A Machine Learning Algorithm for Automatic Number Plate Recognition

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 174
Number 1

Year of Publication: 2017

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10.5120/ijca2017915297

Abstract

Identification of cars is a demanding function for surveillance and control systems. People can recognize automobiles through license plates which consist of alphabets and numbers. We can use the uniqueness of a combination of characters in license plates for many purposes. For example, an arrest of a suspect’s vehicle, imposing parking violation fines, and entrance authentication are possible. However, it is a labor intensive job to identify all passing or parked vehicles’ license plates.

This paper presents a training based approach for the recognition of vehicle number plate. The whole process has been divided into three stages i.e. capturing the image, plate localization and recognition of digits over the plate. HOG features have been used for the training purpose and Support Vector Machine is employed for the classification purpose yielding in more than 99% accuracy while recognition. The algorithm has been tested over more than 100 images.

References


**Index Terms**

Computer Science  
Pattern Recognition

**Keywords**

ANPR, SVM, HOG Features, Character Recognition.