

# ATTENDANCE MONITORING SYSTEM USING FACE DETECTION & FACE RECOGNITION

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**Abstract** - The attendance system will remain primitive. Where the teacher calls the name of students to mark their attendance. This system can be easily manipulated. In order to overcome the issues biometrics of the students can be involved. This method of camera is fixed in the class room and its capture the images then the faces are detected. To store the dataset and capture the images. Otherwise the faces are recognized and marking the attendance.

**Key words:** Face detection, face recognition, camera, attendance system, data base

## I. INTRODUCTION

Attendance monitoring system is a very important process in almost all the organizations and institutions. Now a days there are two types of systems available: first is manual and second is automated. The mostly used method for taking attendance is totally automated based. It has used Python high level language and currently advanced level of OpenCV source to be used in this system. The objective of this project is to perform face recognition in order to produce the details of the student who attends class and in order to link the attendance to the subject. The data is already saved in the memory. To detect the face and recognize the face and mark the attendance.

## II. LITERATURE SURVEY

The student's fingerprints are scanned by a code. The student impresses the fingerprint against the scanner. The system compares the new fingerprint patterns and it will be connecting to the various points for the fingerprint to the database. A match is recorded as a knock[1].

The fingerprint module then we are taking the sample of there are four fingerprints and they are detected along the images when the user that should keep finger on the module and it will be scanning and compared is already stored in the memory of the person whose fingerprint is matched. They will be marking present and not matching the SMS send to his parents [8],[25].

When the student images are stored in the database, the Raspberry Pi camera module is placed for the student entering in the class room. The USB camera module captures the student image. The system will automatically update the student presence in the class to the student's database and sends message to guardians of absentees and also to head of department [2],[3],[5].

The laptop web camera captures the image. Each student's faces are stored to the database. The image of the students for further process. Then detected face images are compared with the image of students database. And the recognition process. If the image is matched with the database, the student is marked as present. The student attendance report will send to student on mail account [9],[10].

The face recognition captures the student's image. The student entering in the classroom or everybody already occupies in the classroom. The student's attendance is automatically recognized [11].

The student database is collected and stored to the Pi. The camera will be connected to the Raspberry Pi module. The camera will be placed in front of the class. It captures the image of the student who is present in the class. It is used for face detection. Then the detected face is compared with the stored data of every student. Then recognized and mark the attendance [6].

The camera will now capture your image. If the image detected matches to the sample image for the database, the attendance is marked as present on the LCD. If the camera fails, the fingerprint scanner will be activated and the attendance will be marked present [1].

The system that can be automatically capture student's attendance by flashing their student card at the RFID reader to enter the class room. The student ID is instantly captured by the reader after that the data is sent to the online server for recording.

The system help to automatically compute the percentage of attendance of each individual student. The GUI of user list function for adding and removing the students personal details[4],[20],[24].

The student to mark his attendance. After recognizing the faces of the students. The face information of students are updated in to an MySQL database. The data of present student are then sent to server computer and stored the authorised person can see it[7].

Biometric method is used for the eyeball detection. This method eyeball sensor is used. Also senses the iris. The individual of eyeball is stored in the database. The image of eyeball in database. the attendance are marked. This setup is practically not possible[10]. Where the iris of students are scanned. Then stored to the database retrieved for the comparison and attendance is managed automatically in the server[15].

Where the each students voice is recognized from its vocals. The data is stored to the database. The unknown speaker is matched against a database of known speaker is result. The best matching speaker is identified. The computer system which spontaneously identifies and verifies the sample of persons voice. The stored sample voice is matched with the current voice of speaker for voice verification[12]. voice recognition method is used in this system and warning letter is send to the parents[13].

The students faces are pre stored in the databases. Raspberry pi camera capture the student face and compared to the database image. If it is matched the student attendance register with time. The absentees faces will be send to the authorized mail id.[14].

The raspberry pi camera module is placed for student entering in the classroom. Camera module is capture the video form. Which contains the many frames from which any one of the frames can be used for face recognition and marking the attendance[15].

Which obtain the faces images capture by camera. When face recognize operation is started and find out the nearest matched images from SD card. After completion of your time amount a file generated with student details like roll number, date, time, present or absent. someone will absent the message send to the parent mobile numbers using GSM. This system provides accurate attendance information of the students in easy and efficient[16].

The student will carry a phone having GPS system which sends the GPS location of campus latitude & longitude values are sent to the raspberry pi module. The processing the data which received from user mobile. The raspberry pi module the students is seating in classroom and GPS coordinate already stored for classroom database with specific range will match with student. If the marked as present or absent. The students are absent in class the sms sending to the parents[17].

Finger print reader that records persons fingerprint data and the reader is connected to PIC and will convert the data to the XBee module. Which is stored all the datas of students. Students are needed to press switch and scan fingers to mark their attendance. If attendance marked successfully LCD will then show their results[18].

A portable hand held finger print scanner is passed to each students and their finger print is recorded. It is then communicated to the computer via USB interface. Using GUI the faculty can add a student remove a student and also import or export data from the portable scanner.[19].

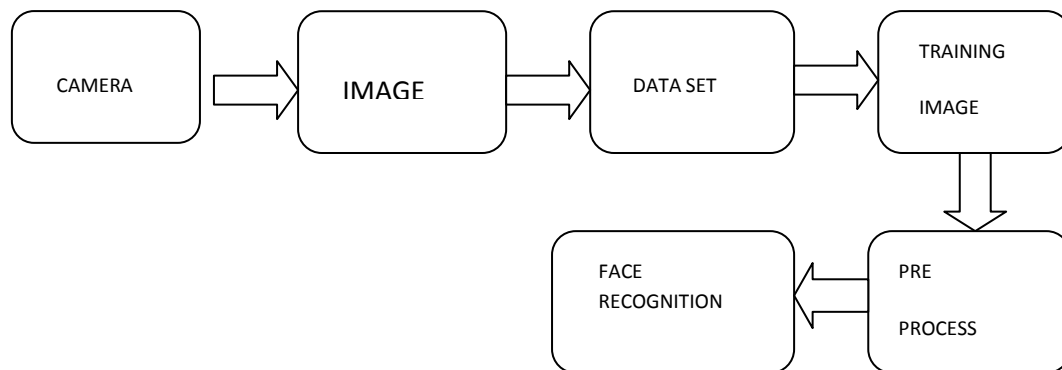
This attendance system for using of employers and students in general. The system make attendance individual in time along with data information thumb impression will be taken as signature for the system entry [21].

The captured the images are stored in jpeg format and then ear part in cropped from the images. The images are include the following operations are edge detection and timing. After this process are completed the whose ear images are matching from the stored images then show the result [22].

This system takes the attendance with the help of fingerprint sensor and all the records are saved the computer server. Fingerprint sensors and LCD screens are placed for entrance on the class room. In order to mark the attendance. The student has to place the finger print sensor on identification students attendance record is updated in the database is notified to the LCD screen[23].

### III. PROPOSED METHOD

#### BLOCK DIAGRAM



#### WORKING

The proposed automated attendance management system is based on face recognition algorithm. When a person enters the classroom his image is captured by the camera at the entrance. Face region is then extracted and pre-processed for further processing. As not more than two person can entire the class room at a face detection is less work. Face recognition proves to be advantages then other system has discussed to analysis the face recognition and marking the attendance.

#### IV. CONCLUSION AND FUTURE WORK

Automated attendance system based on face recognition technique proves to be time saving and secure. In future when the student is absent then a message can be automatically sent to their parents and also the same system could used for hostel attendance monitoring.

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