**Vehicle Number Plate Recognition System**

Submitted by Group 2 of Lab Group C2

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**Description :**

Number Plate Recognition system is a technology for automatically reading [vehicle number plates](https://en.wikipedia.org/wiki/Vehicle_registration_plate) .It is used by police forces around the world for law enforcement purposes, including to check if a vehicle is registered or licensed .It is also used for controlling traffic over the roads ,Petrol Pumps, Shopping Malls, Airports, highways, toll booths, Hotels, Hospitals, Parking lots, Defense & Military check points etc.

We took approach for the recognition of number plate using MATLAB Image Processing. Many a times images are noisy ,different countries have different patterns for license plates .This makes the task very difficult .So it becomes very important to select proper algorithm for this purpose.

**DataSet :**

In our dataset we have used number plates of different countries which have different patterns .

The dataset contains images from a real life source. We used our own pictures. Dataset contains 50 images. There are two attributes in total.Alphabetic images and car images. About 17 images are from category ’car Images’ and the rest of the 23 are form ’Alphabetic Images’. •The dimension of each images are ﬁxed to 24\*42 by preprocessing.

**Methodology :**

Basically, we implemented the method that paper [2] proposed. Our implemented model includes three main steps :

1. localization of the plate
2. segmentation of the characters
3. detection

**Flowchart :**

input image

convert to grayscale

Noise removal by median filter

histogram equalization

edge detection

morphological operation

Region Extraction

Image Binarization

Image Enhancement

Image segmentation

**References:**

1. <https://drive.google.com/file/d/1hy5vXcJdU_2AwjbdiXHZQ6aLZnw3dyVn/view?usp=sharing>
2. https://drive.google.com/file/d/1Eaps3M7J\_xjOYFPttauhGwm2JCndX174/view?usp=sharing