CLASSIFICATION OF TYPES OF MANGOES USING K-NEAREST NEIGHBOR (KNN) METHOD

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ABSTRACT

Mango is a seasonal fruit that has many varieties, but some types of mango have almost the same shape. Although mango is not a native fruit from Indonesia, its widespread presence throughout the archipelago makes it popular. Mango belongs to the genus Mangifera. Mango belongs to the Anacardiaceae tribe, the scientific name of mango is Mangifera indica. Around the world, there are approximately 69 mango species scattered in the tropical Asia region. Each type of mango has a different shape pattern and can be used as an identifying parameter. The identification parameters obtained from the extraction results can be combined with digital image processing techniques, thus forming a system that can classify mango species. The process for classifying using the K-Nearest Neighbor (KNN) method, from the research that has been carried out has produced 780 mango image datasets with 6 types of mangoes, researchers have succeeded in making an image classification system with 546 training data and 234 test data, for calculations with the euclidean distance formula gets the highest accuracy value of 50.855% and the calculation with the manhattan distance formula gets the highest accuracy value of 54.274%.

Keywords: Classification, Image, K-Nearest Neighbor, Mango