

FACE DETECTION AND RECOGNITION STUDENT / EMPLOYEE ATTENDANCE

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ABSTRACT

A face recognition system can be used to develop a presence review system. This system measures the presence of each student by taking a picture using a portable computer webcam. The captured image is processed via a personal computer, allowing an instructor to automatically verify a student's attendance with no additional effort and cost.

The system updates whether a student is present or absent in an Excel sheet, which is continuously overwritten while the system is in use. This ensures that the attendance data is stored in memory for future reference. Based on data obtained from the website, it can be concluded that the presence-based system works satisfactorily.

The current system demonstrates better performance in terms of speed, a lower false positive rate, and higher accuracy. In this implementation, facial recognition is achieved using the Principal Component Analysis (PCA) and Eigen face techniques. The system effectively detects a person's face and works well with various facial expressions.

KEYWORDS: *Face Recognition, Attendance System, Principal Component Analysis (PCA), Eigenface, Image Processing, Student Attendance, Automatic Attendance System, Webcam, Personal Computer, Facial Expressions*

Article History

Received: 08 Aug 2024 | Revised: 10 Aug 2024 | Accepted: 12 Aug 2024
