# **Attendance Via Face Recognition App System Requirements Document**

# Revision History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author(s)** | **Description** |
| V1.0 | 15/10/19 | Team | Initial version |

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# Introduction-:

This is a mobile app-based project which aims to introduce attendance marking system via face recognition attendance marking system in which faculties will be using app for their course and student through this app by logging in to the app and marking their attendance. This document tells about the internal system used to make this app.

## Need and Purpose

As we know in today college’s students try to mark proxy (fake attendance) of some students who are absent. This creates lots of problems for teacher who are teaching in colleges as their main motive (to completely teach their course to students) can’t be completed. Hence there is a need of attendance system to tackle this proxy problem which allows faculties to see and monitor which students are not coming in the class and which are. This app is developed on both for mobile and web as some teacher are not maybe comfortable in app version. And thus, via Face Recognition in this app proxy problem certainly going to diminish.

## Intended Audience

This document is intended for software designers, managers and for faculties of college.

## References

**2. Description**

This is an Android Application which will be installed on faculty’s smartphone. Faculty will circulate his/her phone to capture the image and student’s attendance will be marked on the Facial Recognition which is done by Keras-OpenFace that will detect face on the camera and check with the student’s database through CNN Training Model of faces which will be process on the server side and when it is matched attendance will be marked. Faculties has to put certain percentage criteria of attendance in the starting and afterwards he/she can check which students are behind this criterion. This app can also print this list of students in excel sheet.

***2.1 Features and Functions***

***2.1.1 Features***

Attendance via Face Recognition app can be used by many faculties for their course’s student’s attendance. They can use it via app or web browser. Developed in simplistic manner for novice users. It uses secure authentication protocol for securing the attendance of students. Faculties can check in app for list of students which are behind given percentage criterion of attendance and view in excel sheet.

**2.1.2 Functions**

The front end has user mode and admin mode.

The user mode handles -:

# Register Login

1. Attendance records

The Admin Mode handles –:

1. Marked attendance
2. See and Modify attendance requests
3. Course Request

The course management module handles -:

1. See and Modify courses database
2. See and Modify attendance database

The authentication module handles -:

1. User databases
2. Face recognition cognitive services
   1. **Users**
3. Teachers
4. Students
5. General Public
6. Teaching Assistants
   1. **Operating Environment**
      1. **Hardware-:**

Face recognition app needs a mobile phone based on Android and a computer for web version of this app.

* + 1. **Software -:**

Face recognition app can be run on Android such as KitKat, Lollipop, Nougat, Oreo, Pie etc. It requires:

1. Android Studio 3.5 or later
2. Keras-OpenFace
3. React-Native 5.0 or later
4. PostgreSQL
5. NodeJS
6. CNN (deep learning model)
7. ReactJs
8. Git

Its user interface can be run on the following browser for web version on any hardware and OS -:

1. Chrome 2.0
2. Firefox 5.0
3. Safari 3.6
4. Internet Explorer 6.0
5. Opera 2.5

High version of browser will be able to run it.

# Specific Requirements

* 1. **Performance Requirements -:**