

Vehicle Number Plate Recognition

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Abstract: *Recognizing vehicle number plates is a difficult but much needed system. This is very useful for automating toll booths, automated signal breakers identification, finding out traffic rule breakers and to detect stolen vehicles. The developed system consist of a Raspberry Pi based vehicle number plate recognition system that automatically recognizes vehicle's number plate using image processing. The system uses a digital camera interfaced to a Raspberry pi processor. A rear image of vehicle is captured and processed using various algorithms. The system constantly processes incoming camera footage to detect any trace of number plates. On sensing a number plate in front of the camera, it processes the camera input and extracts the number plate part from the image. The image is extracted using OCR. And by using CNN techniques, the number is extracted from the image. The system then displays the extracted number. The implemented system consist of a fully functional vehicle number plate recognition system using Raspberry Pi considering success rate and processing time as parameters. The developed system can be used for security purpose in housing societies to monitor the entry/exit of authorized vehicles. It is observed that the developed system successfully detects and recognizes the vehicle number plate on real time images. The system accuracy is about 80%*

Keywords: CNN, Number place , Dataset, Rpi