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Recognition of Vehicle Number Plate by Using Python and Open CV

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Abstract: *A computer System called License Plate Recognition that recognizes any digital image automatically on the number plate. [7] We used OpenCv library along with python language for image processing by using pytesseract. The input image is then converted from high scale image to grayscale image and the processed image is filtered through bilateral filter to remove unwanted characters.[6] In india there is need of ANPR because large number of vehicles travelling on the roads and it would help in tracking of vehicles , traffic examining, finding stolen vehicles, supervising parking toll and imposing strict actions against red light breaching .[1] This technique is used to localize number plate from an image and extract characters from the detected number plate.[1] Our objective is to use various morphological operations in such a way that the number plate of vehicle would be identified accurately. It includes various operation such as image enhancement, morphological transformation, edge detection and extraction of number plate from vehicle image. After a series of operations we apply segmentation to recognize the characters present on number plate using template matching.[2] ANPR in India can be challenging due to different lighting conditions, changes in fonts, shapes, angles, letters size, number of lines and padding between lines, different languages used. In our project we proposed a system that can detects vehicle number plate with considering all irregularities. The OCR has two parts Character segmentation and Character Recognition. The OCR system is used to extract characters of different fonts and non-roman script as well and the quality of the OCR would depend on the quality of image, image contrast, text font style and size.[1].*

Keywords: Recognition, Automatic Number Plate Recognition (ANPR), OCR (Optical character recognition), license plate, Character Segmentation Image Segmentation

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