

1. Application name

Drowsiness Detection

2) What the application is supposed to use for and solve

What it is used for:

A drowsiness detector is a tool used to monitor a person's level of alertness while they are engaged in tasks that require sustained attention and concentration, such as driving or operating heavy machinery.

What it solves:

By continuously monitoring the user's eye movements, the drowsiness detector can identify signs of drowsiness or fatigue. When these signs are detected, the detector alerts the user, prompting them to take a break, rest, or engage in activities to regain alertness. This approach helps prevent accidents and serious injuries by intervening before the user's drowsiness reaches a level where it affects their ability to safely perform the task.

3) Features and functionality.

- Real-time monitoring of driver alertness.
 - This feature allows the drowsiness detector keeps a constant watch on the driver, checking if they're getting too tired while driving. It provides instant feedback on their alertness level, helping them stay safe on the road.
- User-friendly interface.
 - The detector is easy to use, with a clear and intuitive design, regardless of their tech skills. There are tooltips for explanations of further stuff if you still do not understand Whether you're tech-savvy or not, you can still benefit from its safety features while driving.
 - Users can also adjust the sensitivity of the drowsiness detection system's score or eye measurement to prevent cases of false detection. The higher the score, the more open your eyes are, and vice versa
- Timely alerts to prevent accidents.

- When drowsiness is detected, the app triggers alerts through loud audio cues to prompt the driver to wake up and take a break

4. Quick Start Guide & Installation manual:

Firstly Unzip the CV_Project_Drowsiness_Detection file

■ CV guide.mp4

- In the CV_Project_Drowsiness_Detection file, navigate to the distforexe folder
- In the folder click testing.exe to run the application
- Once the cmd screen shows Welcome to pygame, that's when the program is about to launch
- If needed here are the needed libraries to install run these commands in CMD app or ur choice of python env:
- pip install scipy
- Pip install imutils
- Pip install dlib (if any problem occurs with this command refer to this video:
[📺 Install dlib for python3.10 on windows | Install dlib successfully | Machine L... \)](#)
- Pip install opencv-python-headless
- Pip install pygame
- Pip install Pillow
- Pip install matplotlib