

ABSTRACT

Aglaonema is one type of plant that shows leaves as the main attraction. The various motifs and leaf colors have recently become a topic of discussion among connoisseurs of ornamental plants. Aglaonema plants also have many types, there are several Aglaonema plants which are of course expensive.

Because this type of Aglaonema plant has many types so that it has similarities with several other types of Aglaonema plants, making it difficult to distinguish visually. Therefore, a design system for the classification of Aglaonema plants was made using Deep Learning. This system uses the Neural Network method with VGG16 and ResNet50 architectures. using google colab with python as the programming language used and the hardware used is the GPU. This study also uses multiple epoch scenarios, namely epochs 10, 20, 30, 40, 50 and 60 for each architecture used.

The result of this system is that the more epochs or stages used, the more maximal the results will be and from the two architectures tested in this final project, the results show that the VGG16 architecture, the accuracy is 97% better with 60 epochs compared to the ResNet50 architecture of 88 % with epoch 60. For further development, it is tested with more classes and applications can be made so that it is easier.

Keywords : Convolutional Neural Network, Classification, Plants, Aglaonema, Deep Learning, Machine Learning