Driver Drowsiness Detection Using OpenCV and dlib

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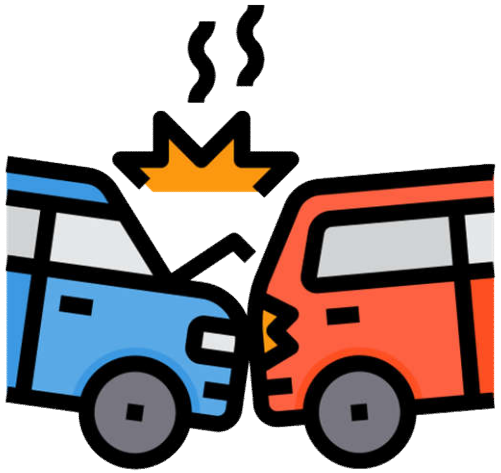


57 CONFIRMED DEAD ON THE KINTAMPO-TECHIMAN HIGHWAY ON 22ND MAY, 2019

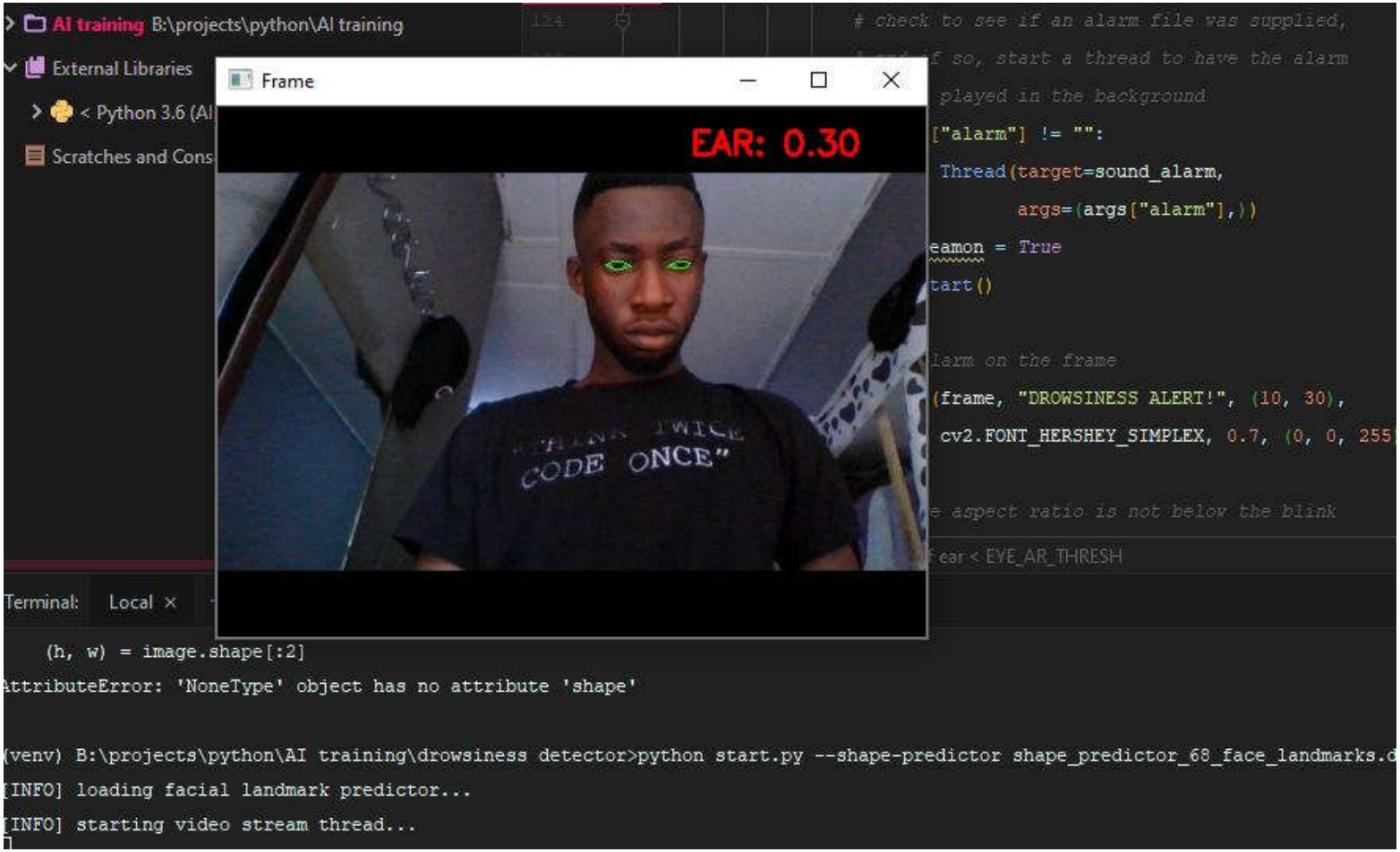
PROBLEM STATEMENT

Over 100,00 deaths are caused by sleeping drivers and there are no existing solutions to curb the menace in commercial drivers in Ghana.

OUR SOLUTION

A drowsiness detection application built with OpenCV to detect and prompt drivers when they are feeling sleepy.

This application can also be configured to send reports to the various transport unions and transport administrators so they know their drivers' performance on the road.


AI training B:\projects\python\AI training
External Libraries
< Python 3.6 (AI
Scratches and Cons
Frame
EAR: 0.30
CODE ONCE"
check to see if an alarm file was supplied,
played in the background
["alarm"] != "":
Thread(target=sound_alarm,
args=(args["alarm"],))
eamon = True
tart()
larm on the frame
(frame, "DROWSINESS ALERT!", (10, 30),
cv2.FONT_HERSHEY_SIMPLEX, 0.7, (0, 0, 255)
e aspect ratio is not below the blink
f ear < EYE_AR_THRESH
Terminal: Local ×
(h, w) = image.shape[:2]
AttributeError: 'NoneType' object has no attribute 'shape'
(venv) B:\projects\python\AI training\drowsiness detector>python start.py --shape-predictor shape_predictor_68_face_landmarks.d
[INFO] loading facial landmark predictor...
[INFO] starting video stream thread...

INNOVATION

This solution is innovative as there are currently no such solution used by the commercial transport sector in Ghana and this solution will help prevent a lot of deaths on our roads in Ghana and across Africa.

IMPACT

This solution has a lot of impacts:

1. Save human lives
2. Financial impact
3. Business impact

TECHNICAL FEASIBILITY

Items needed to implement:

1. **Raspberry Pi**
2. **Webcam**

The solution can be technically implemented.

DEMO