ABSTRACT

Aglonema or Sri Rejeki including family Araceae, a plant extract that lovely guesthouse, which has high economic value. The beauty of this Aglonema plant located in the color composition contained in the leaves where each leaf has its own shape and color. Each type of plant Aglonema has its own characteristics, where there are differences in terms of shapes, forms and colors of the image Aglonema tersebut.Namun leaves, for people who do not know the exact characteristics of each of these Aglonema plant will find it difficult to distinguish type.As a result, errors can happen for consumers when purchasing Aglonema plants due to ignorance or a mistake in determining the types of plants that will Aglonema purchased. This is of course a big impact for consumers, because the difference in price of each Aglonema leaves of plants can be very much adrift.

This final project aims to produce a tool that can recognise plant leaves Aglonemma image and classify the types of leaves and analyzes performance using analytical form (structure) and the colors used.

In general, the classification system based on image leaf leaves consists of two main parts, namely the first part feature extraction using color analysis is to calculate the percentage of red and green colors on the percentage of each type of plant leaves Aglonema and analysis of the form (structure) is calculated diameter ratio of length and width of leaves. While the second part of the classification of features using K-Nearest Neighbors (KNN).

From the results of testing with the extraction of features using color and structure analysis obtained manually classification accuracy rate of leaf is 100% for training data and 82.2% for test data. While for the results of testing obtained otomatic classification accuracy rate of leaf is 100% for training data and 70% for test data.

Keywords: color and shape analysis, K-Nearest Neighbors (KNN), image processing.