

AI-Based Plant Disease Detection

Empowering Farmers for a
Sustainable Future



Understanding Crop Diseases



01 Early Identification Challenges

Many farmers struggle to identify crop diseases early, leading to **significant losses** in yield.

02 Limited Expert Advice

Access to affordable expert advice is scarce, causing **delays in action** against diseases.

03 Productivity Impact

Crop diseases directly affect productivity, resulting in **financial strain** for farmers and reduced food supply.

Key Features of the Tool



01 Instant Disease Detection

Our tool provides **rapid identification** of plant diseases through advanced image processing techniques.

02 Remedy Recommendations

Users receive **tailored solutions** for their specific plant diseases, enhancing recovery chances.

03 Offline Accessibility

The application operates without the need for internet, making it **accessible** in remote farming areas.

IMAGE INPUT

Users upload leaf images for analysis.

FEATURE EXTRACTION

Important characteristics of the leaf are identified and extracted.

PREPROCESSING

Images are cleaned and prepared for feature extraction.

DECISION TREE CLASSIFICATION

The algorithm classifies the disease and recommends remedies.

Decision Tree Overview



01 Effective Disease Classification

The Decision Tree algorithm effectively classifies diseases based on leaf images, allowing for accurate disease identification.

02 Lightweight and Efficient

Its lightweight nature ensures that the tool runs smoothly on various devices, making it accessible to all users.

Simple, interpretable, and fast — ideal for offline and low-resource environments..

03 Retrainability for Adaptation

The algorithm can be easily retrained with new data, allowing the tool to adapt to emerging plant diseases.

Key Features of the Solution

Our tool offers essential features for effective disease management.

- **Fast detection** of plant diseases
- Instant **remedy suggestions** based on analysis
- **Offline access** for remote usage
- **User-friendly** interface for all users

