

## عنوان مقاله:

MULTI-CLASS FRUIT DETECTION USING DEEP LEARNING MODELS AND RANDOM FOREST CLASSIFIER

## محل انتشار:

دهمین کنفرانس بین المللی راهکارهای نوین در مهندسی، علوم اطلاعات و فناوری در قرن پیش رو (سال: 1400)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

This paper presents a new deep learning system for recognizing fruits using machine learning models as well as using random forest classification. Since the classification of fruits based on their types and characteristics is usually done by hand and eye, this method can cause huge losses in terms of time, cost, and labor. The proposed method can be very useful in harvesting fruits at harvest time. The proposed system could also use shelves in-store reviews to identify off-site fruits. Also, in this study, we used a convolutional neural network with AlexNet structure for feature extraction and a random forest algorithm for fruit classification. In this article, the convolutional neural network predicts the name of the fruit according to its image. We trained the network in a supervised manner in which the fruit images would be the network input and the fruit label (fruit name) the network output. After training, the CNN model will be able to predict the fruit label. The results show that the proposed method is able to automatically detect the name of the fruit with a high degree of accuracy.

## کلمات کلیدی:

Fruit classification-Features extraction-Convolutional Neural Network (CNN)-Random forest

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1279347>

