

MIT WORLD PEACE UNIVERSITY

Cyber Security and Forensics
Second Year B. Tech, Semester 3

ATTENDANCE AUTOMATION ASSISTANT

PAPER PLAN

Prepared By

Krishnaraj Thadesar

CSF, PA34

Saubhagya Singh

CSF, PA40

September 5, 2022

Contents

1 Title of the Project	1
2 Faculty Mentor	1
3 Details of Group	1
4 Reference Journals / Conference Papers Related to Work	1
5 Project Details and Objectives	1
6 Resources Required	1
7 Detailed Project Description	1
8 Market Survey	2
References	3

1 Title of the Project

"Attendance Automation Assistant"

2 Faculty Mentor

Prof. Jyoti Naughare

3 Details of Group

Sr No	Name of Student	Year - School	Email Address	Mobile Number
1	Krishnaraj Thadesar	SY - School of CSE	kpt.krishnaraj@gmail.com	9834312135
2	Saubhagya Singh	SY - School of CSE	Saubhagyasingh65@gmail.com	7007084088

4 Reference Journals / Conference Papers Related to Work

1. Fast Facial Recognition System Hlaing Htake Khaung Tin, Myint Myint Sein [1]
2. Setta, S., Sinha, S., Mishra, M., Choudhury, P. (2022). Real-Time Facial Recognition Using SURF-FAST [2]

5 Project Details and Objectives

1. To Make taking Attendance Easier for Teachers across the University
2. To Avoid proxies given by students.
3. To Reduce Time and Effort expended by teachers during classes.

6 Resources Required

Further Research Pending to determine resources required. But as of now, No special resources are required. Upon integration with ERP, we may need to acquire certain licenses for web interface and communication.

7 Detailed Project Description

1. Cameras in our Smartphones are getting better and better each day. This technology has tremendous potential, that is being explored to its limits by AR and VR integration in smartphones. We aim to use this advancement in Camera technology, and the fact that everyone has a smartphone with a good camera now a days, to make the process of taking attendance in classes easier for teachers.
2. The Idea would be for the teacher to open the app, point to camera at the entire class for around 5 to 10 seconds, or just take 2 or 3 clear photos of sections of the class on the spot, and a backend algorithm would then process those images using Facial Recognition, and Identify the presenties.

3. Images would be cross referenced against the latest images of the students.
4. Within a minute of processing, the App would show the teacher every person that is present, and give the option to add or modify the table to account for errors.
5. They would then be able to save the records as a csv file, or in our case, if possible, directly upload the results to our ERP.
6. The videos or images taken on the spot would have an option to be saved or deleted for further verification depending on the Teachers wishes.
7. Records for Each student in each class would be stored locally, as cloud access would put a limitation on net requirements. Most classrooms do not have active and fast 4G connection, so ideally we would try to localise data and algorithms.

8 Market Survey

1. The Market for this Project in its first phase would only be for The teachers in our University
2. Upon further Extention, we may provide solutions and integrations with various School ERPs from other universities, and schools.
3. At present there are so solutions of a similar kind. The only other alternative to taking attendance the conventional way, would be to use biometric scanners.
4. Cost offered would be extremely minimal to none, and would therefore be affordable to virtually any school, and perhaps even tuition centers for keeping their records.
5. For any teacher or Faculty wanting to keep attendance of their students, this app could easily export an Excel Sheet for easy to access and use attendance.

Submitted By
Faculty Member

Reviewed by
Expert 1

Reviewed by
Expert 2

Reviewed by
HOS

References

- [1] Fast Facial Recognition System Hlaing Htake Khaung Tin, Myint Myint Sein
- [2] Setta, S., Sinha, S., Mishra, M., Choudhury, P. 2022. Real-Time Facial Recognition Using SURF-FAST. In: Sharma, N., Chakrabarti, A., Balas, V.E., Bruckstein, A.M. eds Data Management, Analytics and Innovation. Lecture Notes on Data Engineering and Communications Technologies, vol 71. Springer, Singapore