FINAL YEAR PROJECT PRESENTAION

Face Recognition Attendance Project

FEDERAL URDU UNIVERSITY OF ARTS, SCIENCES & TECHNOLOGY

Submitted By

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OUTLINE

- ABOUT PROJECT
- PROBLEM AND STATEMENT
- PURPOSE AND SCOPE
- OBJECTIVES
- SYSTEM ARCHITETURE
- CONCLUSION

ABOUT PROJECT

Traditionally attendance is marked manually by teachers/Focal Persons and they must make sure correct attendance is marked for respective student/Employee.

This whole process wastes some of lecture time and part of correct information is missed due to fraudulent and proxy cases.

ABOUT PROJECT

In order to determine classroom attendance, face detection and face recognition are performed. Face detection is used to determine the location of the faces in the entrance location Of classroom image and extract sub images for each face. Then, in face recognition, the face images detected will be compared with the data base consisting of images of students in the class, and attendance will be recorded accordingly.

PROBLEM AND STATEMENT

Lack of Policy

Majority of employers do not have an attendance management policy. If they do, it is outdated. Decisions are not advisable in the absence of a policy as they result in inconsistency. An attendance management system needs to also comply with certain legal considerations based on the structure of the organization

PROBLEM AND STATEMENT

Face Recognition is a method of identifying an individual by comparing live capture or digital image data with the stored record for that person.

Face Recognition Attendance System is marking of attendance based on this technology.

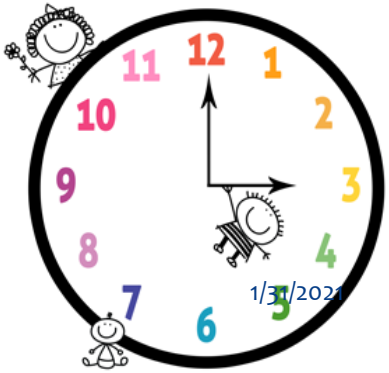
PROBLEM AND STATEMENT

1-Automated

3-Effective

2- Economically

4- Keep extra time



PURPOSE AND SCOPE

Provides an automated attendance system that is practical,
reliable and eliminate disturbance and time loss of traditional attendance systems.

• Present a system that can accurately evaluate student's
performance depending on their recorded attendance rate.

PURPOSE AND SCOPE

The system we have developed has successfully able to accomplish the task of Marking the attendance in the classroom automatically and output obtained in an excel sheet as desired in real time.

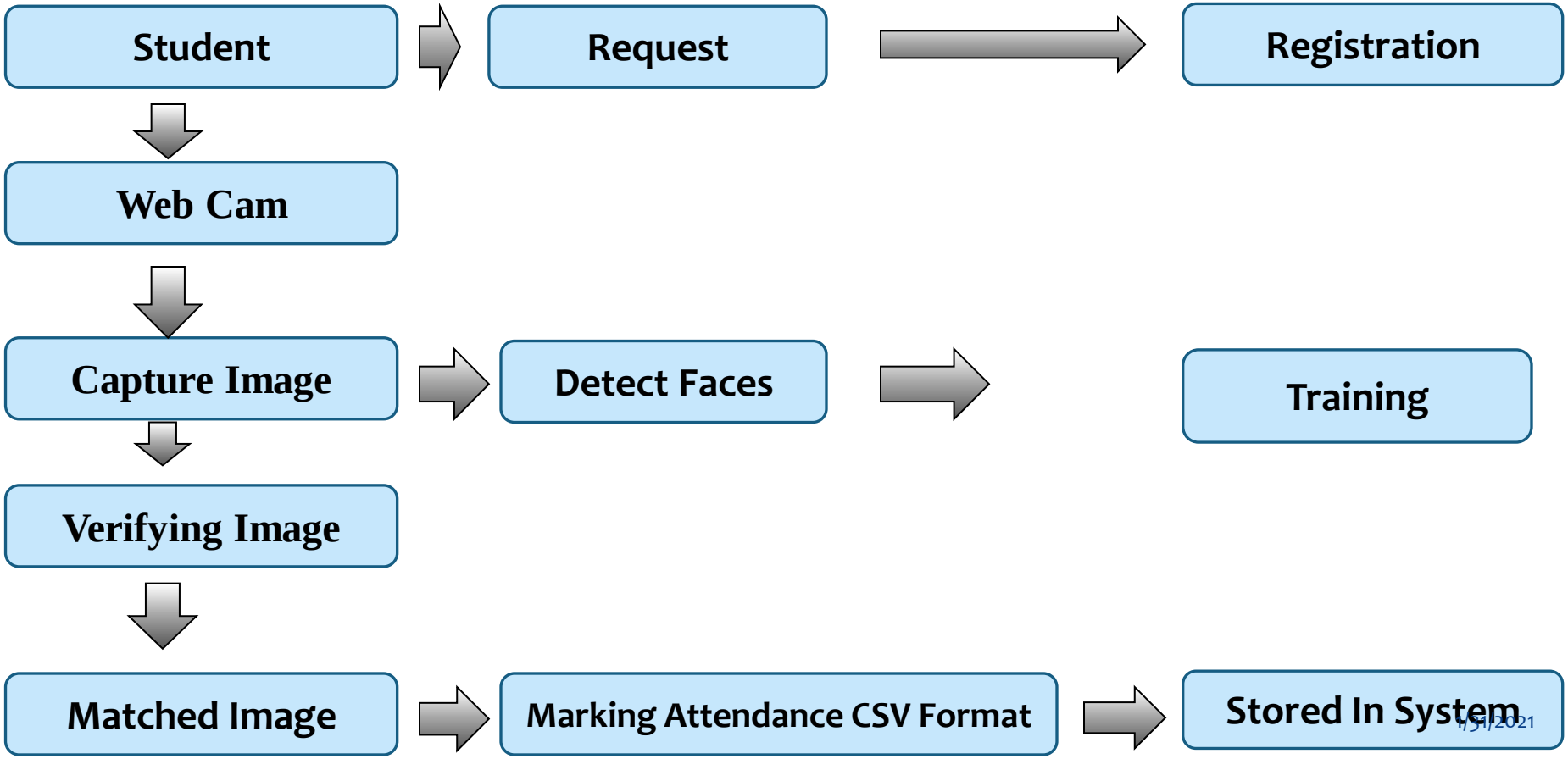
Another important aspect where we can work is towards creating an online data base of the attendance and its automatic updating, keeping in mind growing popularity of internet of things.

OBJECTIVES

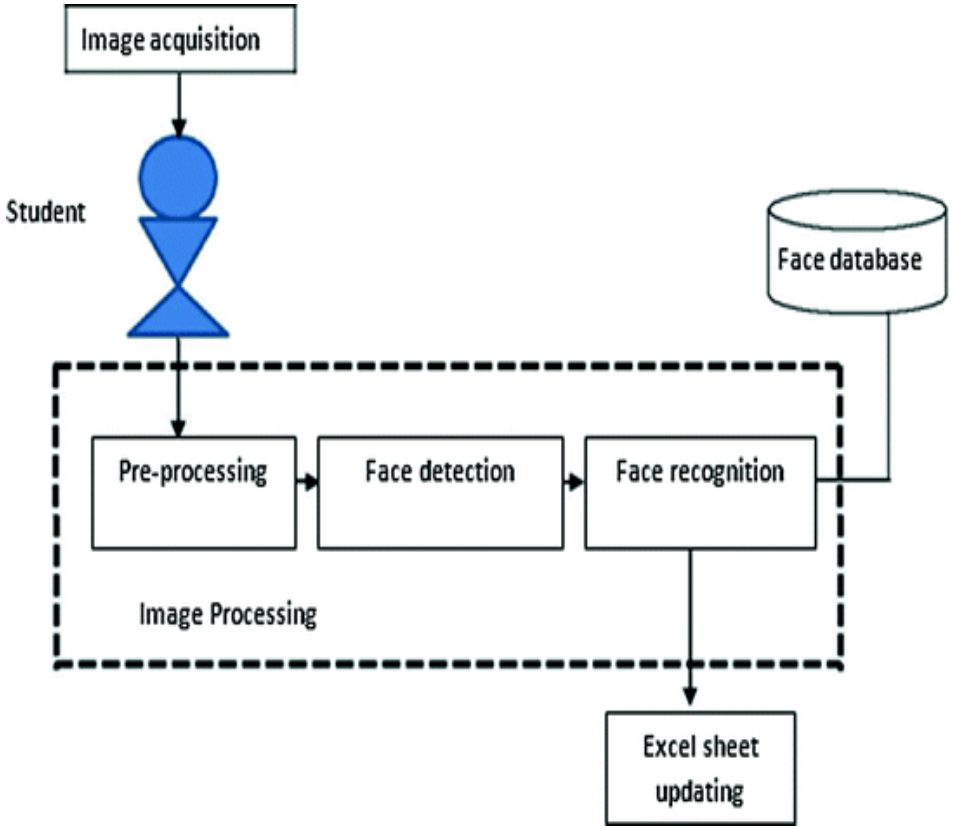
In this project we aim to build an Attendance marking system with the help of facial recognition owing to the difficulty in the manual as well as other traditional means of attendance system.

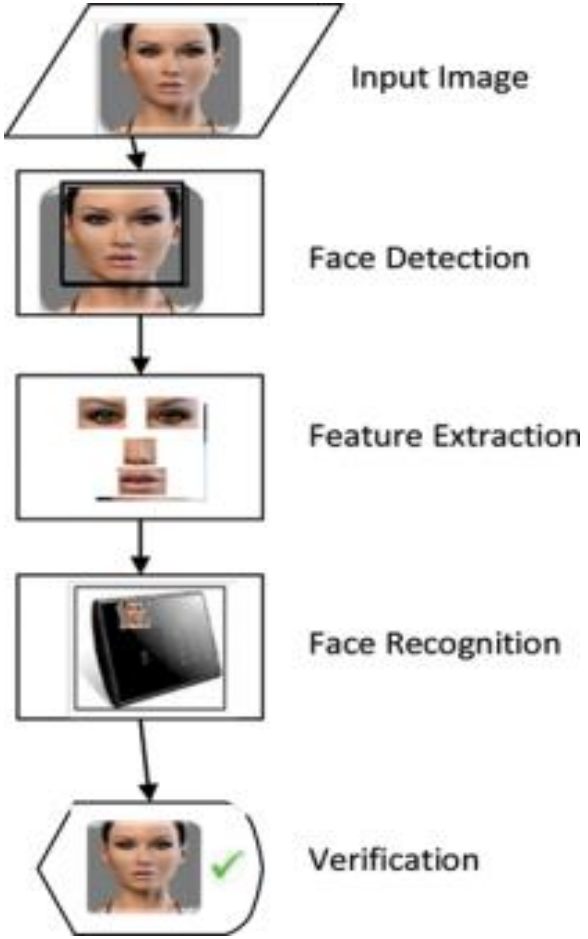
The main objective of this project is to offer system that simplify and automate the process of recording and tracking students' attendance through face recognition technology. In this technology to identify or verify a person from a digital image or surveillance video

SYSTEM ARCHITETURE



SYSTEM ARCHITETURE

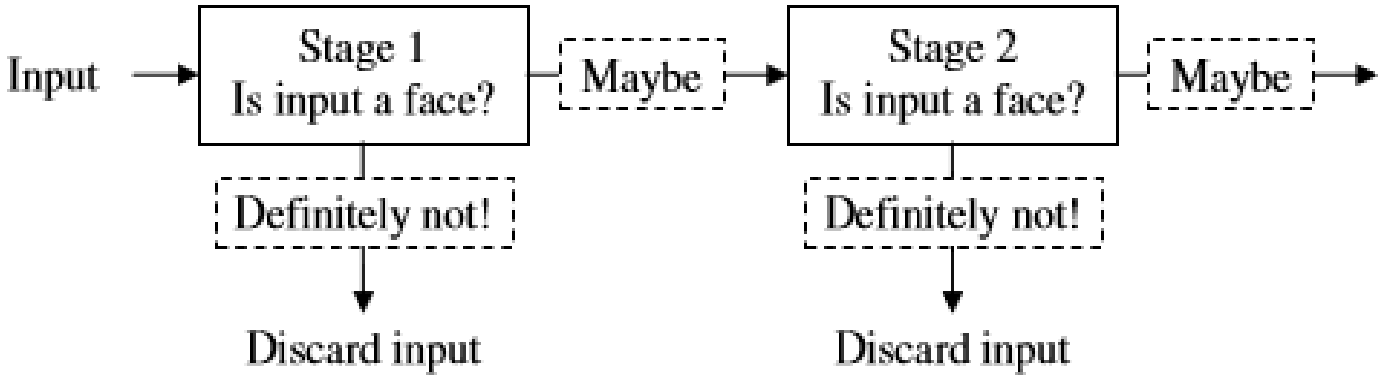




SYSTEM ARCHITETURE

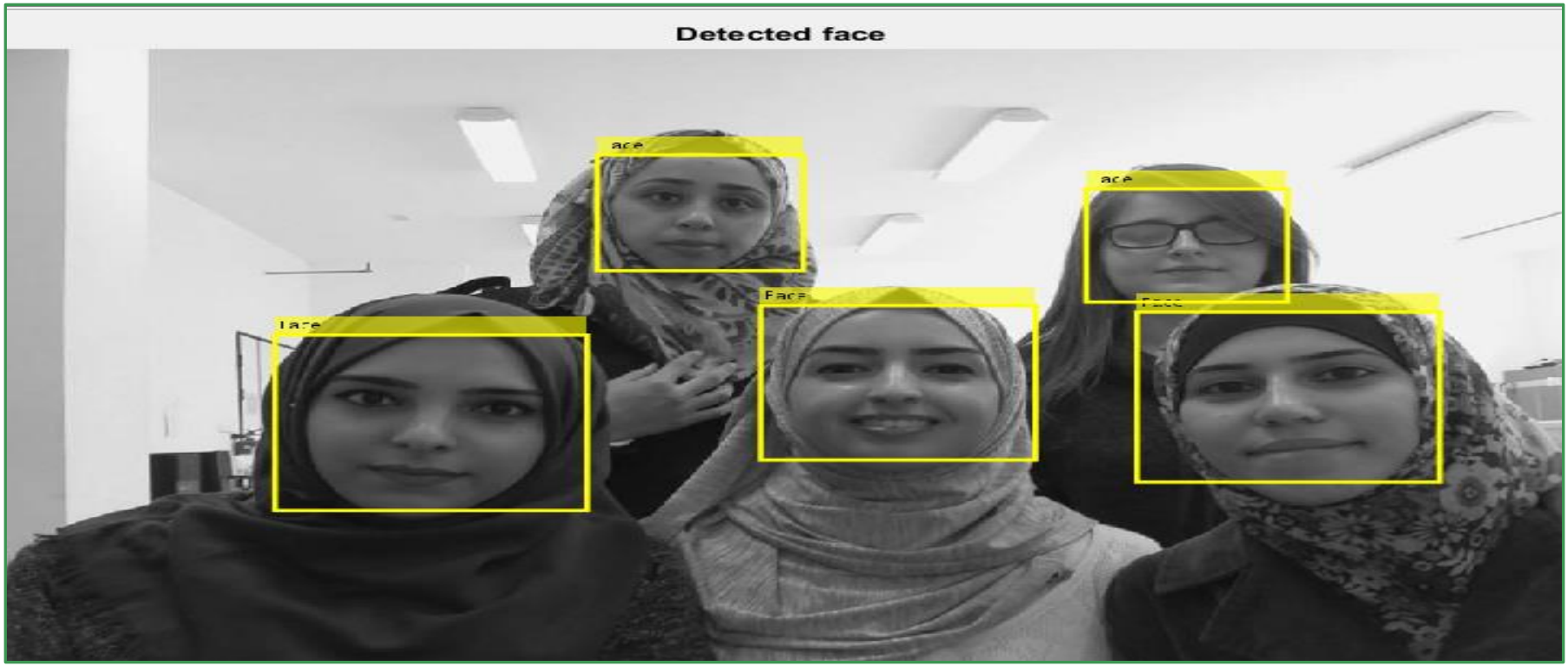
Cascade Classifiers

- **In stead of finding faces, the algorithm should discard non-face**



SYSTEM ARCHITETURE

Example for detect face



SYSTEM ARCHITETURE

Eigenface approach to Face Recognition

Face is a typical multidimensional structure and needs good computational analysis for
Recognition

• Many face features make development of facial recognition systems difficult.

• This problem is solved by the method called Principal Component Analysis or so called
eigen face approach.

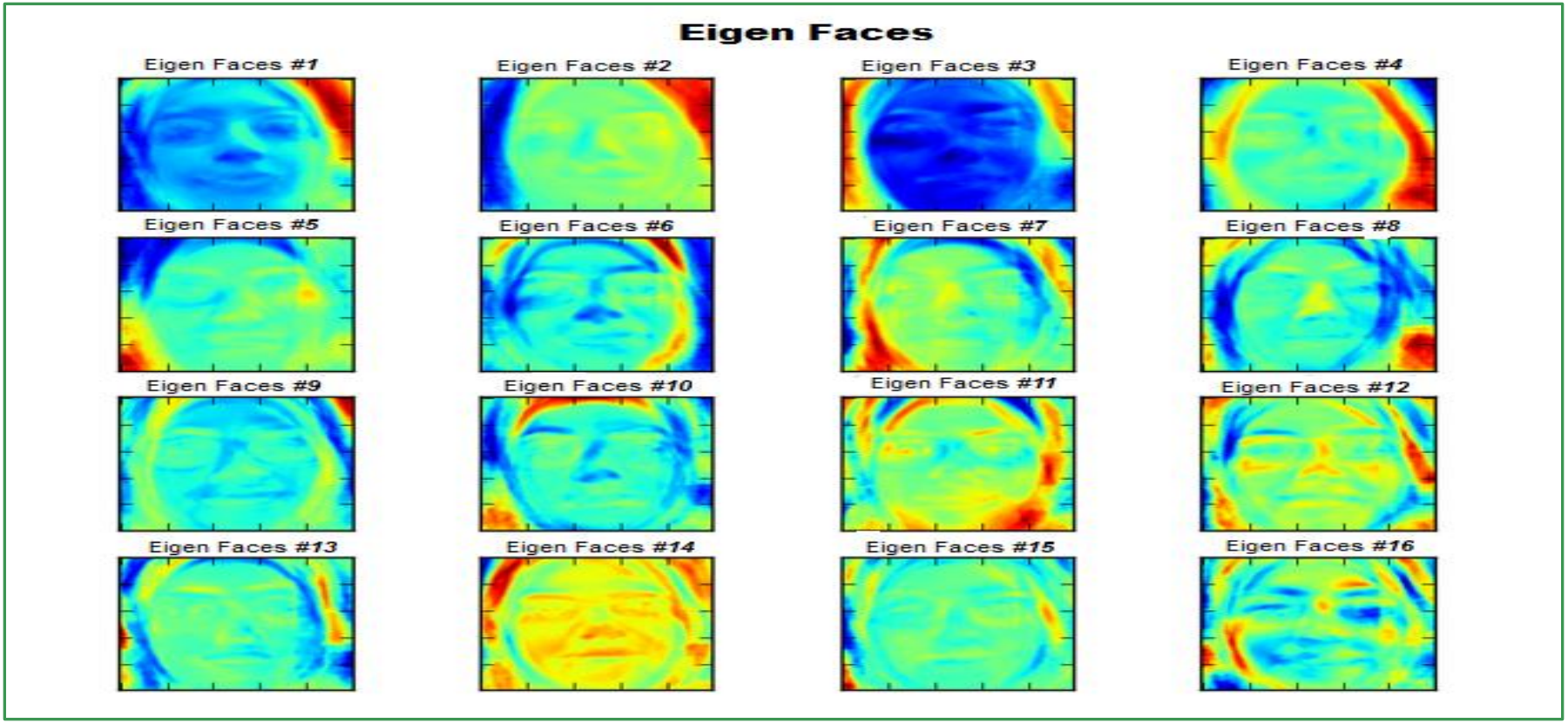
SYSTEM ARCHITETURE

• This approach transforms faces into a small set of essential characteristics, eigenfaces,

which are the main components of the initial set of learning images (training set).

• Recognition is done by projecting a new image in the eigenface subspace, after which the
person is classified by comparing its position in eigenface space with the position of known
individuals

SYSTEM ARCHITETURE



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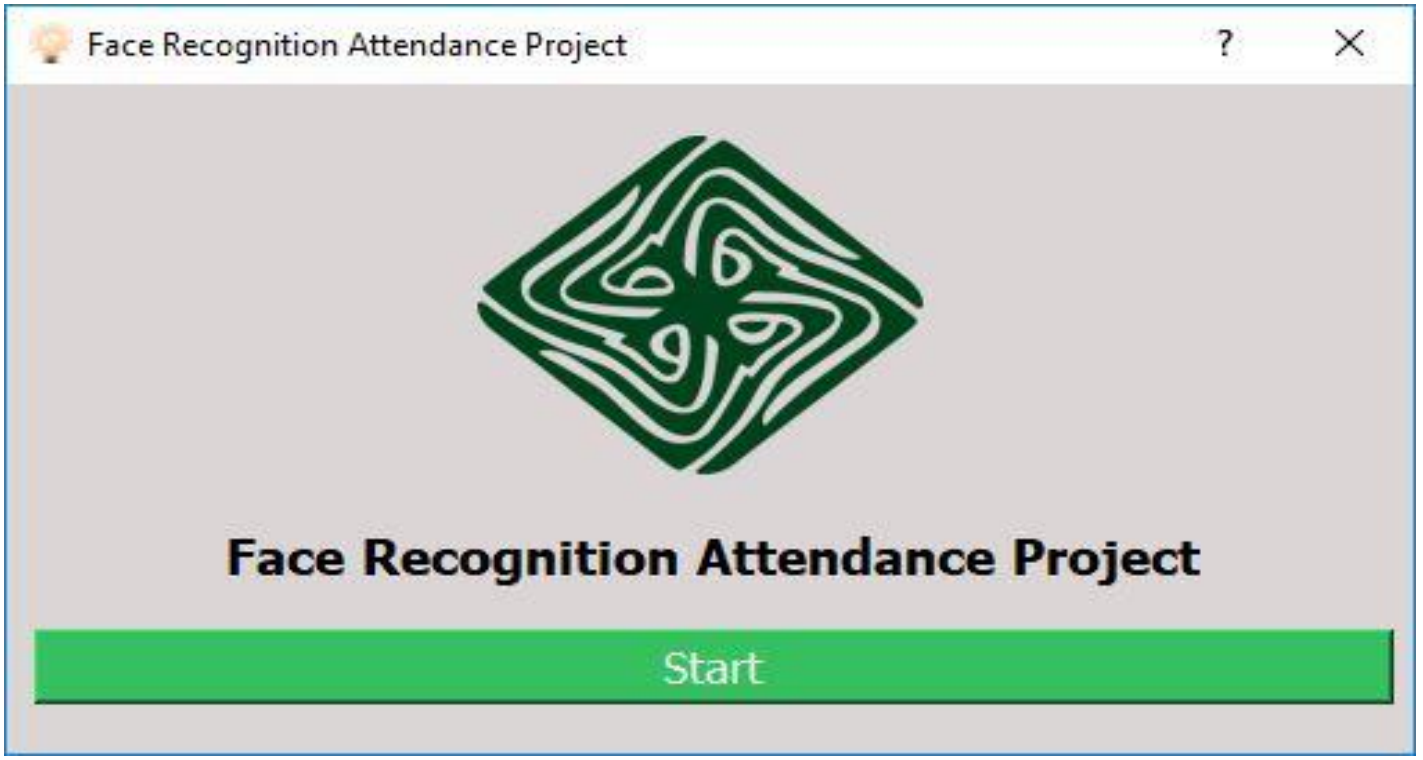

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Sheet1 | Sheet2 | Sheet3

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LIVE FEED

ATTENDENCE SHEET

OBJECTIVES

Automatic attendance system can be improved by increasing the number of features which can be extracted to increase accuracy of face recognition. Once the software is developed and tested properly, it could be improved to cover full institutions such as the Department of Computer Science.

OBJECTIVES

From our experiment, we noticed the face recognition was sensitive to face background, light, and head orientations. This technique described the accurate and efficient method of automatic attendance in the classroom which could replace the traditional method. An automatic attendance has many advantages, most of the existing systems are time consuming and require semi manual interference from lecturers, our system seeks to solve these issues by using face recognition in the process to save the time and labor. And No need for installing complex hardware for taking the attendance in classroom, all we need is a camera and laptop. We used algorithms that can detect and recognize faces in the image.

OBJECTIVES

In The System We Have Implemented An Attendance System For A Lecture,
Section Or Laboratory By Which Lecturer Or Teaching Assistant Can Record
Student Attendance. Its Saves Time And Effort, Especially If It Is A Lecture With Huge Number Of Students.

OBJECTIVES

- **Easy integration**
- **Simple algorithm**
- **Easy to use output format**
- **Proxy attendance is eliminated**
- **Saves time**

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THANK YOU