Abstract

License plate recognition is a fully automated real time technique that has been widely used for identification, theft control and security validation of vehicles. For recognition and extraction of desired regions of the number plate of the vehicle, different algorithms are used. An image processing technology based on license plate recognition (LPR) that is being used to identify vehicles, using neural networks and image co-relation was developed by K. Yilmaz [2]. In this paper, a different novel approach has been presented to increase the quality of the image and to enhance the results for extracting license plate from dull and low intensity images. In the previous technique the recognition rate (percentage of image recognized) reached was 96.64% [2], but now using multithresholding and neural pattern recognition (NPR) techniques together with artificial neural networks, a higher recognition rate of 98.40% has been achieved. Certain problems related to neural networks in the previous research methodology such as blobs extraction, segmentation and character recognition, that inhibit complete extraction of features from number plate of the vehicle were analyzed in this approach. The proposed technique helps to improve the quality of the images and detect the characters or digits of the number plate with a better recognition rate.
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**Index Terms**

Computer Science  
Artificial Intelligence

**Keywords**

License plate recognition  Multithresholding Technique  Neural Pattern Recognition  
Artificial Neural Networks.