



SIMATS ENGINEERING

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Course Code: DSA0216

Slot: B

Course Name: Computer Vision with OpenCV for Modern AI

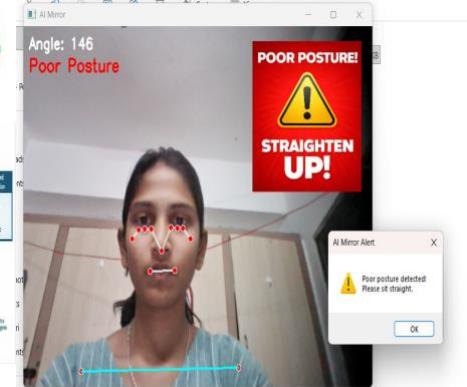
Course Faculty: Dr. S. Senthilvadivu & Dr. T.Kumaragurubaran

Project Title: AI Mirror for Real-Time Posture Correction Using Computer Vision

Module Photographs:



- Module 2: Posture Analysis & Deviation Detection**
- Module 2 focuses on analyzing the detected body landmarks to evaluate the user's posture.
 - The system compares the real-time pose data with predefined correct posture models to identify misalignment or errors.
 - It calculates angles and distances between key joints to measure deviations.
 - If any incorrect posture is detected, the system marks the deviation for correction in the next stage.



Review – 1

Module - 3

Module Output

Project Description:

Module 3: Alert & Feedback System

This module is responsible for notifying the user when incorrect posture is detected. Based on the posture analysis results from the previous module, the system continuously monitors whether the user's body alignment crosses the predefined threshold values. If a deviation is identified, the module immediately generates a warning alert on the screen. The feedback is provided in real time to help the user quickly adjust their posture. This module makes the system interactive and ensures effective posture correction.

In addition, the module ensures that alerts are triggered only when the incorrect posture persists for a few consecutive frames, which helps reduce false warnings. The alert message is displayed clearly without interrupting the user's activity, making the system user-friendly and non-intrusive. Overall, this module plays a crucial role in guiding the user toward maintaining proper posture through continuous monitoring and timely feedback.

Student Signature

Guide Signature