A Real Time Android Based Face Recognition System For Time And Attendance Management In Corporates

Evangelin Sonia.S.V[1], Priyanka.V[2], Rohini.V[3], Viveka.K[4]

[1] Assistant Professor, Dept of Computer Science and Engineering

[2, 3, 4] Dept of Computer Science and Engineering

[1, 2, 3, 4] Sri Shakthi Institute of Engineering and Technology, Coimbatore

Abstract- *This is an automated system for human face recognition in a real time background for Corporates to mark the attendance of their employees. The task is very difficult as the real time background subtraction in an image is still a challenge. To detect real time human face, Principal Component Analysis (PCA) is used to recognize the faces detected with a high accuracy rate. The matched face is then used to mark attendance of the employees once recognition is done, automatically attendance will be updated in an Excel Sheet along with his/her name, date and time. In addition to that we provide ideal solution to the problem of power wastage in which appliance available in the employee cabin is controlled through face recognition. Deployment can be done easily by wireless mode of communication. A prototype of the controller is implemented, and the experiment results show that the controller can easily and flexibly control the appliances.*

Keywords *- Face recognition, PCA, Real time, LDA, Corporates attendance maintenance, Salary calculation.*

I. INTRODUCTION

The face detection is required for the success of these applications like biometrics, facial recognition systems, human computer interfaces etc. The task of human facial feature extraction is not easy. Human face varies from person to person. The race, gender, age and other physical characteristics of an individual have to be considered thereby creating a challenge in computer vision. The detection of the facial feature aims to disclose the specific features such as eyes, mouth and nose.
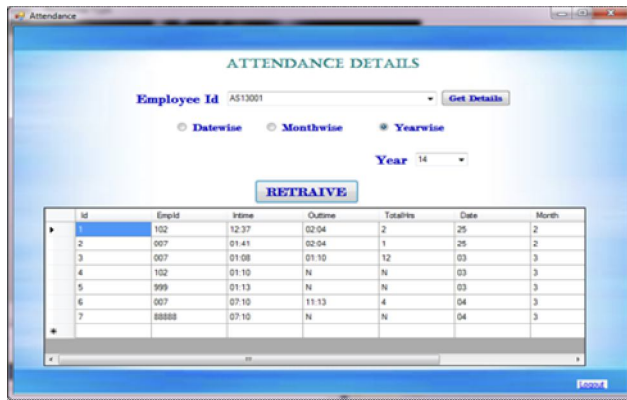
The system proposed a real time system. It takes input image through a web camera continuously. The camera should be installed in a place with good light in the background and free of obstacles, in the entrance of the organization. Attendance is automatically calculated depends on presence of employees. Android applications is implemented for finding the Monthly salary details and no of working days details.

II. WORKING

The recognition of image is done by the most successful technique Principal Component Analysis(PCA). This even classify face identification, face classification and sex determination.

When face recognition success mean, our system automatically put attendance for that particular person. And also it maintains a proper attendance details for each person.Calculate an accurate salary for each person depend upon their attendance record. In salary calculation depend upon person working hours.

Create an android application for known salary information. If the person or employee wants to know their salary information mean, they simply send a SMS to control section. In control section, When SMS received form employee mean it automatically send a information to that particular employee.

III. ADDITIONAL FEATURES

The recognition process was used in simple geometric models, but now it is into the science of modern mathematical representations and processes and many different algorithms were developed in which Principle Component Analysis (PCA) is used here.For manual control of appliance, a real time android based face recognition system for time and attendance management in corporate.

Android applications is implemented for finding the Monthly salary details and no of working days details.
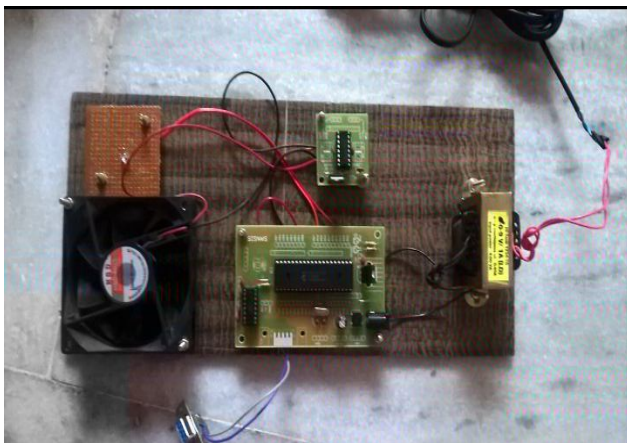
IV. REASON

In the existing system Radio Frequency Identification(RFID) technology can be used to improve the localization of mobile robots and persons in their environment, but the main disadvantage is that localization can be measured only manually.It can also be misused, and the manual control of appliance is difficult to monitor.The goal is that to manage the time efficiently and accurate the salary prediction.The system proposed a real time system. It takes input image through a web camera continuously. The main camera and attendance identification display can be placed at the entrance of the organization to get better result.

It is a way of identifying different conditions of attendance marking.Appliance is automatically controlled depends on presence of employees.Android applications is implemented for finding the Monthly salary details and no of working days details.

V. ALGORITHM

The Linear Discriminant Analysis (LDA) performs the Principal Component Analysis (PCA) approach in face recognition tasks.Due to the very large dimensionality of a image space, many LDA based approaches, however, first use the PCA to project an image into a lower dimensional space or so called face space, and then perform the LDA to maximize the discriminatory power. In this paper, we propose a new, unified LDA/PCA algorithm for face recognition. The new algorithm maximizes the LDA criterion directly without a separate PCA step. This eliminates the possibility of losing discriminative information due to a separate PCA step.

VII. CONCLUSION

This system can be implemented for better results regarding the management of attendance and leaves. This system will save time, reduce the amount of work the administration has to do and will replace the stationary material with electronic apparatus.Hence a system with expected results has been developed but there is still some more for improvement. Under future development of face recognition , it should be capable of detecting any faces under any light conditions.So in future this system should be able to handle and identify large number of keywords.

REFERENCE

[1] [1] Arulogun O. T., Olatunbosun, A., Fakolujo O. A., and Olaniyi, O. M., "RFID-Based Students Attendance Management System", International Journal of Scientific & Engineering Research Volume 4, Issue 2, February-2013.

[2] Yashi Mishra, Gaganpreet Kaur Marwah and Shekhar Verma, Lovely Professional University, Phagwara, India, "Arduino Based Smart RFID Security and Attendance System with Audio Acknowledgement", International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 4 Issue 01, January- 2015.

[3] Sultana, Shermin, Asma Enayet, and Ishrat Jahan Mouri. "A SMART, LOCATION BASED TIME AND ATTENDANCE TRACKING SYSTEM USING ANDROID APPLICATION." International Journal of Computer Science, Engineering and Information Technology (IJCSEIT) 5.1 (2015).