IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 5, November 2025
Impact Factor: 7.67

Leaf Disease Detection and Planting Adviser Using Python

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Abstract: *Plant leaf diseases that lower yield and quality frequently pose a danger to crop productivity. Two commonly grown crops, potatoes and tomatoes, are especially susceptible to illnesses like Early Blight and Late Blight. Conventional illness detection techniques rely on manual observation, which is laborious, unreliable, and prone to human mistake. A Python-based automated framework for planting guidance support and the leaf disease detection is proposed in this study. The Convolutional Neural Networks (CNNs) are used by the system to accurately classify tomato and potato leaves as either healthy or unhealthy. A rule-based planting consultant module that offers crop suggestions based on soil pH, temperature, and humidity characteristics is also integrated. Utilize the plant village dataset to train and assess the suggested method, which showed encouraging real-time illness accuracy. With the goal of reducing losses, increasing productivity, and advancing precision agriculture, the model offers farmers a dependable decision-support tool by fusing automated diagnosis with practical planting suggestions.*

Keywords: *Plant leaf diseases*

DOI: 10.48175/IJARSCT-30003