Fr. Conceicao Rodrigues College of Engineering, Bandra (W)

SE Electronics & Computer Science (SEM IV)

Mini Project-1B Proposal Form

AY -2020 – 21

1. Name of the student(s) with roll nos

- Andrea Pinto (Roll No. 8830)
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2. Title of the Mini Project:

Face Recognition Attendance System

3. Mini Project Category:

Research		**Software**	√
Application	√	**Hardware**	
Product		**Software and Hardware**	

4. Mini Project Area/ Problem Characteristics:

Analog Circuits		**Software Tools**	√
Digital Circuits		**Mobile Application**	
Micro-Controller based circuits		**DBMS/Data Structure Application**	
Basic Science/Engineering	√	**Social/Environmental issues**	
Others (Please Specify)			

Literature Survey: While humans can recognize faces without much effort, facial recognition is a challenging pattern recognition problem in computing. Now-a-days, biometric authentication methods are growing rapidly as one of promising authentication methods, besides the conventional ones. Almost all biometrics technologies require some actions to be done by the user, which include setting the user's fingers or hand for geometry detection, standing still in a fixed position in front of the camera for iris or retina identification. However, the face recognition method has several external advantages over other biometric methods as this method can be done passively without explicit action since the user's face image can be obtained by the camera from a certain distance. This method can be especially useful for academic purposes and invigilation.

5 A. Mini Project Abstract:

Authentication is one of the significant issues in the era of information systems. Among other ways, human face recognition (HFR) is one of known techniques which can be used for user authentication. As we are making a system which can recognize a face and match with its own database, it will make the attendance system more detailed and specific. Additionally, we seek to provide a valuable attendance service for both teachers and students by reducing manual process errors by offering an automated and reliable attendance system. Also, students will not need to carry their ID cards as this will be the most authentic method to take attendance.

5 B. Project Objectives:

- To prevent any sort of cheating or malpractices during online examinations
- To identify and verify students entering the institute
- To build a face recognition system where a human can stand in front of the system and a camera will match the face along with its database
- To help professors with organizing the process of tracking and managing student's attendance and absenteeism

6. System Requirements

6.1 Software Requirements

Python

7. What is the Novelty / Innovation/ Social relevance in the proposed project?

The system will store the faces that are detected and automatically mark the attendance. Multiple face detection is also possible. Moreover, the faceprint is a unique code that is applicable only to a particular person and hence increases privacy and security, which implies that a student cannot present another friend in place of him/herself.

8. References

https://en.wikipedia.org/wiki/Facial_recognition_system

https://www.eff.org/pages/face-recognition