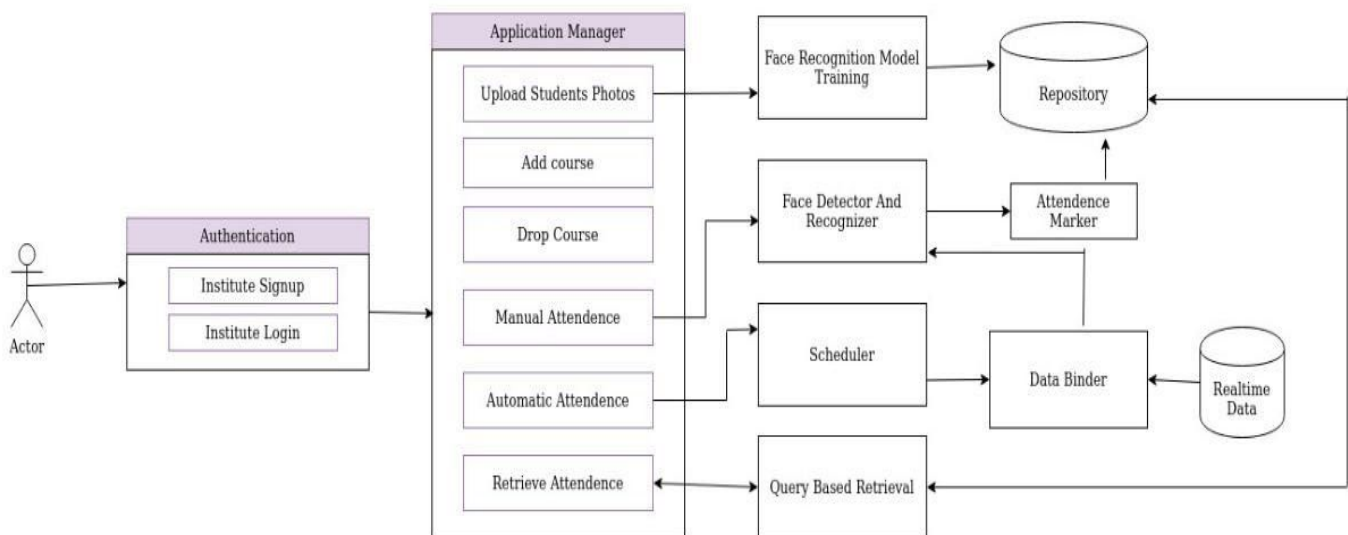


# AI\_BASED\_ATTENDANCE\_PLATFORM

## Abstract

Replacing manual tasks of attendance taking with a comprehensive application can save a lot of precious teaching time. Our AI powered face recognition solution which uses Computer Vision and Machine Learning algorithms to mark the attendance of the employees or students of the organisation. This platform is a really convenient choice to quickly and easily track a student's attendance or their participation in any given event, program or classes. Following is the working of the application proposed.



Following are the short description of the above modules/services :

## Authentication

Different institutes will need to create their account and hence will get their unique logins to the application. The Authentication Service will be responsible to handle signup and login of the institutes.

## Application Manager

This is the modules which will be visible to the institute using which they can avail the services of the platform.

- **Upload** : For the platform to train the face recognition attendance model , the institute will need to upload the zip format file which contains the n-number of photos of the students. Hence our model will get trained over those photos.
- **Add/Drop Course** : This is the scheduling service through which institute will upload configuration file for the courses of which it want to capture the attendance. This configuration file will contain the scheduling information like <course\_no,class\_id,roll\_no\_of\_students\_enrolled,schedling\_day,scheduling\_time>. Also Institute can remove the course which are added.
- **Manual Attendance**: If for any class the institute wants to run the face recognition attendance model over some photos of any particular course for any date . This service will help to achieve that.
- **Automatic Attendance**: This module will is responsible to pass the scheduling information of the courses to the scheduler for automatic attendance.
- **Retrieve Attendance**: Using this module the institute will be able to get the attendance for any date,course using query and the return data will be wither in json format or csv format.

## Data Binder

This module is responsible to bind the input stream data of the class either comming from cctv camera or any other source and the face recognition attendance model at the scheduled time.

## Attendance Marker

The module gets the results of the prediction model as input and will then be responsible to save the attendance in the database.

## Scheduler

This module is responsible to run the face recognition attendance model at the scheduled time as given by the institute on the configuration file.

