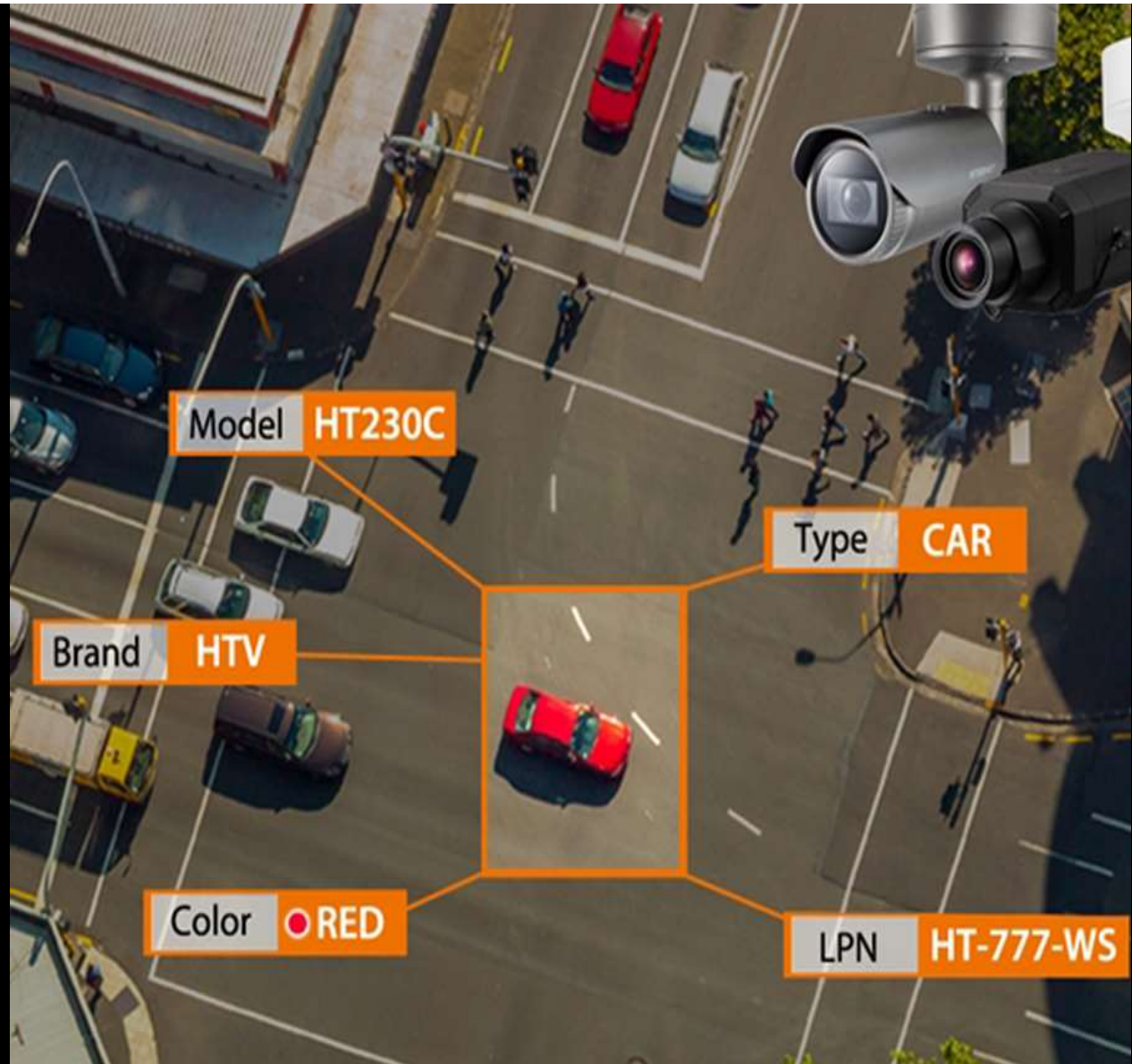


Car Document Validation through Automated Number Plate Monitoring using Yolo



WHAT IS ANPR?

ANPR (Automatic Number Plate Recognition) is a technology that automatically reads and analyzes vehicle license plates using cameras and image processing software. It identifies the license plate number and can compare it against databases for law enforcement, traffic management, parking systems, and toll collection. Privacy concerns arise due to the automatic collection of vehicle information.

FLOWCHART



WHERE IT IS USED?

This system helps in the function like detection of the number plates of the vehicle, process them and using processed data for further process

- Usage of Car Number Plate detection (ANPR) can be use in car parking system
- the most predominant usage of ANPR is Electronic Toll Collection system(ETC)
- It can also be used for checking car document validation

BENEFITS OF AUTOMATED CAR DOCUMENT VALIDATION

By automating the car document validation process through ANPR, we benefit from increased accuracy, time savings, and reduction in fraud and associated costs.

- **Reduced human error**

Eliminating the potential for manual errors and oversights, means a higher degree of accuracy in validation.

- **Efficiency & time savings**

ANPR technology allows for almost instantaneous validation, enabling the rapid and high-volume processing of vehicles.

- **Cost reduction**

Preventing fraud from falsified documents reduces liability, associated costs, and ensures greater compliance.

PROCESSING OF THE IMAGE

Graying of Original Image

As the problem lies with the data size of the original plate image is the larger one the calculated amount of direct processing these colours is extremely large, so transform the original image into 256 level gray image convenient for the computer processing gray-scale image only have brightness information instead of colour information .



PLATE REGION EXTRACTION USING ALGORITHMS

The ROI pre-thresholding and border cleanup



CHARACTER RECOGNITION USING OCR

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VALIDATION OF CAR DOCUMENTS

Documents to Validate



Registration papers, insurance certificates, driver's licenses. These can be easily falsified, leading to dangerous and costly situations.

How ANPR helps with document validation



ANPR technology can cross-check the number plate against the registration and insurance records to ensure the documents are genuine.