
ABSTRACT

At this time road users in major cities of Indonesia requires some information about traffic density and because of the growing period, the number of vehicles users will increase and this will also cause traffic congestion levels are higher as well. To obtain information system about the traffic density, some video samples have been taken to describe the road conditions in traffic jam, dense, medium, and smooth.

In this final project, the author uses the method of Support Vector Machine (SVM) that growing rapidly in pattern recognition. The carried out process to identify the traffic conditions on the road is a video capture and data on the road, pre-processing, feature extraction and classification of road traffic conditions. The algorithm used for feature extraction vehicle is Independent Component Analysis, while for the classification of texture characteristics of roads author will use SVM.

The results are shown as the classification of the traffic conditions which are divided into classes each. And this system also can recognize the pattern of road traffic conditions and can identify any particular type of road traffic conditions. Designed system can achieve 100% accuracy rate in identifying image conduct road traffic by using Support Vector Machine (SVM) and Independent Component Analysis (ICA).

Keyword : Traffic Density, Independent Component Analysis (ICA), Support Vector Machine(SVM)