



SIMATS ENGINEERING

Saveetha Institute of Medical and Technical Sciences
Chennai- 602105



Student Name: Mannepalli Satwik

Reg. No.: 192424339

Course Code: DSA0216

Slot: B

Course Name: Computer Vision with OpenCV for Modern AI

Course Faculty: Dr Senthilvadivu S and Dr Karthik Kumaragurubaran T

Project Title: A Web-Based Real-Time Person Identification System for Intelligent Surveillance Using OpenCV and Deep Learning

Module Photographs: (3 photographs –Module Photo, Individual student contribution module work in the project and presentation image)



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Module 3: Real-Time Tracking & Alert System

- Tracks detected persons across consecutive frames.
- Uses proximity-based centroid tracking for ID assignment.
- Detects unknown individuals in real time.
- Generates alerts for potential threats.
- Implements threat alert cooldown to prevent repeated alerts.
- Broadcasts alerts using Socket.IO on a Flask web dashboard.



Real-time Remote Monitoring



MODULE 3: Real-Time Tracking & Alert System

Live Accuracy Metrics

Metric	Value
Overall Accuracy	0%
Detection Rate	0%
Identification Rate	0%
App Confidence	0%

Live Statistics

- Active Tracks: 0
- Persons Identified: 0
- Threats Detected: 0
- Processing FPS: 0
- System Status: Inactive

Recent Activity

Alert Notifications

Alerts will appear here...

Project Description:

A Web-Based Real-Time Person Identification System for Intelligent Surveillance Using OpenCV and Deep Learning is designed to automatically detect, recognize, and track individuals in live video streams using computer vision and artificial intelligence. The system captures video from CCTV cameras or webcams, processes the frames using OpenCV, and applies deep learning-based face recognition models to extract and match facial features with a stored database. It provides a web interface where authorized users can view live video, manage registered persons, and monitor identification logs in real time. When a known person is detected, their identity and details are displayed, and when an unknown person appears, the system can raise alerts for security monitoring. This project enhances safety and automation in environments such as offices, campuses, malls, and smart surveillance systems by delivering a fast, accurate, and scalable identification solution.

Student Signature

Guide Signature