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TEAM MEMBERS:

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THEME:ENVIRONMENMT & SUSTAINABILITY

TITLE:THE SUSTAINABILITY GAP IN MODERN AGRICULTURE

PROBLEM STATEMENT:

Without real-time crop health insights and climate-aware decision support, farmers suffer from crop losses, excessive chemical use, and inefficient resource consumption. Long-term agricultural sustainability is threatened by traditional farming methods, which also increase food waste, environmental harm, and carbon emissions.

PROPOSED SOLUTION:

An AI-driven smart farming platform that uses real-time data to optimize resource usage, provide eco-friendly treatment recommendations, and instantly identify crop diseases.

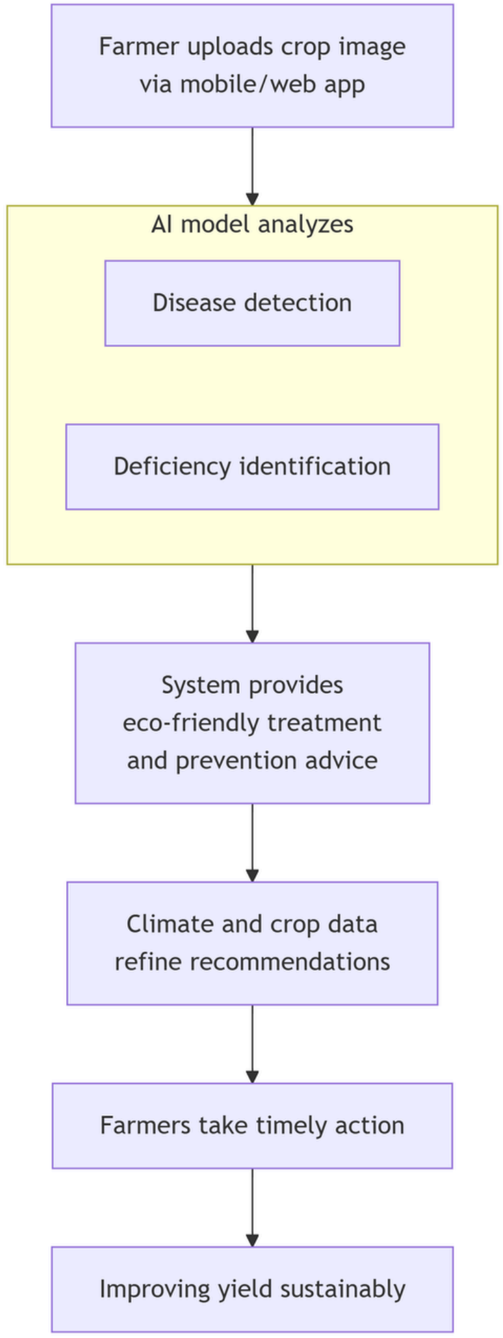
Important Features

- AI-based image-based crop disease detection
- Recommendations for low-chemical, sustainable treatment
- Climate-conscious guidance for preventive agriculture
- A user-friendly interface that prioritizes farmers

TOOLS & TECHNOLOGIES

- Predicting diseases using artificial intelligence and machine learning.
- Image-based crop analysis using computer vision (CNNs).
- Scalable data processing and storage through cloud computing.
- APIs: Integration of weather and agricultural data.

WORKFLOW


Farmer uploads crop image via mobile/web app
AI model analyzes
Disease detection
Deficiency identification
System provides eco-friendly treatment and prevention advice
Climate and crop data refine recommendations
Farmers take timely action
Improving yield sustainably

Expected Impact

- Reduction in crop losses and food waste
- Lower chemical and water usage
- Reduced environmental and carbon impact
- Improved farmer income and productivity
- Supports circular and sustainable food systems

THANK YOU