Drowsy driver detection

Objective

To build a system for detecting drowsiness of driver using camera.

Summary of Discussion

We will be using opencv-python module for implementation

GUI

* GUI will be created using Tkinter ( Python library for creating desktop Applications)
* A window with a button to start live video

System model

Stage1

* When start button is clicked following operation will occur
* Start live video capture
* Frame by frame reading
* Face detection using opencv deep neural network.
* Extract left eye co-ordinates from detected face
* Extract right eye co-ordinates from detected face
* Calculate eye aspect ratios
* Draw contours around eye
* Check whether aspect ratio is greater than threshold
* If yes increase counter value
* Check whether the counter value is greater than threshold2, produce alert

Note : Camera quality affect the accuracy of the system

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