ABSTRACT

Teak is one type of tree that has many functions and uses. Teak wood is of very high quality to be used as raw material for making home furniture such as tables, chairs, cabinets, and others. But there are still many furniture entrepreneur who often mistakenly evaluate the quality of teak. This results in a lack of quality teak which is used as raw material for making home appliances or for building needs.

The final project studies the quality of teak using the Histogram of Oriented Gradients method as a feature extraction method and the Support Vector Machine method as a classification method. The Histogram of Oriented Gradients method aims to calculate gradient values in a particular area of an object. The classification method uses Support Vector Machine because it can find a hyperplane function that aims to separate different objects with different classifications.

From the test results obtained the best accuracy of 96,67%. Accuracy was obtained from 144 test images using Histogram of Oriented Gradients in cell size 20×20, block size 8×8, bin numbers 9, polymonial Support Vector Machine kernel types and One Against All multiclass.

Keywords: *Teak Wood, Histogram of Oriented Gradients, Support Vector Machine.*