Abstract

Orchid is one type of flowering plant that is quite difficult to identify, that is because of the many types of orchid plants in the world today. An orchid identification system is needed to make it easier to identify the type of orchid that was obtained. In this study the author uses orchids from the genus Dendrobium Hybrid and applies the Convolutional Neural Network (CNN) method, the system can identify orchid species based on flowers in the Buttercup, Pink stripe, and Sonia species. There are three basic architectural models created for comparison, then using the K-Fold Cross-Validation method to find the best model and calculate the f1-score using the Confusion Matrix method. The best model in this study produced an accuracy of 92.59% f1-score 93% test data.

Keywords: Orchid Species Identification, Data Augmentation, Convolutional Neural Network, K-Fold Cross Validation, Confusion Matrix