ABSTRACT

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Title	:	Rotten And Fresh Fruits Classification Using CNN Algorithm

The classification of rotten and fresh fruits is an essential task in the food industry, with significant economic implications for fruit producers. This study proposes a methodology for the classification of rotten and fresh fruits using a convolutional neural network algorithm. The methodology involves dataset collection, data preprocessing, data augmentation, model training, and model evaluation. A dataset of 1400 fruit images labeled as rotten or fresh was collected, and a convolutional neural network model was designed with three convolutional layers, two max-pooling layers, and two fully connected layers. The model achieved an accuracy of 98.04% on the validation set. The results demonstrate the effectiveness of the proposed methodology and highlight the potential of convolutional neural network algorithms in the food industry. The developed system provides a practical and reliable solution to the classification of rotten and fresh fruits, which can lead to significant economic benefits for fruit producers.

Keywords: Fruit classification, Freshness detection, Rotten fruit identification, Convolutional Neural Networks (CNN), Deep Learning, Image Processing, Food Industry.