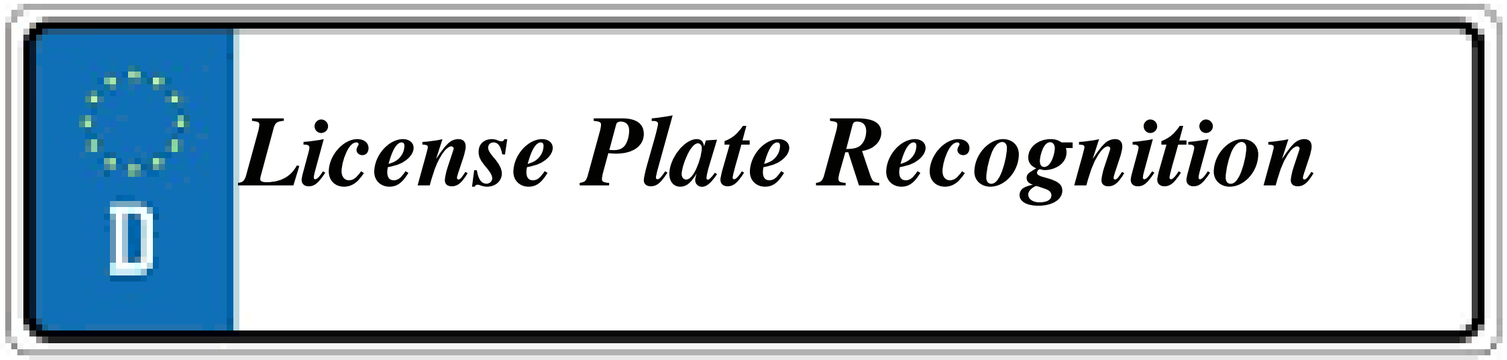


License Plate Recognition

Rohit Mene

TODAY'S PRESENTATION

DISCUSSION OUTLINE

Introduction

Literature survey

Problem identification

Working principle

Conclusion

Reference

INTRODUCTION

LPR is an actively researched domain in the field of image processing.

The realtime LPR is vital in automatic traffic watching and enforcement of traffic and also helps in identification of car coming into in secure premises.

Image processing techniques like edge detection, thresholding and resampling have been used to isolate the registration number plate and also the characters.

LITERATURE SURVEY

Mrs. J. V. Bagade1, MSukanya Kamble , Kushal Pardeshi , Bhushan Punjabi , Rajpratap Singh

Automatic Number Plate Recognition System using a machine learning approach

V. Koval , V. Turchenko V. Kochan , A. Sachenko , G. Markowsky

Smart License Plate Recognition System Based on Image Processing Using Neural Network

Khalid W. Maglad

A Vehicle License Plate Detection and Recognition System

Mohamad Riduwan Md Nawawi

License Plate Recognition (LPR): A Review with Experiments for Malaysia Case Study.

Traffic violations

Increased traffic violations and less efficient surveillance

Human handled parking lots

Slow registration of the cars

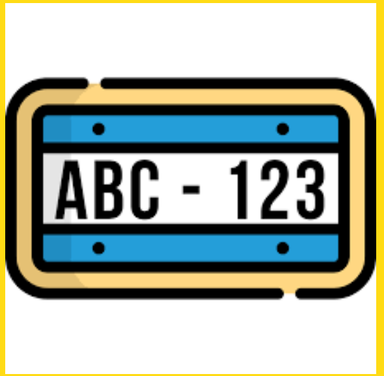
Less efficient toll gates

Increased traffic at toll gates leads to increased traffic.

Low security in societies

Identifying the number and ID's of vehicles entring is difficult

PROBLEM IDENTIFICATION



FOR PHASE 1 COMPLETION

1. Image Acquisition
2. Preprocessing
3. Number Plate Localization
4. Edge Detection
5. Character Segmentation
6. Character identification and database matching

PHASE I WORKING PRINCIPLE

Image Acquisition

In this step the image is acquired from different resources. The image could be a directly a picture or could be captured from a camera. The image is captured and acts an input for the next step.

Preprocessing

Pre-processing is the method wherein background illumination situations and the wide variety of plate localization algorithms are used.

Number Plate Localization

The number plate localization is the segment in which specifically focuses on ROI (Region of Interest) where we discover the contour area.Contours can be explained really as a curve becoming a member of all of the non-stop points (along the boundary), having identical color or intensity.

PHASE 2 WORKING PRINCIPLE

Edge Detection

It is the phase in which we detect the edges of the license plate.

Character Segmentation

It is the most crucial step for any OCR system because the characters are the smallest unit of any language script. After the segmentation of the character features can be ext, it cannotbe recognized accurately by the feature extraction algorithm.

Character identification and database matching

It includes the mechanical and electrical conversion of scanned images of handwritten, typewritten text into machine text. After the characters are identified and retrieved, the characters are then put in the database. The plate numbers present in the database can be later used for matching.

CONCLUSION

License plate recognition is technology is a
very powerful technology. In terms of ease and usefulness,
his technology has a
widespread use in traffic systems, toll plazas, parking lots
etc. Although this
technology requires a lot of improvements

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1. https://www.tutorialspoint.com/dip/optical_character_recognition.htm

2. STUDY OF VARIOUS CHARACTER SEGMENTATION TECHNIQUES FOR HANDWRITTEN OFF-LINE CURSIVE WORDS: A REVIEW

*3.*https://towardsdatascience.com/image-pre-processing-c1aec0be3edf

4.A Vehicle License Plate Detection and Recognition System Khalid W. Maglad

5.Smart License Plate Recognition System Based on Image Processing Using Neural Network

6. Automatic Number Plate Recognition System: Machine Learning Approach

7. License Plate Recognition (LPR): A Review with Experiments for Malaysia Case Study


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ThankYou!