



Plant Diseases Detection for Sustainable Agriculture Project

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Internal Guide
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Introduction

- Objective: Develop AI-based plant disease detection system
- Current Status:
 - Research and planning completed
 - Dataset collection in progress
- Next Steps:
 - Model training, testing, and deployment



Organization: Triveni Global Software Services LLP

Internship Focus: AI for Agricultural Applications

Impact: Early disease detection for better crop management



Objective of Training

- Goal: Develop AI-based plant disease detection
- Progress:
 - Studied existing methods
 - Defined problem statement
- Next Steps:
 - Model implementation & optimization



Hardware and Software Requirements:

- Hardware:
 - Multi-core processor, 8 GB RAM
- Software:
 - Python, TensorFlow/Keras, Pandas
 - Jupyter Notebook, Flask/Django



Process Model

- Current Progress:
 - Image Collection
 - Data Preprocessing (In Progress)
- Next Steps:
 - Model Training, Testing & Deployment



Functional & Non-Functional Requirements:

- Functional:
 - Image collection
 - Preprocessing (In Progress)
- Non-Functional:
 - Model optimization
 - Scalability for real-world use



Implementation Work:

- Completed:
 - Literature Review, Data Collection
 - Preprocessing Pipeline Defined
- In Progress:
 - Feature Extraction
 - Model Development



Challenges Faced

- Data Issues: Variability in image quality
- Computational: GPU dependency for training
- Model Accuracy: Need for better tuning



Future Work

- Upcoming Steps:
 - Train CNN model
 - Test with real-world images
 - Develop a simple UI
- Long-Term Goals:
 - Web API & Mobile app