IDENTIFICATION OF RICE TYPES WITH DIGITAL IMAGE PROCESSING USING CONVOLUTIONAL NEURAL NETWORK METHOD

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ABSTRACT

Rice is a basic necessity for the majority of Indonesia's population. The large number of types of rice makes it difficult to differentiate them just by sight, which results in possible errors in selecting the type of rice and inappropriate consumption. This research uses digital images and the CNN (Convolutional Neural Network) method to identify types of rice based on image shape and texture values, using 200 images as data. The research stages include collecting rice images, image pre-processing to improve data quality and consistency, creating a CNN model, training the model with the available dataset, and evaluating model accuracy. The research results show that the CNN method achieves an accuracy of 97.92%, which concludes that this method is effective in identifying types of rice.

Keywords*: CNN, rice, artificial intelligence, digital image processing.*