ABSTRACK

Herbal leafs is a type of plant that has efficacy in healing various diseases. As an example, the leaves of papaya which we find in the environment around us has benefits for healing varicose veins, skin spots, acne, etc. But based on a survey conducted on 10 correspondents, none of which recognize correspondent leaf "insulin", but this leaf have properties to cure diabetes, etc.

The development of digital image processing technology can be used as an easy solution for everyone to recognize the herb leafes. In this final project, an application developed to identify herbal leafs using features extraction SURF (speeded Up Robust Features) and KNN classification method. Herbal leafs image retrieval is done by using a 12-MP digital camera. In this final project, though data by using the software MATLAB 2012a.

After the testing process, it can be concluded that this application has been able to identify the five kinds of herbal leafes are the leafes of insulin, guava, turmeric, greetings, and soursop. The level of accuracy of the best system of this application is 57,77% and the computing time of 23,109 seconds.

Keywords: herbal leaves, MATLAB, SURF, KNN, feature extraction