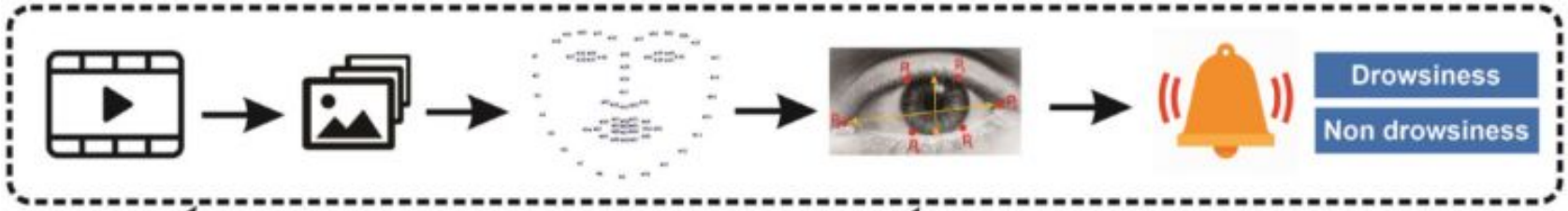
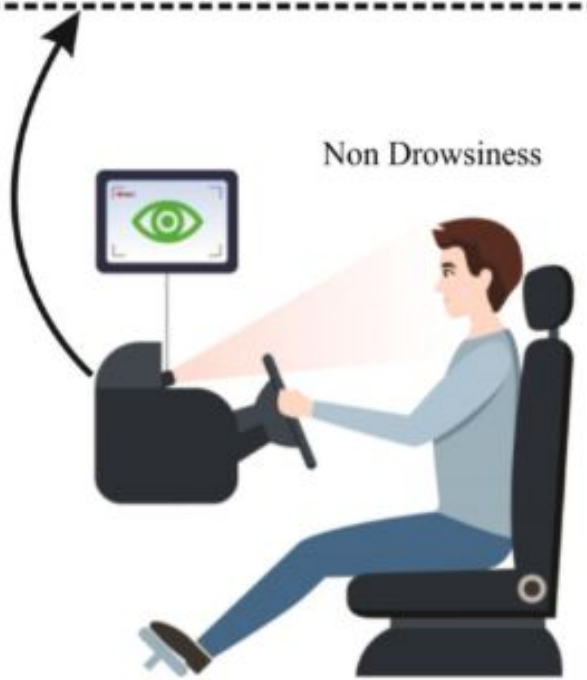
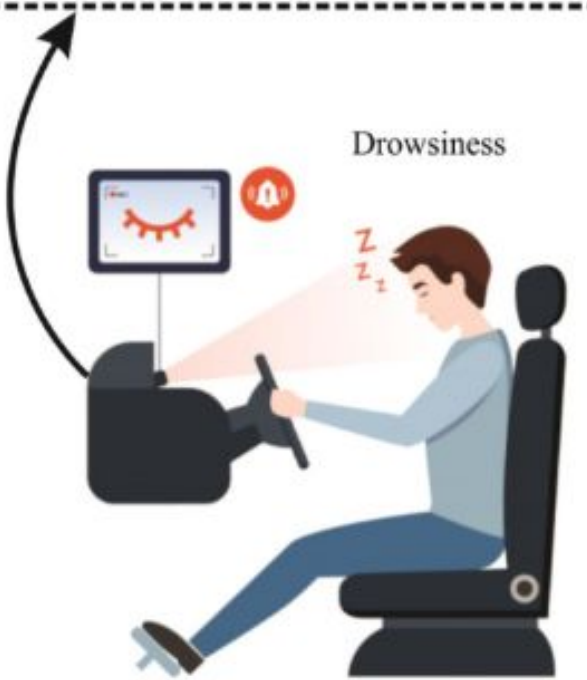
Drowsiness Detection

- YOLO V5


Drowsiness
Non drowsiness


Non Drowsiness


Drowsiness

Objective

Driver drowsiness and fatigue are two of the most common causes of car accidents.Every year, the number of deaths and fatalities increases over the world.You need to create an app to reduce the frequency of accidents caused by driver weariness and so improve transportation safety with the help of this project; this system deals with automatic driver sleepiness detection based on visual information. You can try a method for measuring PERCLOS, a scientifically established measure of tiredness linked with slow eye closure, by locating, tracking, and analyzing both the driver's face and eyes.Many drivers and workers' lives are put at jeopardy due to drowsiness. To identify the onset of drowsiness, it is critical to design realistic and easy-to-deploy real-world solutions.The goal of this project is to create an app that can detect driver drowsiness in real time.

Benefits :

[] Easy for the machine for detection and prevent from the accident in future.

[] Helps to detect that the driver is in mood or not.

Training the YOLOv5 Object Detector on a Custom Dataset

Model Selection –

Yolov5 model dont have a particular feature like accuracy. Instead you can use the confidence of every object that is being detected in the frame

Prediction:

The testing files best.pt is created after running 999 epochs and then we have to download and past in the yolo v5 dir and we have to test the model

We perform data pre-processing techniques on it.

Based on the cluster number respective model is loaded and is used to predict the data for that cluster.

Once the prediction is done The predictions are saved in one folder.

Thank
you