

XELFUGETS 2K24

AI-Driven Crop Disease Prediction and Management System

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IDEA TITLE

❖ Introducing the Smart Crop Disease Prediction and Management System

- An innovative solution designed to help farmers effectively tackle crop diseases.
- This system uses artificial intelligence to analyze crop images and disease outbreaks, and provide farmers with practical insights and treatment recommendations.
- Plus, with partnerships with pesticide companies

IDEA TITLE

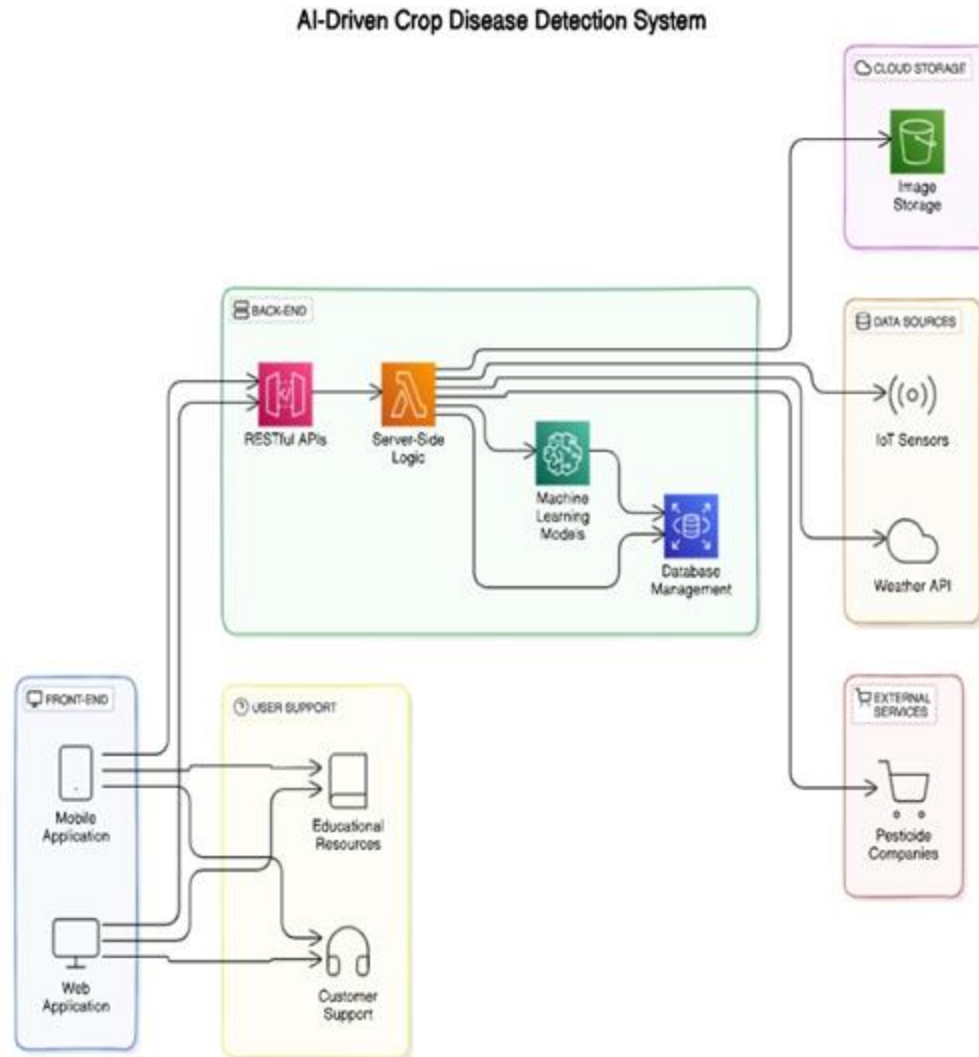
❖ KEY BENEFITS:

- Image Analysis and Disease Detection
- Environmental Data Integration
- Actionable Insights and Alerts
- Partnership with Pesticide Companies
- User Training and Support

❖ How It Addresses the Problem:

- Early Detection
- Data-Driven Decisions
- Streamlined Access
- Education & Support

TECHNICAL APPROACH



TECH STACK

MOBILE APPLICATION -  Flutter

BACK END -  

DATABASE - 

API - RESTful APIs , Weather

ML INTEGRATION - TensorFlow

FEASIBILITY AND VIABILITY

1. Feasibility:

AI and The system is viable due to accessible smartphone use.

1. Challenges:

1. Poor image quality can lead to inaccuracies.
2. Farmers may resist adopting new technology.
3. Different farming conditions can affect predictions.

2. Solutions:

1. Improve image quality and provide capture tips.
2. Offer training to build user trust.
3. Create adaptable algorithms for various conditions.

IMPACT AND BENEFITS

- **Early Disease Detection**: Quick identification of crop diseases to reduce loss and boost yield
- **Smart Decisions**: Real-time weather and soil data optimize farming practices.
- **Proactive Risk Management**: Alerts and insights help prevent issues before they escalate.
- **Direct Access to Pesticides**: Easy purchase of recommended pesticides through the app.
- **Empowering Farmers**: Tutorials and support enhance farmers' knowledge and confidence.