PLANT DISEASE DETECTION AND RECOMMENDATION SYSTEM

ZEROTH REVIEW REPORT

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1. TEAM MEMBERS:

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2. ABSTRACT:

In Tamil Nadu, after rice and sugarcane, crops such as Coconut, Groundnut, Banana, Corn, Jowar, Black Gram, Green Gram, Cotton, and Mango are widely cultivated, but they are highly susceptible to various plant diseases, leading to significant agricultural losses. This project aims to develop a robust plant disease detection and recommendation system leveraging advanced machine learning models and image processing techniques.

The system leverages various machine learning and deep learning trained on a diverse dataset of diseased and healthy plant images. To enhance model performance, various data augmentation strategies, preprocessing techniques, and feature extraction methods are explored to ensure accurate and generalized predictions. The project will also compare multiple models to determine the most suitable one for disease classification to boost effectiveness.

By providing farmers with an accessible and efficient disease diagnosis tool, this system can aid in early disease detection, enabling timely intervention and reducing crop losses. The integration of this technology into mobile application ensures widespread accessibility, ultimately contributing to more sustainable and resilient agricultural practices in Tamil Nadu.

3. TOOLS AND TECHNOLOGIES USED:

- Programming Language: Python
- Integrated Development Environment (IDE): Google Collaboratory
- Application Programme Interface (API): FastAPI
- Deployment Services: Huggingface
- Library: Tensorflow, OpenCV.
- Framework: Keras