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Cassava Leaf Disease Detection System using Support Vector Machine

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***Abstract*—Cassava (Manihot esculenta Crantz) has been used as a staple food of many nations. It is also known as manioc, and tapioca. In Malaysia also cassava is used as daily food source. Its tuber is the most popular form of consumption, although the leaves are also consumed at times for medicinal purposes. Even though cassava is the popular form of consumption, it is vulnerable to disease. The type of disease that can be found on cassava is bacterial blight and mosaic disease. Problem arises when farmers have to detect the disease using the expert's naked eyes which is takes a lot of time and difficult process to be carried out on a large farm and it may lead to inaccurate result. This study is therefore proposed in order to solve this problem, which is to develop a prototype for the detection of cassava leaf disease by applying of image processing technique. In this project, a set of data is collected from Kaggel website, with a total of 200 images (100 images of bacterial blight disease and 100 images of mosaic disease) being successfully collected in order to take further steps in processing of the image. Image processing phases that involved in this project is image acquisition, image pre-processing, segmentation, feature extraction and classification. All this phases are done to train the data before the prototype is ready to be tested. Support Vector Machine (SVM) are used to classify the disease either it is bacterial blight of mosaic disease. The accuracy of this prototype is 87.5%.**

***Keywords*—Cassava, disease detection, SVM, image processing, classification**