**Abstract**

In this python project, we are getting to build the Human Detection and Counting System through Webcam otherwise you can give your own video or images. this is often an intermediate level deep learning project on computer vision, which can assist you to master the concepts and cause you to an expert within the field of knowledge Science. Let’s build an exciting project.

Recent research has been devoted to detecting people in images and videos. In this paper, a human detection method based on Histogram of Oriented Gradients (HoG) features and human body ratio estimation is presented. We utilized the discriminative power of HoG features for human detection, and implemented motion detection and local regions sliding window classifier, to obtain a rich descriptor set. Our human detection system consists of two stages. The initial stage involves image preprocessing and image segmentation, whereas the second stage classifies the integral image as human or non-human using human body ratio estimation, local region sliding window method and HoG Human Descriptor. Subsequently, it increases the detection rate and reduces the false alarm by deducting the overlapping window. In our experiments, DaimlerChrysler pedestrian benchmark data set is used to train a standard descriptor and the results showed an overall detection rate of 80% above.

Counting people in visual surveillance is hard and challenging problem. Automatic counting surveillance of individuals publicly areas is vital for safety control. Previously many techniques and methods are proposed. These methods/techniques aren't producing accurate and high performance for difficult situations. Now Foreground Extraction and Expectation Maximization (EM) based methods are proposed, which provides a far better accurate solution for counting people and locating a private. This work presents the security precaution of covid-19 for maintaining social distancing. Single shot detector algorithm (SSD) takes the live stream from camera and convolutional neural network (CNN) will identify the human and assign a private id and therefore the count it accordingly.