

Abstract

The vehicle logo is one of the features that can be used to identify a vehicle. Even so, a lot of Intelligent Transport System which are developed nowadays has yet to use a vehicle logo recognition system as one of its vehicle identification tools. Hence there are still cases of traffic crimes that haven't been able to be examined by the system, such as cases of counterfeiting vehicle license plates. Vehicle logo recognition itself could be done by using various feature extraction and classification methods. This research project uses the Local Binary Pattern feature extraction method which is often used for many kinds of image recognition systems. Then, the classification method used is Random Forest which is known to be effective and accurate for various classification problems. The data used for this study were as many as 2000 vehicle logo images consisting of 5 brand classes, namely Honda, Kia, Mazda, Mitsubishi, and Toyota. The results of the tests carried out obtained the best accuracy value of 88.89% for the front view logo image dataset, 77.03% for the side view logo image dataset, and 83% for the dataset with both types of images.

Keywords: Recognition System, Vehicle Logo, Local Binary Pattern, Random Forest