for the most part matches with that one in the database picture set is checked present.

**A. EIGEN FACE**

We have centered our examination towards adding to an unsupervised pattern acknowledgment technique that does not relies on upon unnecessary geometry and calculations like deformable layouts. Eigen-faces plan appeared to be a sufficient technique to be utilized as a part of face acknowledgment because of its effortlessness, speed and learning ability. In this paper, we propose a face acknowledgment framework in light of the eigen-faces approach, This plan breaks down face pictures into various attributes set of elements known as eigen-faces, which can be considered as the central parts of the starting preparing set of face images. Acknowledgment is performed by mirroring another picture onto the subspace spread over by the Eigen faces and after that comparing so as to arrange the face its position in the face space with the positions of known people.

Proposed framework is equipped for both perceiving known people and figuring out how to perceive new face pictures.

**B. FACE DETECTION**

This instrument is server based on account of concentrated occupation of processor for the face location calculation, detecting a face is embodiment in an item discovery undertaking, the object of enthusiasm for this case is the face. Be that as it may, numerous variables can meddle with the face recognition calculations, components, for example, picture hues, position, scale, turn, face posture, light and so forth.

The procedure of detecting faces from still pictures containing different faces can be isolated in few stages. There are a lot of face identification calculations which can viably distinguish a face in a photo. In the framework introduced, most students face the camera.

**C. FACE RECOGNITION**

Perceiving a face intends to distinguish that specific face from a rundown of faces on a database. Our college, upon enrolment takes pictures from each understudy, and those pictures are put away in a database. Same as in face discovery, there are numerous current calculations used to recognize a face. Our framework takes advantage of Eigen-faces to distinguish a face. This calculation has numerous disadvantages: it relies on upon scale, posture and the shade of the thought about pictures. However the calculation is exceptionally fast, and can contrast pictures with pictures, in this way we don't NEED to have numerous pictures of a man to prepare our framework.

Subsequent to our framework is setup to catch just frontal pictures the stance of the face in not an issue.

**D. AUTOMATIC ATTENDANCE MARKING**

After the face detection process completed, this device will automatically compares the recorded face with the face stored in the database, Then this device will automatically mark the attendance for the corresponding person whose face was recorded by the webcam on the personal computer. If the face recorded is not matched then it will not mark the attendance.

### IV. CONCLUSION

Our project takes out any plausibility of proxy also keep record of attendance of students in a well viable way.

The general project is in charge of attendance of students. The attendance is set apart on the premise of in and out times record by the cams. The time table is as of now transferred the database and by as indicated by the in and out times the attendance is set apart into the time table. Toward the end of month, an all around depicted type of attendance report is made accessible to the students and the faculties. project is likewise fit for setting up an alternate record each for detainment list. This project decreases the work load on faculties. The additional focal points is that it is more dependable and the methodology is eco-accommodating as it diminishes paperwork. The future work which can be incorporated is that the notice for attendance at the time of effectively catching picture and detecting a face in its sensor. Likewise, a web entryway can be made which will contain all the data identified with attendance and an understudy can sign into see his territory of enthusiasm for the database.

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