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## AUTOMATIC VEHICLE NUMBER PLATE & GATE CONTROLLER

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### ABSTRACT

Verifying a license is difficult but requires a lot of system. This is useful for auto cabinet numbers, auto signal circuit breaker identification, and finding specific circuit breakers. Our project is a Raspberry Pi based license certificate, which uses an image to recognize the license. This system uses a camera with an LCD display circuit connected to a Raspberry pi. The system continues to monitor the situation with cameras. The camera can continuously input data to smash the camera. The license plate is understood in front of the camera, the camera input is processed, and the license plate is removed from the image. The process of the extracted image using OCR and extracts the license card number from it. The system then displays the reverse code and opens the door. Using the Raspberry Pi, we found the, a fully functional license plate recognition system and door control.

## 1.INTRODUCTION

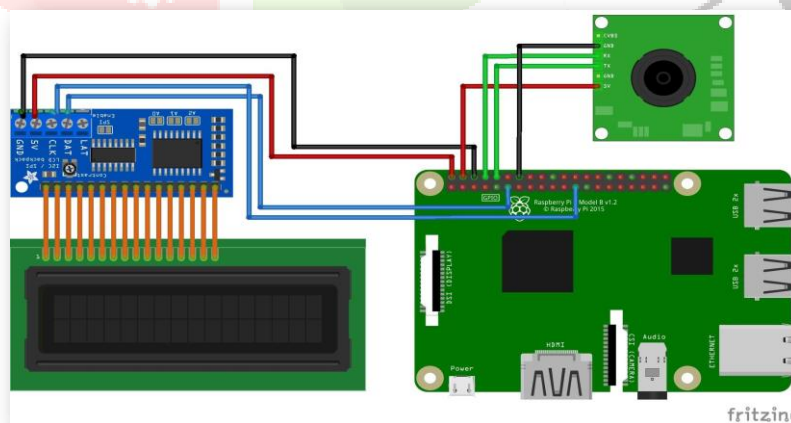
Verifying a license is difficult but requires a lot of system. This is very useful for finding auto cabin numbers, auto signal circuit breaker identification and special tool circuit breakers. Our project is a Raspberry Pi based license certificate, which uses an image to recognize the license. This system uses a camera with an LCD display circuit connected to a Raspberry pi. The camera can continuously input data to break up the camera in a row. The license plate is understood in front of the camera, the camera input is processed, and the license plate is removed from the image. The process of the extracted image using OCR and extracts the license card number from it. The system then displays the reverse code and opens the door. Using the Raspberry Pi, we found the, a fully functional license plate recognition system and door control.

## 2.OBJECTIVE OF THE PROJECT

Main goals concerning this work maybe pictured as:

- **Detecting the license plate of a vehicles and then extracting the information regarding that vehicle using raspberry Pi**
- **The automatic vehicle recognition system plays a major role in detecting threats to defense.**
- **To design an efficient automatic authorized vehicle identification system by using the vehicle number plate**

## 3.SYSTEM BLOCK DIAGRAM



#### 4.ADVANTAGES

- Added security: This technology is used to stop criminal behaviour in advance.
- Automated service: High accuracy readings and 24/7 operation, they are more efficient
- Real time benefits: Number plates can be recognised and checked against the database instantaneously.
- Time efficient: instantaneous operations result in less time consumption.

#### 5.DISADVANTAGES

- Privacy concerns: ANPR camera raises privacy concerns for many people who dislike the idea of their data being stored.
- Extreme circumstances: ANPR cameras may struggle to work in adverse weather conditions such as heavy rain, heavy snow.
- Human behaviour: Disadvantage of ANPR systems is that they rarely consider human error and behaviour.
- Image enhancement: compressing images downgrades the quality of the image.

#### 6.SCOPE OF THE PROJECT

- Efficient Detection and Recognition
- Easier Result visualisation with Web UI
- Smarter Management
- Interoperability
- Cost-effective Technology

## 7.REFERENCES

- [1] Ismael Saad Eltoum, Zhaojun Xue, “Automatic GateControl System Based on Vehicle License Plate Recognition”, International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 3 Issue 8, August – 2014.
- [2] P.Meghana, S.SagarImambi, P.Sivateja, K. Sairam,” Image Recognition for Automatic Number Plate Surveillance”, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-4, February 2019
- [3] Andrew S. Agbemenu, Jephthah Yankey, Ernest O. Addo, “An Automatic Number Plate Recognition System using OpenCV and Tesseract OCR Engine”, International Journal of Computer-Applications, Volume180NO43 May2018.
- [4] B.Santosh, manoj, kumar, M.V.K.Prasad, K.Sripath Roy,“University Campus Number Plate logging System”, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-7, May, 2019
- [5] Mr. A. N. Shah<sup>1</sup>, Ms. A. S. Gaikwad, “A Review- Recognition of License Number Plate using Character Segmentation and OCR with Template Matching”, International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 2, February 2016.
- [6] Ms. Shilpi Chauhan and Vishal Srivastava, “MATLAB Based Vehicle Number Plate Recognition”, International Journal of Computational Intelligence Research ISSN 0973-1873 Volume 13, Number 9 (2017), pp. 2283-2288 © Research India Publications.