**Hardware Requirements:**

1. GPU with tensor cores, high FLOPs number, high memory bandwidth, and 16-bit capability.

2. GPU equivalent to Titan X series GPU or Nvidia RTX 2080ti

**Software Requirements:**

1. OpenCV(V3.4 or above)

2. Numpy

3. Matplotlib

**Object Detection using OpenCV and YoloV3:**

**With this technique we detect the object and count for the number of object in the frame to determine whether the place is maintianing social distancing or not.**

Step 1: Importing of the OpenCV and numpy lib

Step 2: Intialization of the Parameter

* Intialize the confidence score as 0.5
* Initialize the Intersection above the Union Check as 0.5
* Initialization with the layes parameter
* Intialization with the pretrained weights for more accuracy fast processing
* Initialing with the Lebels to be detected in the Video

Step 3: Step 3: Reading the Video as Images into the buffer and Preprocessing the image

Step 4: Reading the Video as Images into the buffer and Preprocessing the image

In this step we need to capture the whole video as image and convert to a specific resolution. This step displayes the time taken to label single frame .

Step 5: Object detection

In this step we compare the detected labels in the last step to the confidence score and Presicion score and store the new score to the respected list.

Step 6: Checking for the Object Detected and Marking them as Box

Ensuring for the Object confirmed in last stage. In this step we mark a Box around the Object detected by measuring the height and width of the object. Also adding labels and Confidence score to the image in carried out in this stage.