

Mini Project II





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Department of Computer Science & Engineering
Presentation on

Detecting Number Plate of Moving Vehicle.

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Under the guidance of:

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Agenda:

- Abstract
- Problem statement
- Objectives
- Methodology
- Flow chart
- Outcomes/Applications
- Technology stack
- Conclusion
- References

Abstract

Number plate recognition is an image processing technology which uses number plate to identify the vehicle. The goal of this project is to develop an algorithm that could detect number from registration plate and this information can be used for various applications like parking management.

Problem Statement

Detecting Number Plate of Moving Vehicle.

Objectives

- Study of Easyocr, Yolo for image processing.
- Design an algorithm which can extract a registration number from image of a vehicle having number plate.
- Dashboard for vehicle entry and exit.
- Analysis about Accuracy of different algorithms for detecting number plate of vehicle.

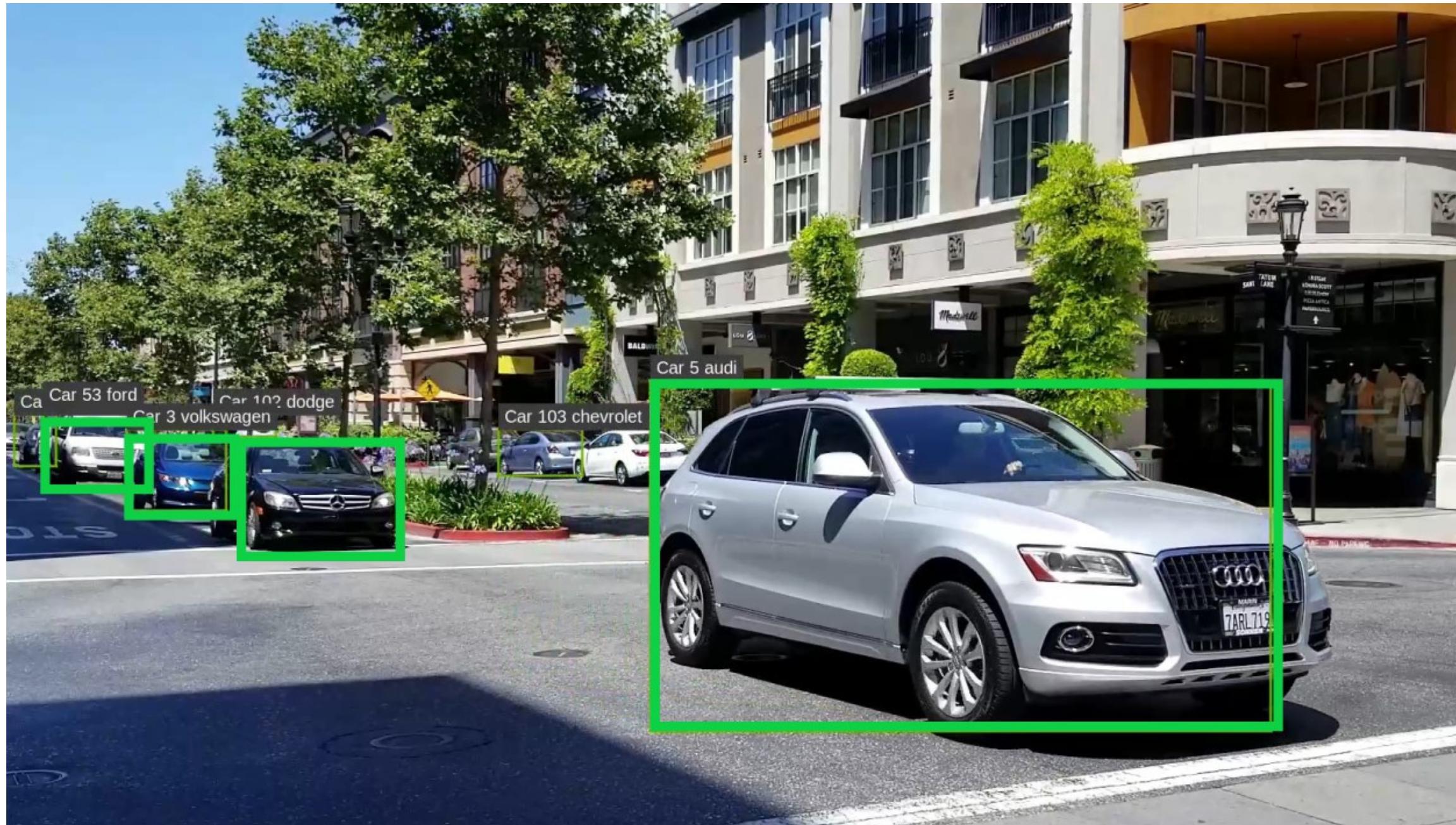
Methodology

Functioning

There are three functions :

- For detecting number plate from a still image
- Detecting number plate from a recorded video
- Detecting number plate from live streaming footage

Object Detection



YOLO V5

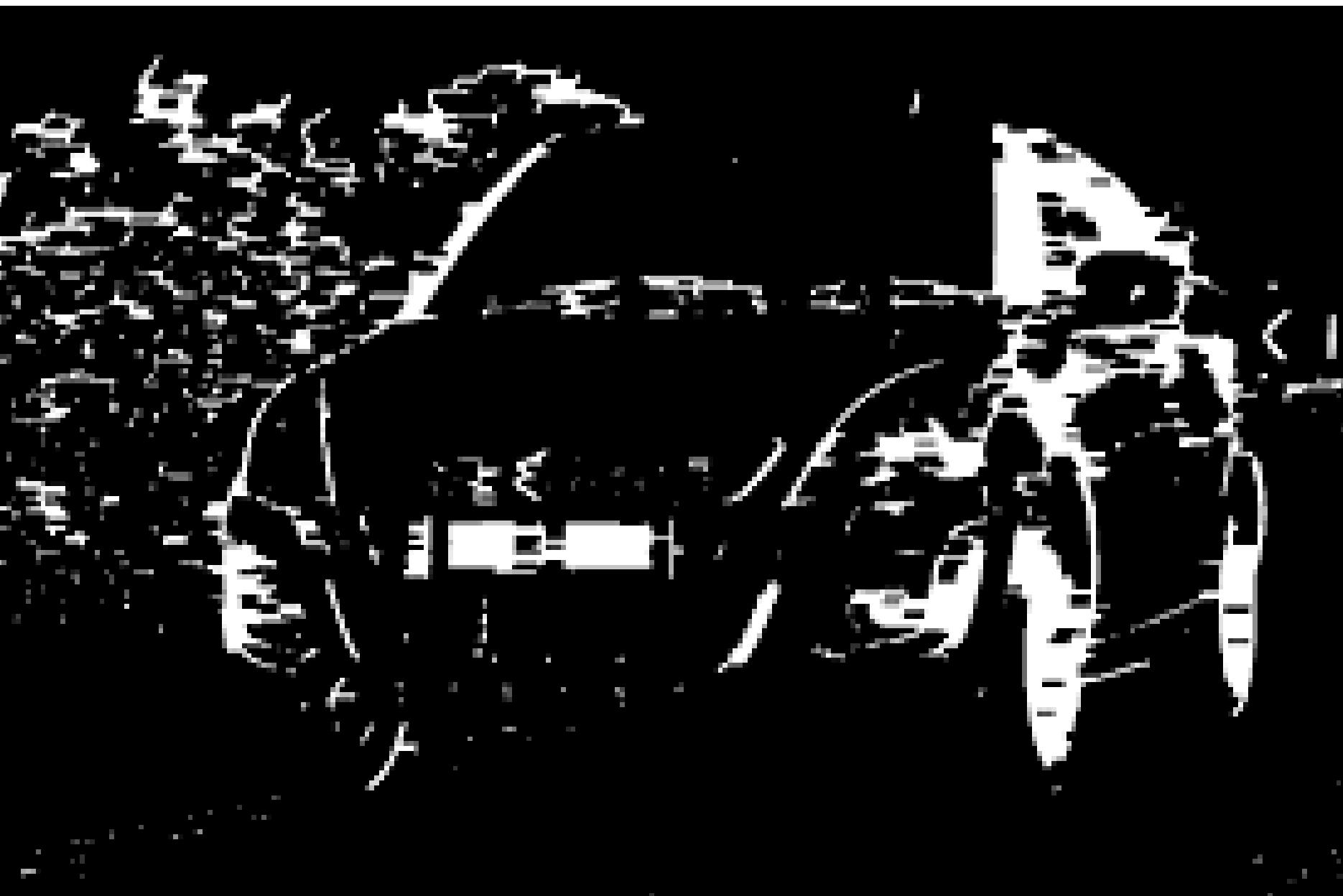
YOLO an acronym for 'You only look once', is an object detection algorithm that divides images into a grid system. Each cell in the grid is responsible for detecting objects within itself.

YOLO is one of the most famous object detection algorithms due to its speed and accuracy.

Vehicle Detection



Grayscale Image



Extracting Number Plate from Grayscale Image

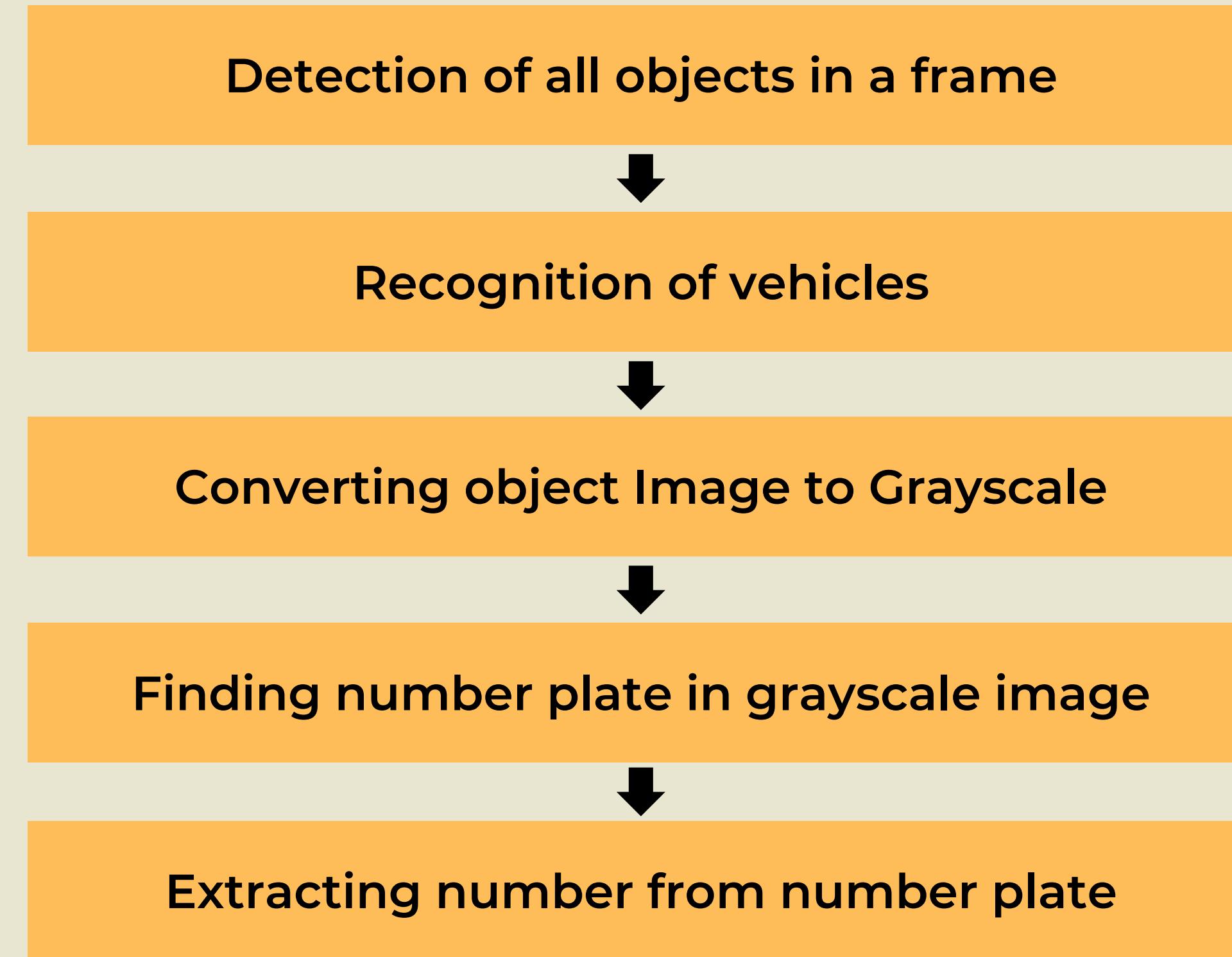


**Passing
Number to
EasyOCR**

KL 55 R 2473

KL 55 R 2473

Flowchart



Detect any suspicious vehicle in a premises.

Surveliance in mining area

Applications:

Parking Management

Detection of stolen vehicles

Technology Stack

- **Image Processing**
- **OCR**
- **Python**
- **YOLO V5**

Conclusion

**Algorithm is able to detect
number plate from the given
image or video**

References

- [1] Prasad Molawade, Shruti Shanbhag et. al., "Number Plate Recognition using Machine Learning", Volume 1 Issue 1.
- [2] Tella Pavani, DVR Mohan, "Number Plate Recognition by using open CV- Python", International Research Journal of Engineering and Technology (IRJET) e-ISSN:2395-0056 Volume: 06 Issue: 03.
- [3] Shashidhar R, Roopa M et. al., "Vehicle Number Plate Detection and Recognition using YOLO-V3 and OCR", 2021.

Thank You!