ABSTRACT

One of the supporting factors of human survival is in the agricultural sector. Humans grow crops to utilize biological resources that can produce food, industrial raw materials, energy sources, and to manage their environment. Agriculture in Indonesia consists of two types, wet and dry land. The problem that is always faced by every plant is pests and diseases. When plants have started to grow leaves and stems or twigs, often there are attacks from pests or diseases that can cause the leaves and fruit of plants that are infected with holes to rot and die.

This final project discusses the design and implementation of bokchoy plant disease detection. Detection of bokchoy plant disease in one shot with the type of disturbance detected is hollow leaves and leaf miners into one picture frame.

The implementation and benefits of the detection of bokchoy plant diseases aim to reduce crop failure or rotten and damaged plants using the Convolutional Neural Network (CNN) classification method. By using the CNN method, it is expected to be able to detect bokchoy plant diseases with a high degree of accuracy.

The result of this final project is that the system can detect two classes of diseases in leaves and one class of normal leaves in 90%:10% partition data of training data and test data, with images taken on storage. The accuracy obtained by using the CNN method reaches 86.67%.

Keywords: agriculture, bokchoy, CNN.