# Automatic attendance system using Facial Recognition

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## 1 Abstract

The project deals with the automatic face-recognition attendance system. The camera is placed outside the classroom.For every person who enters the class , the camera captures the image and sends the image to the LoadBalancer. As there are multiple classes running in parallel, the loadbalancer is getting multiple requests at the same time.It sends the image to server which is having less load.The server extracts the face from the image.After extracting the face it detects the fact to which person it belongs to.After getting the person name , it marks the attendance of that student in attendance repository.

## 2 Solution Overview

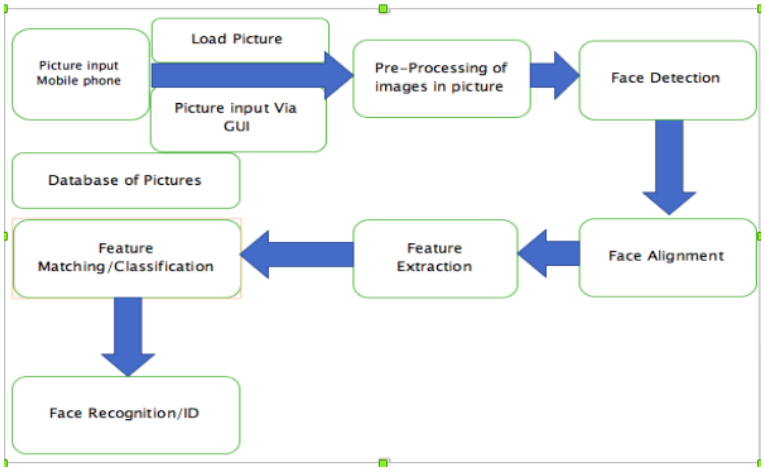


Figure 1: Face detection and recognition flow diagram

From the figure, above, Face Detection or face detector will detect any given face in the given image or input video. Face localization, will detect where the faces are located in the given image/video, by use of bounding boxes. Face Alignment is when the system will find a face and align landmarks such as nose, eyes, chin, mouth for feature extraction. Feature extraction, extracts key

features such as the eyes, nose, mouth to undergo tracking. Feature matching and classification. matches a face based on a trained data set of pictures from a database of pictures. Face recognition, gives a positive or negative output of a recognized face based on feature matching and classification from a referenced facial image.