Abstract
Studies in the identification and classification of plants are a very important task to be able to extract plant information. One of the important parts that include information of a plant is the leaf. A lot of research has been done to identify the species of plant based on the shape, texture, and other features of the leaf. In this paper, we discussed how to identify plant species based on leaves using the Multi Texton Histogram (MTH) method which combines two histogram values derived from color histograms and histogram orientation of the edge of a single into a single histogram. The classification model used is the Support Vector Machine (SVM) method. The classification result of 32 leaf species using SVM shows the accuracy of 91.10% in Multiclass One vs One and 89.90% in Multiclass One vs All which processed by SVM quadratic kernel. These results indicate that the use of MTH and SVM is effective in identifying leaf images from Flavia dataset.

Keywords: Leaf, MTH, Sobel, SVM, Texton