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Generalized Framework for Fruits Defect Detection using Deep Learning

Dr. Jyoti Deshmukh, Sumit Chavan, Sakshi Chalak, Shruti Ghogare, Aditi Ghadge
Pillai College of Engineering, New Panvel, Maharashtra, India

Abstract: *In agricultural applications, machine learning techniques are important for computerized fruit grading and quality assessment. Automation in agriculture boosts a nation's economic growth, productivity, and quality. Fruit quality grading is a crucial export market metric, particularly when it comes to surface fault detection. Given the popularity of mangoes in India, this is particularly relevant. Mango grading by hand, however, is a laborious, erratic, and subjective procedure. In order to discover defects in mangoes, a computer-assisted grading method has been devised. Lately, effective classification outcomes in digital image classification have been attained through the application of machine learning approaches, such as the deep learning approach. In particular, automated fault identification in mangoes uses the convolution neural network (CNN), a deep learning technology. This paper suggests a CNN-based computer-vision approach for classifying excellent mangoes. The NIR scanner will be used to scan the mango, and the data it collects will be sent to the software. It will be able to tell whether a mango is defective or not after training and testing the data*

Keywords: Mango defect detection; machine learning; deep learning; convolutional neural network; Mango; Scanner

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