Classification of Quality Level (Grade) of The Mangosteen Fruit Using K - Nearest Neighbor

Ahmad Nova Rifki Wildani
Computer Engineering
Information Tecnology
State Polytechnic of Jember

ABSTRACT

The mangosteen fruit is not only supplying the needs of the domestic market, but also the international market. Therefore, the mangosteen fruit quality must be maintained. Currently sorting quality mangosteen is still done manually by humans, consequently produce a diversity of quality is not good because of the limitations of visual, fatigue, and differences in the perception of each observer. For that we need a system that can classify the mangosteen fruit quality using digital image processing and K - Nearest Neighbor.

Image data to be captured that mangosteen fruit sample freshly harvested using a digital camera. Digital image processing is used to extract the color feature and the diameter of the mangosteen fruit. While K - Nearest Neighbor is used for quality classification mangosteen. This study used 75 for the mangosteen fruit mangosteen training data and 15 for the test data. Quality mangosteen are divided into three classes, namely quality Super, the quality I and quality II. The parameters used for input K - Nearest Neighbor is wide diameter, and the average value red, green, blue.

***Keywords** : Quality Classification Manggis, Digital Image Processing, K - Nearest Neighbor.*