WATCHBOT

COMPUTER VISION BASED VEHICLE MONITORING SYSTEM

TECHNOPHILES

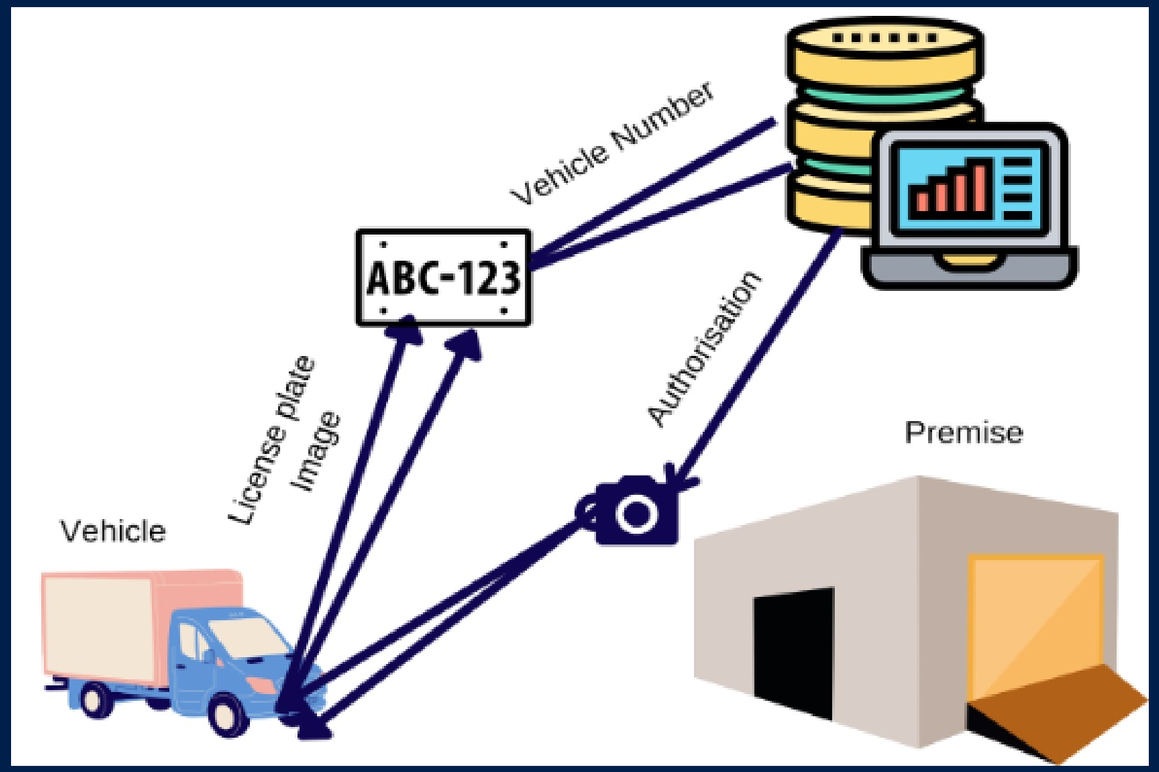
BACKGROUND

Traffic congestion, crowdedness, air pollution and other problems of large cities are the reason we seek efficient solutions that could improve the quality of life. With the lack of vehicle monitoring, you must have at one point come across an issue to find a vacant slot in the city or to authorise vehicles in godowns or wait in long queues at toll tax.

PROBLEM STATEMENT

To track the arrival and departure of vehicles at a location using Computer Vision.

SOLUTION



A computer vision and deep learning model would be created to detect the license plate of vehicles using the surveillance camera and the vehicle number would be extracted from the license plate and this can be used for various purposes like authorising vehicle, monitoring entry and exit time of vehicle.

TECHNOLOGY STACK

- **Front-end technologies: HTML, CSS, JavaScript, ReactJS, Bootstrap, Material UI**
- **Back-end technologies: Node.js, Express.js, Python**
- **Database: MongoDB, PostgreSQL**
- **Computer Vision and Deep Learning**

USE CASES

- Can be used in warehouses for detection and verification of loading vehicles.

- Can be used for detecting the entry of any vehicle in the premises.

- Parking spaces can be pre-booked and assigned a slot digitally and the parking charges can be calculated on the basis of arrival and departure time of vehicles.

- Vehicles can be verified during the entry without any human efforts.

SHOW STOPPERS

- **Blurred images from camera.**
- **Real time processing of camera may require powerful hardware.**
- **If processing time slows down, then real time processing would not be possible.**

RESULT

WatchBot

search

1 vehicle Entered - KL 58 AB 3333