SIMATS ENGINEERING

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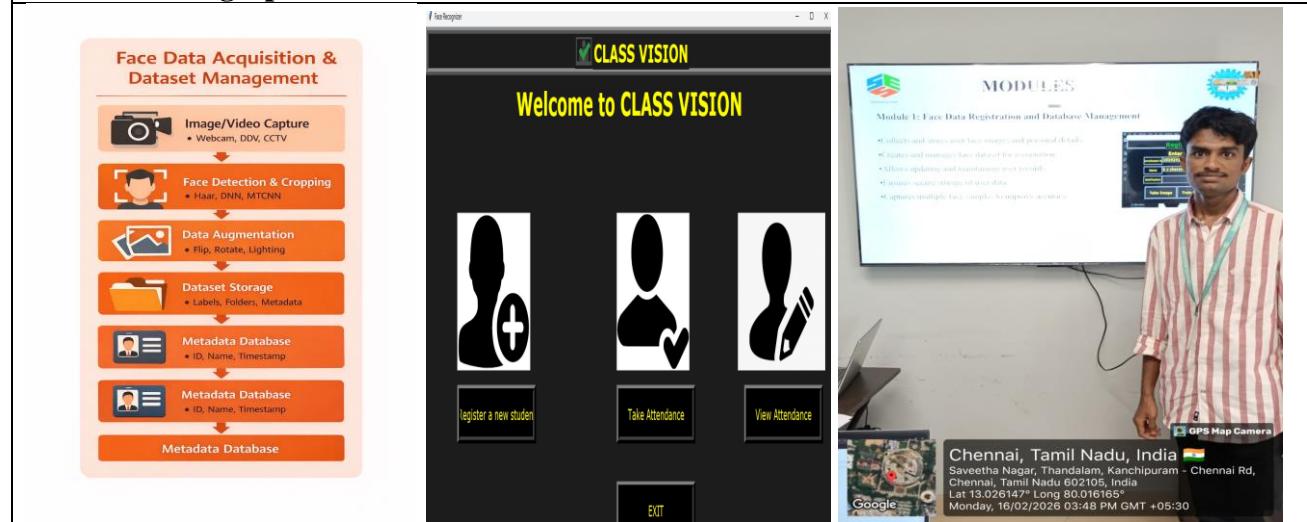
Course Code: **DSA0216**   **Slot: B**

Course Name: Computer Vision with OpenCV for Modern AI

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

Project Title: Face Recognition-Based Attendance System Using Camera and Python To Improve Accuracy and Efficiency
Module Photographs:
Project Description:
The Face Recognition-Based Attendance System Using Camera and Python to Improve Accuracy and Efficiency is designed to automate attendance tracking using intelligent face recognition technology. As part of this system, Module 1 – Face Data Acquisition & Dataset Management focuses on collecting and preparing facial data for training the recognition model. In this module, face images are captured through a live camera, detected using OpenCV's Haar Cascade classifier, and preprocessed through resizing and normalization for consistency. The dataset is organized systematically to enable accurate identity mapping. My contribution included developing the real-time face capture system, implementing automatic face detection and cropping, organizing the dataset with proper labeling, and performing data cleaning to remove unclear or duplicate images, ensuring improved training accuracy.

Student Signature   **Guide Signature**