DRIVER DROWSINESS DETECTION & ALERT SYSTEM (Gmail, Photo)

-Using Deep Learning-

Abstract

- This project is to develop an Driver Drowsiness Detection Application.
- Nowdays the driver safety in the car is on of the most wanted system to avoid acciedents.
- Basically Drowsiness is a state of sleepiness which abnormallly occures during day time or when we are tired or when drunked.
- Sometimes during driving people can be drowsy and it may occures acciedent.
- In India around 1.5 lakh people die per year in road acciedent due to drowsy.

fig (a) : Drowsy Driver

fig (b) : Acciedent due to drowsiness

Aim & Objective

- Our aim is to provide an interface where program can automatically detect the drowsiness of driver and save them from accident
- Collecting the image of human from webcam, and explore how this information could be used to improve the security while driving.

Introduction

- This project help for secure driver from accident.
- Driver drowsiness detection is a car safety project which helps prevent accidents caused by the driver getting drowsy.
- Basically it collect the image of human from webcam, and explore how this information could be used to improve the security while driving.
- Collect images from live webcam feed and aply algorithm on image and detect the driver drowsy or not.
- If driver drowsy the it play the buzer alarm and increase buzer sound in each 2 sec.
- If driver is not wake up at fifth buzer them it send a sms regarding him situaton to the family member

Modules

- **Login Module** – In this module user will able to enter in system and avaible to start the drowsiness system and system will start the camera and start monitoring the driver.

- **Registration Module** - In this module user able to register his deatils such as its contact number, email and also his family member details and their number and emails which going to use to make them alert by sending eamil in stage of drowsinesss.

- **Eye Extraction Module** - In this module it will detect the eyes and face landmarks from live webcam feed and apply algorithms on image to detect driver drowsy or not.

Remaining Modules

- **Drowssiness Detector Module** - In this module it will detect the eyes from live webcam feed and apply algorithms on image to detect driver drowsy or not.

- **Face Identification Module** - In this module it will going to detect the driver identification with the help of face recognition method and with this authentication it will fetch the driver family details from databse.

- **Alert Module** -If driver will not wake up in 5 alarm music then it send *email* to user family member to inform them that you are drowsly along with its current *photo and location.*

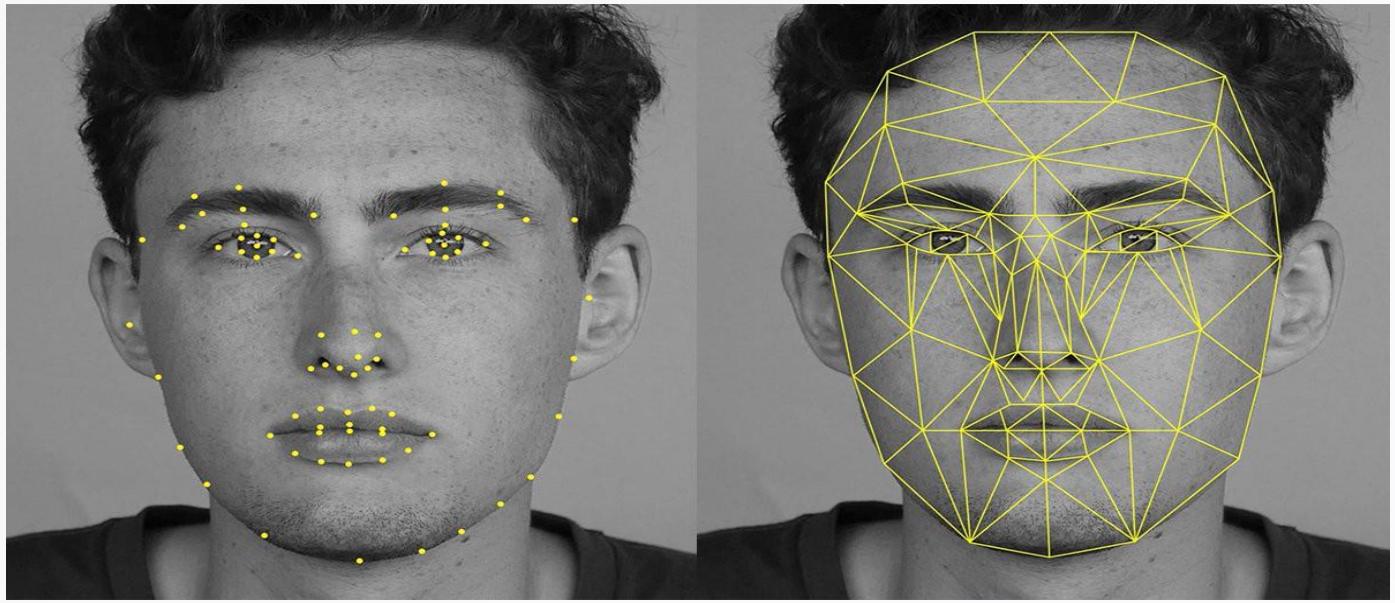
Advantages of System

- Low Cost
- High Security
- Anti - drowsiness Alarm
- Make Easy and Safe drive
- Decreasing road accidents
- This program can use Aircraft also

Library

DLIB

- *Dlib is a open source machine lerning library.*
- *Basically Dlib library used to detect the landmarks of face.*
- *It is used in both industry and academia in a wide range of domains including robotics, embedded devices, mobile phones, and large high performance computing environments.*
- *Dlib is a modern C++ toolkit containing machine learning algorithms and tools for creating complex software in C++ to solve real world problems.*



Software/Hardware Requirements

1. Software

- Python, Pycharm
- OpenCV + Dlib
- WINDOWS 7 and Above

2. Hardware

- Webcam
- Processor-i3
- Hard disk-5GB
- Memory-2GB RAM

Thank You