

## Social Distancing Monitoring Application.

### Methodology:

We are going to develop a “Social Distancing Monitoring” application with the help of Image Processing technology. This application can handle 3 different types of input. It can work on image, recorded video and real time CCTV camera. We will be using COCO dataset for image classification and labelling. We will be using YOLO V3 algorithm for getting best confidence level in image processing. Whenever people try to violate Social Distancing a beep sound will be given to the people to check their social distancing.

### Working:

Initially we will be identifying people from the given form of input. Then a rectangular frame is drawn around them. Each rectangular frame will be indexed from 0 to n. we will be defining a threshold for the distance. Now the threshold will be compared with each and every rectangular frame from centre of it. If the distance falls below the defined threshold they will be put on a list and the other who's distance is greater than the defined threshold will be put on a separate list. The people who falls in violating list will be highlighted with red rectangular frame and a beep sound will be given until they maintain a proper social distance. Now the people who are all following social distancing will be highlighted with green rectangular frame. The output frame also shows the number of people in danger, safe and high risk people. The accuracy is very high in using this algorithm and the time taken for detection is very low.

### Technology used:

- Image Processing
- Artificial Intelligence
- COCO Dataset
- YOLO V3
- Computer Vision