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Grading freshness of fruits by using Deep learning with Image processing.

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Abstract

Nutrition and energy are essential requirements for a human being to become healthy. As a result, in order to become healthy, people are accustomed to consuming fruits that contain various types of nutrition. In the long run, eating healthy fruits will result in fewer health problems and injuries.

In the earlier stages of the agricultural food supply chain, such as harvesting, packaging, and transporting, people tend to grade fruits and vegetables manually based on visual appearance and separate defective goods from fresh goods. However, after displaying the isolated fresh goods to customers, the freshness of the goods will degrade over time, and the fruits will be of poor quality for the customer's selection. The customers will then have to sort out the fresh foods on their own, which most of them have no experience with.

As a result, as technology advances, deep learning and computer vision-based approaches to detecting the freshness of fruits using image processing have recently been proposed in the agriculture domain.
Considering that manual freshness detection of fruits and vegetables is inaccurate and a waste of time, it is clear that an automated version to detect freshness is required. As a result, this report is based on the implementation of a fruit freshness detection application for supermarkets, in which they can capture the desired object (selected fruit) from the proposed web application and instantly identify the quality of the fruit before placing them to sell.