Recognition of Road Signs Using Combination Methods of Digital Image Processing

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Abstract: The purpose of this thesis is to provide a method for identifying traffic signs using digital computing techniques. Creating and expanding intelligent systems in the field of transportation, and in particular the identification of driving symptoms, has been one of the major challenges in recent years. With the help of these systems, you can ensure safer and easier driving. Recognition and recognition are two main steps in identifying traffic signs. Various methods have been proposed for these two steps. In this dissertation, an algorithm based on the pattern recognition for identification of traffic signs is performed. Accordingly, the images are originally stored in the form of matrices of red, green and blue, and stored separately and with a difference and multiplication Between these images, the background is provided to fit a pre-made pattern. In this dissertation, three basic shapes of traffic signs, circular and triangular, with red and square edges with a blue border are identified. Finally, the proposed algorithm applied to a number of digital images containing a guide board that had a precision of 92.8%. The results of the simulation indicate high accuracy presented in text, image quality improvement compared to previous method.

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