

TITLE: LEAF DOCTOR

Advancing Smart Farming with MATLAB for Automated Plant Leaf Disease Detection

Abstract:

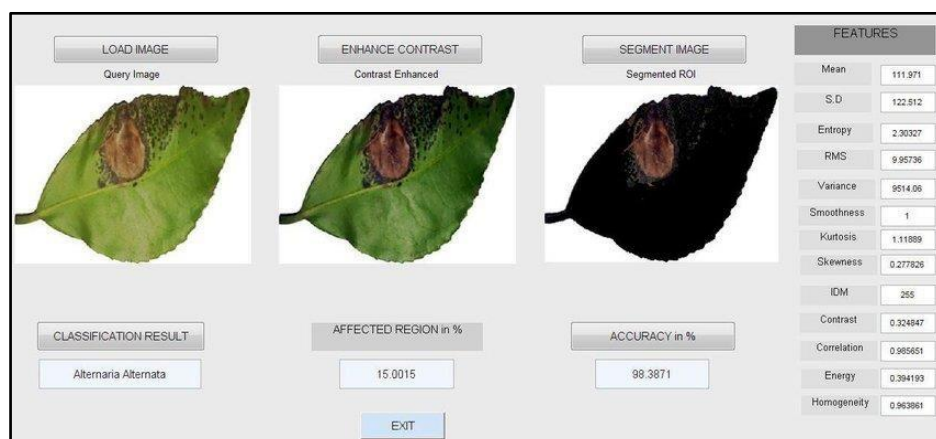
In the agricultural sector, combating plant diseases is crucial for ensuring optimal crop yields and minimizing financial losses. To address this challenge, we introduce an innovative solution leveraging the power of MATLAB for automated plant leaf disease detection. Our approach employs sophisticated image processing techniques to detect and identify diseases affecting plant leaves accurately. By capturing high-resolution images of afflicted leaves and employing advanced computational algorithms, we enhance image clarity and detail, facilitating precise analysis.

Central to our methodology is the utilization of convolutional neural networks (CNNs), a form of artificial intelligence adept at discerning healthy from diseased leaves. Through extensive training on diverse datasets, the CNN learns to recognize various types of plant diseases with exceptional accuracy. The integration of MATLAB streamlines the training process, enabling efficient deployment of this intelligent system.

Validation experiments demonstrate the efficacy of our system in identifying plant diseases across a wide range of scenarios. Notably, our approach offers several advantages, including non-invasiveness, cost-effectiveness, and scalability, making it well-suited for implementation in large-scale farming operations.

This research represents a significant advancement in smart farming technologies, offering a practical solution for early disease detection and crop protection. By harnessing the power of MATLAB for automated disease detection, the LEAF DOCTOR system empowers farmers and researchers to mitigate the impact of plant diseases and optimize agricultural productivity.

RESULT:-



THANK YOU...!

TEAM MEMBERS

1. MONISH B (3rd Year-ECE)
2. MOHIT MUTHIAH S (2nd Year-ECE)
3. AAKASH A (2nd Year-ECE)
4. ARAVINDH A (2nd Year-ECE)