



MANIPAL INSTITUTE OF TECHNOLOGY
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Synopsis Report

On

Vehicle License Plate Recognition

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Machine Vision and Image Processing (PE-V)
MTE 4075

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Introduction

In this project, we aim to extract an automobile's vehicle number, taking its number plate as an input image and searching the database for that recognized number plate even in low light conditions.

The critical challenges of this problem statement are:

- Localization of the license plate from the input image
- Wear and tear of license plates which may make them hard to be recognized
- Noisy images and low light

This project has a wide range of applications since the license number is the primary, most widely accepted, human-readable, mandatory identifier of vehicles. Some of the applications are:

- Authentication to enter any campus premises
- Identification when traffic rules are violated
- Toll booths

Objective

To extract the vehicle's registration number from the input image and search the database for authentication/information about the vehicle.

Methodology

Step-1: Dataset collection

Step-2: Morphological operations (Opening) to enhance the image

Step-3: Top-hat operation

Step-6: Localization of license plate using regionprops

Step-7: Image enhancement of the localized plate

Step-7: Number plate de-skewing using ratio and rotation method

Step-8: Text recognition using Optical Character Recognition

Step-9: Authentication

References

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A. Kashyap, B. Suresh, A. Patil, S. Sharma and A. Jaiswal, "Automatic Number Plate Recognition," 2018 International Conference on Advances in Computing, Communication Control and Networking (ICACCCN), 2018, pp. 838-843, doi: 10.1109/ICACCCN.2018.8748287.

Details of Group Member

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