**LITERATURE SURVEY:**

**TITLE**: Fingerprint attendance system for classroom needs

**AUTHOR**: B. K. Mohamed and C. Raghu

**ABSTRACT**:

Fingerprint attendance system aims to automate the attendance procedure of an educational institution using biometric technology. This will save time wasted on calling out names and it gives a fool-proof method of attendance marking. A hand-held device is used to mark the attendance without the intervention of teacher. The device can be passed and students can mark attendance during the lecture time. Students would be made to place their finger over the sensor so as to mark their presence in the class. It can communicate with a host computer using its USB interface. This device operates from a rechargeable battery. GUI application in host computer helps the teacher to manage the device and attendance.

**TITLE**: RFID based Attendance System with Applications

**AUTHOR**: T. Lim, S. Sim, and M. Mansor

**ABSTRACT**:

The aim of this project is to maintain the record of the students’ attendance by using RFID tags. Each student is issued with his/ her authorized tag, which can be used for swiping in front of the RFID reader to record their attendance. In most of the colleges and schools,attendance is recorded manually – such a process consumes lots of time. In this proposed system, attendance system is implemented by using advanced wireless technology “RFID”. Only the authorized students are provided with the RFID tags. This tag consists of an inbuilt integrated circuit for storing and processing information.

**TITLE**: A Design and Implementation of a Wireless Iris Recognition Attendance Management System

**AUTHOR**: S. Kadry and K. Smaili

**ABSTRACT**:

Iris recognition verification is one of the most reliable personal identification methods in biometrics.With the rapid development of iris recognition verification, a number of its applications have been proposed until now including time attendance system etc. In this paper, a wireless iris recognition attendance management system is designed and implemented using Daugman's algorithm (15).This system based biometrics and wireless technique solves the problem of spurious attendance and the trouble of laying the corresponding network. It can make the users' attendances more easily and effectively.

**TITLE**: Robust Real-Time Face Detection

**AUTHOR**: P. Viola and M. J. Jones

**ABSTRACT**:

This paper describes a face detection framework that is capable of processing images extremely rapidly while achieving high detection rates. There are three key contributions. The first is the introduction of a new image representation called the “Integral Image” which allows the features used by our detector to be computed very quickly. The second is a simple and efficient classifier which is built using the AdaBoost learning algorithm (Freund and Schapire, 1995) to select a small number of critical visual features from a very large set of potential features. The third contribution is a method for combining classifiers in a “cascade” which allows background regions of the image to be quickly discarded while spending more computation on promising face-like regions. A set of experiments in the domain of face detection is presented. The system yields face detection performance comparable to the best previous systems (Sung and Poggio, 1998; Rowley et al., 1998; Schneiderman and Kanade, 2000; Roth et al., 2000). Implemented on a conventional desktop, face detection proceeds at 15 frames per second.

**TITLE**: FACE RECOGNITION BASED ATTENDANCE MARKING SYSTEM

**AUTHOR**: J. G.. RoshanTharanga, S. M. S. C. Samarakoon

**ABSTRACT**:

Automatic face recognition (AFR) technologies have seen dramatic improvements in performance over the past years, and such systems are now widely used for security and commercial applications. An automated system for human face recognition in a real time background for a college to mark the attendance of their employees. So Smart Attendance using Real Time Face Recognition is a real world solution which comes with day to day activities of handling employees. The task is very difficult as the real time background subtraction in an image is still a challenge (6). To detect real time human face are used and a simple fast Principal Component Analysis has used to recognize the faces detected with a high accuracy rate. The matched face is used to mark attendance of the employee.Our system maintains the attendance records of employees automatically. Manual entering of attendance in logbooks becomes a difficult task and it also wastes the time. So we designed an efficient module that comprises of face recognition to manage the attendance records of employees. Our module enrols the staff’s face. This enrolling is a onetime process and their face will be stored in the database. During enrolling of face we require a system since it is a onetime process. You can have your own roll number as your employee id which will be unique for each employee. The presence of each employee will be updated in a database. The results showed improved performance over manual attendance management system. Attendance is marked after employee identification. This product gives much more solutions with accurate results in user interactive manner rather than existing attendance and leave management systems.