Banana Disease Identification Using Machine Learning Based Technologies and Weather-Based Dispersion Analysis

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Abstract

Banana is the fourth most important food crop in the world as well as the most important and popular fruit crop in Sri Lanka. Banana leaf diseases are becoming one of the most important factors affecting agricultural products. As a result of these diseases, the quantity and quality of agricultural produce have drastically decreased. Hence, early detection and classification of banana leaf diseases are becoming more important than ever. But the ancient method of disease identification, visual observation is no longer helpful in this matter as it requires significant knowledge and experience related to banana diseases and symptoms. This skill is lacking in present farmers. Therefore, using ICT-based approaches such as autoML, deep learning, natural language processing and APIs are very important towards the efficiency of the disease identification process and the accuracy of the diagnosis as well as keeping farmers synced with the information related to their plantation such as recent threats and nearby threats.

Keywords

Deep Learning, CNN, Automl, Machine Learning, Natural Language Processing, Crowdsourcing