

Fruit Export and Advisory App using Deep Learning

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Abstract: *Because of the agriculture sector's vital role in global food production and sustainability, fruit quality is critical. Traditional methods of fruit quality evaluation are time consuming and subjective, resulting in inefficiencies in the supply chain and significant food loss. Our research provides a novel solution. By evaluating fruit photos, our algorithm detects fresh versus sub optimal quality fruits using cutting-edge machine learning techniques. Our model correctly identifies ripeness, flaws, and deformities across multiple fruit varieties using deep learning with CNNs at its heart and transfer learning. Implementing this technology reduces food waste and promotes sustainable agriculture by streamlining fruit quality testing. It helps farmers, distributors, and consumers by guaranteeing that only the best fruits make it to market. Our study provides a cost effective, environmentally friendly, and long-term solution.*

Keywords: Fruit quality assessment, deep learning, CNN, transfer learning, sustainable agriculture, food waste reduction, fruit grading, mobile application, agriculture technology, image processing