**VIDEO ANALYTICS**

**TASKS COMPLETED:**

* People and object detection
* People and object counting
* Missing Object Detection

**PEOPLE AND OBJECT DETECTION:**

Yolo is used to detect people and object in the given image or frame of a video. Different classes are listed in ‘coco.names’ file. Yolov3.cfg file has configuration for all these objects. Name of the file can be given dynamically. If the file does not exist, an error is thrown. The input is processed using OpenCV library and the functions in it. The detected object is given label and a frame is drawn around it.

**PEOPLE AND OBJECT COUNTING:**

Two counters are maintained. One to count the number of people and other for objects. When the object discovered is a person the count is updated and similarly desired object’s count can be calculated by giving the desired object as input.

**MISSING OBJECT DETECTION:**

The original image is analysed first and the objects are stored in the list. The objects in the current image are stored in another list.

If the count of objects of a class (type of object) is missing in the second image, then the missing objects (from the first image) are marked based on least overlapping area.