Plant Disease Detector

- AI Based Plant Disease Detection System
- Mini Project Presentation

Project Objective

- • Detect plant diseases using AI
- • Analyze leaf images
- • Help farmers & students
- • Provide early disease warning

Problem Statement

- • Plant diseases reduce crop yield
- • Manual detection is difficult
- • Requires expert knowledge
- • Need fast automated solution

Solution Overview

- • Upload plant leaf image
- • AI model analyzes image
- • Detect disease type
- • Show confidence score
- • Suggest basic precautions

System Features

- • Image upload
- • AI image classification
- • Disease name output
- • Confidence percentage
- • History of scans

How It Works

- 1. User uploads leaf photo
- 2. Image preprocessing
- 3. CNN model analyzes
- 4. Disease predicted
- 5. Result displayed

Image Preprocessing

- • Resize image
- • Normalize pixels
- • Remove noise
- • Data augmentation

AI Model

- • Convolutional Neural Network (CNN)
- • Trained on plant leaf dataset
- • Pattern recognition
- • Image feature extraction

Dataset Used

- • PlantVillage dataset
- • Healthy & diseased leaves
- • Multiple crop types
- • Labeled images

Application Pages

- • Home Page – upload image
- • Result Page – disease output
- • History Page – past scans
- • About Page – model info

Result Page Output

- • Plant name
- • Disease detected
- • Confidence score
- • Risk level
- • Basic treatment tips

Technology Stack

- • Frontend: Web/App UI
- • Backend: Python
- • AI: TensorFlow / PyTorch
- • Database: Cloud / Local

Advantages

- • Fast detection
- • Easy to use
- • Supports farmers
- • Reduces crop loss

Limitations

- • Needs clear images
- • Limited to trained diseases
- • Accuracy depends on dataset

Future Enhancements

- • Mobile app version
- • More crop types
- • Live camera detection
- • Treatment recommendation

Conclusion

- AI Plant Disease Detector helps in
- early identification and prevention
- of crop diseases.

Thank You

- Plant Disease Detector Project
- Questions?