Cocopal - A Deep Learning Based Intelligent System to Certify and Standardize the Quality of Coconut Based Products

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Abstract

The procedure of certifying and standardizing the quality of the coconut-based products is done manually in Sri Lanka. It is a time consuming and labor-intensive task and is conducted by experts. In most cases, the quality is determined solely by visual inspections by buyers and suppliers, with no scientific basis. The paper reports the capacity of bringing modern technology solutions such as Artificial Intelligence (AI), Machine Learning (ML), Image Processing (IP), and decentralized storage to aid in the certification and standardization of the quality of raw materials. Results showed that the accuracy of the proposed system is in the 86% to 90% range and indicated that this technique could be improved and used as an alternative to manual techniques.

Keywords

Coconut-Based Products, Export, Quality Standards, CNN, Mask R-CNN, Image Processing