

# AUTOMATED ATTENDANCE SYSTEM USING IMAGE PROCESSING

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**ABSTRACT:** Automated Attendance System is an application which will record the participation status of the understudies. This framework, which depends on face identification and acknowledgment, naturally distinguishes the understudies utilizing web cam, when they enter the classroom, and imprints the participation by remembering them. Distinctive continuous situations are considered to assess the presentation of different face acknowledgment frameworks. When contrasted with customary participation denoting, this framework saves time and furthermore assists with observing the participation of the understudies adequately.

**KEYWORDS:** face recognition, feature extraction, web cam, python

## I. INTRODUCTION

The critical factor of improving the nature of schooling is having understudy go to classes regularly. Traditionally understudies are animated to go to classes utilizing participation focuses which toward the finish of a semester comprise a piece of an understudies' last grade. However generally this presents extra exertion from the teacher, who should make a point to accurately stamp going to understudies, which simultaneously burn through a lot of time from the encouraging process. Some are gauging participation physically utilizing the old paper or record based approach and some have embraced strategies for programmed participation utilizing some biometric methods. With regards to schools and colleges, the participation checking framework is an incredible assistance for guardians and educators both.

The registers could undoubtedly be misused by understudies and if data was sent to the guardians, there were high possibilities that sends could be made to

vanish before guardians even saw them. With the observing framework set up, the data can without much of a stretch be printed or a delicate duplicate can be sent straightforwardly to guardians in their own email accounts. which simultaneously some have embraced strategies for programmed participation utilizing some biometric methods. However, it likewise burn through our time waste a lot of time from the educating process. methods of programmed participation utilizing some biometric methods. But it also waste our time a semester constitute a part of a students's final grade attendance Systems exist in the literature. In RFID based system, students carry a RFID tag type ID card and they need to place that on the card reader to record their attendance. Hence, we proposed An Automatic Attendance system for student.

## II. LITERATURE SURVEY

### Automated Attendance Management System Based On Face Recognition Algorithms.

In this cutting edge time of robotization numerous logical progressions and developments have occurred to save work, increment the exactness and to improve our lives. Automated Attendance System is the advancement that has taken place in the field of automation replacing traditional attendance marking activity. Automated Attendance Systems are generally bio-metric based, smart-card based and web based. These systems are widely used in different organizations.

### Identification of Human Faces.

Lately face acknowledgment has gotten critical consideration from both examination networks and society of organization sight and sound data access. Significant advancement and colossal scope of biometric applications in banking, public personality,

law implementation, movement, and sensible access control have projected face acknowledgment innovation into the spotlight. In spite of the fact that prior, straightforward mathematical models were utilized for face acknowledgment however now the acknowledgment interaction has graduated into a study of considerably more sharp and develop numerical portrayals and coordinating cycles.

### **Robust Real-Time Face Detection|| International Journal of Computer Vision Volume.**

This paper unites new calculations and bits of knowledge to develop a structure for hearty and amazingly quick visual recognition. Toward this end we have developed a frontal face recognition framework which accomplishes discovery and bogus positive rates which are comparable to the best distributed outcomes (Sung and Poggio, 1998; Rowley et al., 1998; Osuna et al., 1997a; Schneiderman and Kanade, 2000; Roth et al., 2000). This face discovery framework is most unmistakably recognized from past approaches in its capacity to identify faces amazingly quick.

### **The Representation and Matching of Pictorial Structures.**

In this paper we address the issue of following human positions in different perspective scales in 2D monocular pictures/chronicles. In most bleeding edge 2D after procedures, the issue of scale assortment is rarely discussed. At any rate really, chronicles as often as possible contain human development with logically changed scales. In this paper we propose an after framework that can deal with this issue. A scale checking and changing count is proposed to therefore change the perspective scales during the accompanying cooperation.

### **III. EXISTING SYSTEM**

Ordinarily in schools and universities, the normal understudy's tally will be 50-80. Teacher needs to stamp understudy's essence for consistently. Customarily, understudy's attendances are taken physically by utilizing participation sheet given by the employees in class, which is a tedious event. Moreover, it is extremely hard to confirm individually understudy in a huge homeroom climate with conveyed branches if the verified understudies are really reacting. Utilizing traditional technique for getting down on names [5]takes roughly 5-10 minutes for stamping

participation of whole class. It becomes confounded when strength is more.

In a versatile unique mark gadget which can be passed among the understudies to put their finger on the sensor during the talk time. The issue with this methodology is that passing of the gadget may occupy the consideration of the understudies.

Various works identified with Radio Frequency Identification (RFID) based Attendance Systems exist in the writing. In RFID based framework, understudies convey a RFID label type ID card and they need to put that on the card peruser to record their attendance. RS232 is utilized to interface the framework to the PC and save the recorded participation from the data set. This framework may offer ascent to the issue of deceitful access. Iris is the biometric that can be utilized for Attendance Systems. Iris Recognition:

Frameworks dependent on iris acknowledgment have significantly diminished in cost and this pattern is required to proceed. The innovation functions admirably in both confirmation and ID modes. This framework utilizes iris acknowledgment framework that does catching the picture, iris acknowledgment, extraction, putting away and matching. The trouble happens to lay the transmission lines in where the geography is awful.

### **IV. PROPOSED SYSTEM**

To beat every one of these issues, a constant face acknowledgment framework utilizing web cam is proposed in which web cam is associated with PC, which will catch the essences of gathering of understudies. Utilizing face identification procedure, faces are extricated and handled utilizing standard calculations which is solid, secure and fast. The framework is prepared with the caught pictures of the essences of the understudies to remember them and imprint their participation. Mechanized participation framework is a framework which will record the situation with the understudy; regardless of whether he/she is available in the class. In this paper we propose a robotized participation the executives framework.

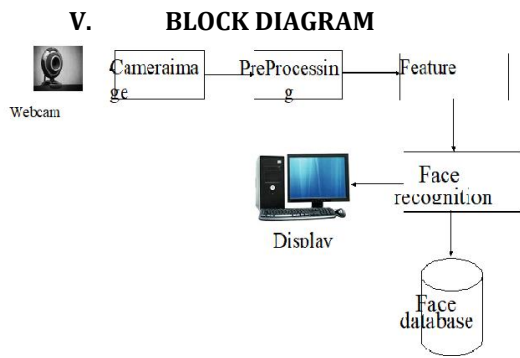
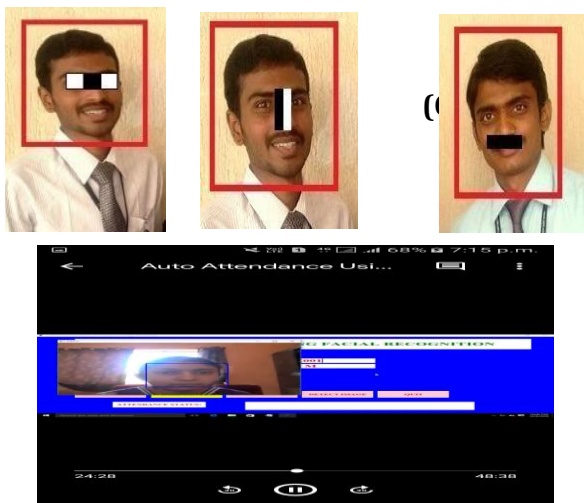


Fig 5.1 : Block Diagram

**VI. EXPERIMENTAL RESULTS**

This framework, which depends on face discovery and acknowledgment calculations, consequently distinguishes the understudy utilizing web cam when he goes into the homeroom and imprints the participation by remembering him. The framework design and calculations utilized in each stage are depicted in this paper. Distinctive continuous situations are considered to assess the presentation of different face acknowledgment frameworks. This paper additionally proposes the strategies to be utilized to deal with the dangers like satirizing. When contrasted with customary participation denoting this framework saves the time and furthermore assists with observing the understudies.



(D)

Fig. 6.1. Text Detection and Inpainting (a) (b) (c) selection of relevant features (d) Capturing images

**VII. CONCLUSION**

A programmed participation the board framework is a vital apparatus for any learning the executives schools. The majority of the current frameworks are tedious and require a semi manual work from the instructor or understudies. Our methodology intends to settle the issues by incorporating face acknowledgment all the while. The framework can be improved so that the exactness, discovery rate and acknowledgment rate can be expanded so that more number of understudies can be identified and perceived for the individuals who are available in the class.

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