

ABSTRACT

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DEVELOPMENT OF A SEAWEED QUALITY ANALYSIS MODEL BASED ON IMAGES USING THE CNN MOBILENETV2 ALGORITHM.

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Keywords: Seaweed, *Eucheuma cottonii*, Convolutional Neural Network, MobileNetV2, Image Classification, ice-ice disease.

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Indonesia, as a maritime country with abundant marine resources, has significant potential in seaweed cultivation, particularly in ponds. One type of seaweed cultivated in ponds is *Eucheuma cottonii*, which is a source of carrageenan. However, seaweed cultivation in ponds faces challenges in maintaining production quality, especially related to diseases such as ice-ice, which can affect seaweed quality. This study aims to develop a seaweed quality analysis model based on images using the Convolutional Neural Network (CNN) method with the MobileNetV2 architecture. This model is designed to classify seaweed quality based on images, focusing on detecting whether the quality is good or poor (ice-ice disease). The program implementation uses the Python programming language and is optimized with the CNN algorithm. The research results show that the developed model can classify seaweed quality with a fairly good accuracy of 85%. The use of CNN MobileNetV2 in seaweed image analysis has proven effective in monitoring production quality.

Reference (2010 - 2023)