



ELC ACTIVITY

REAL-TIME COMPUTER VISION



Vehicle Detection using YOLOv8

An AI based approach to
detect, classify and count vehicles from
traffic videos using YOLOv8 and
OpenCV





OBJECTIVES

01. Detect and classify vehicles from a video stream

02. Generate visual (video) and analytical (CSV) output

03. LMVs: Car, Scooter, Motorcycle, Auto
HMs: Bus, Truck, Tractor



Tools & Tech

- Python
- YOLOv8
- OpenCV
- CSV for data storage



Workflow Overview

01

Load YOLOv8 model

02

Normalize and map
class names

03

Capture and resize
video
Detect objects per
frame

04

Classify and count
LMVs and HMTVs
Annotate video & log
counts



Conclusion

- The solution offers real-time vehicle detection and classification using YOLOv8 . generating both visual and analytical outputs
- Ideal for traffic monitoring and smart surveillance systems.

The background is a light gray color, decorated with various hand-drawn blue doodles. These include several loops and swirls at the top, a series of vertical lines on the right side, a wavy line at the bottom center, and several checkmarks at the bottom right. The central text is in a bold, black, sans-serif font with a white drop shadow.

**Thank you
very much!**