A NEW PROPOSED METHOD FOR AUTOMATIC NUMBER PLATE RECOGNITION

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Abstract:

This paper describes our new proposed method for automatically identifying the text of vehicle number plate. From a new image, the method automatically extracts plate, classifies and recognizes characters (digits). Firstly, Laplace operator is used to calculate the magnitude of gradient which then is binarized based on a threshold. In the second phase, a sub-window slides all images to search the candidate of plate. The best candidate is chosen by aspect ratio conditions. The extracted plate is then enhanced and classified by colour segment conditions to find candidates of characters as foreground. The horizontal and vertical histograms are used to classify and extract each character separately. Finally, Support Vector Machine algorithm is used to identify the characters. The experimental results have shown that our proposed method obtains high accuracy and is available for real applications.

Key words: Automatic number plate recognition (ANPR); Laplace operator; Plate extraction; Plate classification; Plate identification.