**Crowd Detection System**

Abstract

In this COVID19 scenario many do not have permission to go out freely and in colleges students are not allowed to make crowd in the campus without permission, So in these particular Managing this crowd to maintain social distance is huge task for government and college authorities, so they require a system which will help them to control the people to maintain social distance. In our study, we develop a device using AI which helps in detecting the people who are in the frame of camera and if there are more faces present in the frame than allowed frame limit then the device make an alert and inform them that they are violating the rules. In this way we can control the crowd

**Introduction**

In this project we are detecting crowd formation in restricted areas by the face detection. The Haar feature was extracted from internal image detection, by counting the faces detected from a frame we can estimate the formation of crowed in an area, Whenever there is a crowed forms then alert will be sent to the authorities and also we will take photograph of the crowd and upload the photo to a cloud the photo can be access from anywhere in the world

**Block diagram**

Camera

Upload PHOTO to a Cloud Storage

Sending Message to Authorities

Take photo of crowd

Face detection and face counting algorithm

Classifier

Feature extraction

Pre-Processing