Android Application to Detect Plant Disease and Pest

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➢ Introduction

The Plant Disease Detection Mobile Application is a user-friendly tool designed to help farmers, gardeners, and plant enthusiasts identify and diagnose plant diseases quickly and accurately. Leveraging the power of machine learning and image processing, the application analyzes images of plant leaves captured through the device's camera or uploaded from the gallery.

➢ Features

1. **Image Capture:** Users can capture images of plant leaves using the device's camera.
2. **Image Upload:** Alternatively, users can upload images of plant leaves from the device's gallery.
3. **Real-Time Diagnosis:** The application provides real-time diagnosis and feedback on the health status of the plant based on the analyzed image.
4. **Disease Identification:** The application identifies common plant diseases by analyzing leaf images and provides information about the detected disease.
5. **Educational Resources:** Users can access information about common plant diseases, their symptoms, and recommended treatments.
6. **User-Friendly Interface:** The application features an intuitive and easy-to-use interface, making it accessible to users of all skill levels.

➢ System Requirements

1. Android OS version 6.0 (Marshmallow) and above.
2. Camera access permission for capturing images.
3. Internet connectivity for accessing additional resources and updates.

➢ Installation

The Plant Disease Detection Mobile Application can be installed from the Google Play Store or downloaded as an APK file from the project repository.

➢ User Guide

1. Open the application on your device.
2. Choose to capture a new image using the device's camera or upload an image from the gallery.
3. Once the image is selected, the application will analyze it and provide a diagnosis of any detected plant diseases.
4. Users can explore additional information about the identified disease, including symptoms and treatment options.

➢ Technologies Used

1. **Java:** Programming language used for application logic and functionality.

2. **XML:** Markup language used for designing the application layout and UI components.

3. **TensorFlow Lite:** Machine learning framework for implementing the plant disease detection model.

4. **Android Studio:** Development environment for building the Android application.

➢ Conclusion

The Plant Disease Detection Mobile Application serves as a valuable tool for plant enthusiasts and professionals alike, offering quick and accurate diagnosis of plant diseases. With its user-friendly interface and advanced features, the application aims to empower users to effectively manage plant health and contribute to improved crop yield and agricultural practices.

Developed By

Name : Israk Ahmed

Student ID : 2037820103

Department : Computer Science & Engineering

Session : 2019-2020

TMSS Engineering College Affiliated with University of Rajshahi

ML Model Credit

Name : Anand Singh

GitHub : https://github.com/Anand-Singh-techie

Name : Saurabh Kumar

GitHub : https://github.com/indskgit

Project Link (GitHub) : https://github.com/IsrakAhmed/Plant_Disease_Detector