A METHOD OF DETECTING AND RECOGNIZING SPEED-LIMIT SIGNS

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Abstract

Abstract—In this paper, we propose a new method of speedlimit sign detection and recognition, which is based on the information of gray image. This method has a real-time processing ability to remind drivers about the speed limit when they drive their vehicles under different road conditions. The method contains four main processing modules: speed-limit sign detection, speed-limit sign segmentation, speed-limit sign recognition and system integration. For detecting speed limit signs, both Adaboost and Circular Hough Transform (CHT) are used. For recognizing speed-limit signs, Support Vector Machine (SVM) is applied and a high recognition performance up to 97.02% is achieved in our experiments. By integrating the four processing modules efficiently, a high efficient speedlimit sign detection and recognition system has been developed.

Keyword：Speed-limit sign; Adaboost; Circular Hough