

## عنوان مقاله:

Automatic license plate recognition for Iranian vehicles

## محل انتشار:

دومین کنفرانس دانش پژوهان کامپیوتر و فناوری اطلاعات (سال: 1393)

تعداد صفحات اصل مقاله: 8

## نویسندگان:

Reza Bahrami - *ICT Department, Malek Ashtar University of Technology, Tehran, Iran*

Vahid Dolati - *ICT Department, Malek Ashtar University of Technology, Tehran, Iran*

Ali Jafari - *ICT Department, Malek Ashtar University of Technology, Tehran, Iran*

## خلاصه مقاله:

In recent years we have witnessed an increasing number of vehicles, resulting in the need to control the transport and traffic clearly felt. The automatic recognition of vehicle license plates plays an important role in this issue. In this paper, an automatic vehicle license plate recognition (ALPR) based on neural network is presented. Proposed system consists of three main steps: license plate locating, character extraction and recognition of characters in image that extracted from input images using a SOM neural network. In plate locating section methods of edge detection and morphology is used, on the other hand, by using the color image as input, special features that help the Iranian plate is extracted. With combination results of these two parts, place of plate is located. To identify the characters, properties of prepared numbers and the numbers obtained from the extraction are used to identify numbers with SOM neural network. In this work we used 525 images that divided into two groups: low complexity (220 images) and high complexity (305 images). These images with 640×480 size have been considered as input of image processing algorithm. In proposed method a very good success rate are obtained that plate locating is 99.24% and success rate of character recognition is 95.04%. Then after combining these success rates, final success rate is 96.76%.

## کلمات کلیدی:

License Plate Recognition; Colored Edge Detection; Character Recognition; Self-Organizing Map (SOM); Edge Detection; Morphological Operators

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/453802>

