

# **MINI PROJECT**

## **License Plate Detection and Owner Detail Fetching**

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## **ABSTRACT**

The License Plate Recognition (ALPR) system is a pivotal technology for enhancing security, managing communal spaces, regulating parking, and optimizing urban traffic. In this project, we explore an innovative approach to ALPR by utilizing the Open Computer Vision Library (OpenCV) in conjunction with Python, providing a cost-effective alternative to traditional, expensive ALPR systems. Our system not only detects and recognizes license plate numbers but also retrieves additional information such as owner details. By leveraging OpenCV and Python, we aim to overcome the limitations of outdated technologies and make advanced ALPR capabilities more accessible and efficient. This approach aligns with the growing trend of free and open-source software, fostering collaborative solutions to complex challenges in intelligent transportation systems.

The proposed algorithm addresses challenges such as noise, low light conditions, and variability in plate fonts and orientations. As the number of vehicles increases and the demand for automated vehicle management systems grows, developing an efficient ANPR solution becomes imperative. Subsequently, the system utilizes number plate segmentation, contour analysis, and character filtering to accurately extract and isolate characters. Optical Character Recognition (OCR) is then applied to interpret the isolated characters. The effectiveness of the system is demonstrated in controlled environments such as institutions, housing societies, and residential complexes, with potential for broader applicability contingent on further development.

## REFERENCES

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