



## SIMATS ENGINEERING

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**Course Code:** DSA0216

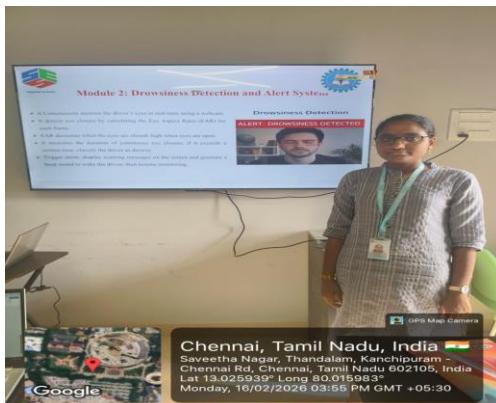
**Slot:** SLOT B

**Course Name:** Computer Vision with Open CV for Modern AI

**Course Faculty:** Dr.Senthilvadivu.S & Dr.Kumaragurubaran.T

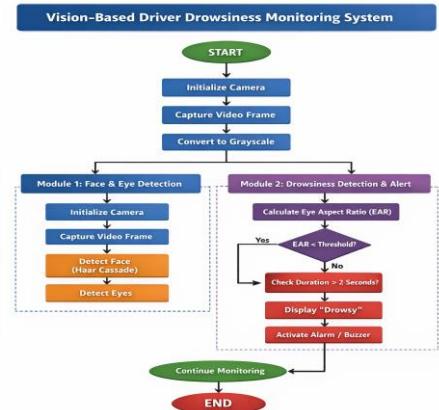
### Project Title: Vision-Based Driver Drowsiness Monitoring System using OpenCV

#### Module Photographs:



Drowsiness Detection

ALERT: DROWSINESS DETECTED



#### Project Description:

#### Module 2 – Drowsiness Detection and Alert System:

This module focuses on detecting driver drowsiness and generating an alert to ensure safety. After detecting the face and eyes, the system continuously monitors the driver's eye movements in real time. The Eye Aspect Ratio (EAR) is calculated from the detected eye regions to determine whether the eyes are open or closed. When the eyes remain closed for a duration longer than a predefined threshold, the system identifies the driver as drowsy. Once drowsiness is detected, a warning message is displayed on the screen and a beep sound is generated to alert the driver. The system then continues monitoring to maintain real-time safety detection.

**Student Signature**

**Guide Signature**