

Real Time Web-Based Smart Attendance System using AI

Maaz Patel¹, Sanskruti Patil², Rishikesh Khade³, Abhishek Sananse⁴, Prof. Pragati Deole⁵

Students, Department of Computer Engineering^{1,2,3,4}

Professor, Department of Computer Engineering⁵

Smt. Kashibai Navale College of Engineering, Pune, Maharashtra, India

Abstract: The performance of automatic face recognition (AFR) technology has improved in recent years. As a result, these systems are frequently employed for security and business purposes. a face recognition programme that runs automatically in the background while a university tracks employee attendance. Hence, Smart Attendance with Real Time Face Recognition might be a global solution for managing personnel on a daily basis. The work is incredibly challenging since the critical temporal background subtraction during an image remains a challenge. Real-time face detection is done using easy, quick Principal Component Analysis, which has a high rate of success in identifying the faces found. As a result, we have developed a module in which an employee's attendance will be recorded automatically by recognising their face using face recognition technology. Their face will be saved in the database after this one-time enrollment process. Since enrolling a face is a one-time activity, we need a mechanism. Every employee will have a unique employee ID that is their own roll number. Every employee's presence will be updated within a database. Results of the proposed system demonstrated that it performs better than the manual attendance system. The marking of attendance follows employee identification. This application provides the customer with considerably more solutions and accurate leads than the conventional attendance and leave.

Keywords: Attendance, Face Recognition, CNN (Convolutional Neural Network)

REFERENCES

- [1]. W. Zhao, R. Chellappa, P. J. Phillips, and A. Rosenfeld, "Face recognition: A literature survey," ACM Computing Surveys, 2003, vol. 35, no. 4, pp. 399-458.
- [2]. Herbert Bay, Andreas Ess, Tinne Tuytelaars, and Luc Van Gool. Surf: Speeded up robust features. Computer Vision and Image Understanding (CVIU), 110(3):346-359.
- [3]. H.K.Ekenel and R.Stiefelhagen, Analysis of local appearance based face recognition: Effects of feature selection and feature normalization. In CVPR Biometrics Workshop, New York, USA, 2006
- [4]. IJCSI International Journal of Computer Science Issues, Vol. 9, Issue 4, No 1, July 2012 ISSN (Online): 1694-0814
- [5]. Javier Ruiz Del Solar, Rodrigo Verschae, and Mauricio Correa. Face recognition in unconstrained environments: A comparative study. In ECCV Workshop on Faces in RealLife Images: Detection, Alignment, and Recognition, Marseille, France, October 2008.
- [6]. Kyungnam Kim "Face Recognition using Principle Component Analysis", Department of Computer Science, University of Maryland, College Park, MD 20742, USA.
- [7]. Osuna, E., Freund, R. and Girosit, F. (1997). "Training support vector machines: an application to face detection." 130-136