ABSTRACT

Agriculture is very important for humans because it directly affects food production. One of the food products that is consumed by the community is Potato. Potatoes are not only consumed as a staple food but can also be used as a basic ingredient for making snacks. With the current production of potatoes, it is increasingly difficult for farmers to check the quality and quantity of potatoes. Potato leaf disease is one of the factors that affect potato quality.

The rapid growth of technology today makes humans create Artificial Intelligence (AI). AI can also be referred to as artificial intelligence in machine technology that implements human intelligence. AI-based on Deep Learning for the classification process of image processing using the Convolutional Neural Network method has superior performance. Using one of the architectures, namely MobileNet, has the advantages of low cost, stability, and high precision.

This study will classify the disease on potato leaves, namely early blight, late blight and healthy. By using the CNN method of the MobileNet architecture, there are four test scenarios to get the best results. The best results from each scenario using the RMSprop optimizer, learning rate 0.0001, epochs 50 and batch size 32 obtained 97,90% accuracy and 0.0390 loss.

Keywords: Classification of potato leaves, Convolutional Neural Network, Mobilenet