ABSTRACT

The application of traffic control system technology like ATCS (Area Traffic Control System) in the past dedace started to be implemented in some areas in Indonesia including Banyumas. To date, ATCS serves to provide the traffic data record using CCTV as the monitor. Based on the image data recorded by CCTV, the development of automatic monitoring system can be done by implementing the vehicle classification system. This research aims to design a system that can classify shape or type of vehicle on the road, especially car and pedicab.The detection of car and pedicab is expected to be in line with the traffic characteristic in Kabupaten Banyumas, especially Purwokerto. This system is using the HOG method as the edge detection system of the object and SVM to group the features of the object that's detected.The testing of the system is using ATCS Banyumas videos at the Kebondalem crossroads. Accustomed image and tested image are extracted from the videos to get the HOG feature as 32 kinds of spagial orientation bin that later will be grouped using the SVM method as 2 clusters, the pedicab cluster and car cluster. Bases on the result of the testing on 125 images for the data test, the precision result of car is 39% whule the car recall is 6%, the precision of pedicab is 17%, recall is 18% and the accuracy score is 7%.

Keywords: HOG, SVM, ATCS, pedicab, car