AloeGreen

Smart Support System for Aloe Vera

Presented by
2025-26J-166

Date
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Meet Our Team

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Snaps From Our Field Visit

Introduction to problem

Limited research exists on an integrated smart system for Aloe Vera cultivation. Most studies focus on individual aspects like disease management, yield prediction, or market analysis separately.

This gap presents significant challenges for farmers and stakeholders, who require a comprehensive, data-driven tool to improve crop health, optimize yields, and make informed market decisions.

Observed issue

- Late disease detection
- Uncertain crop yield
- Improper fertilizer usage
- Lack of awareness of market price trends

Why it matters

Crop loss

- Affecting both farmers' livelihoods and agricultural sustainability
- **Lower farmer income**
- **Reduced productivity**

Previous Research & Shortcomings

Previous Research Focus

Weather-Based Crop Monitoring

Many studies focused on general weather-based agriculture prediction

Basic Crop Yield Estimation

Research mainly predicted yield using limited agricultural data

General Fertilizer Recommendations

Existing systems recommend fertilizers but are not crop-specific

General Fertilizer Advice

Existing systems recommend fertilizers but are not crop-specific

Research Shortcomings

Lack of Smart Technology Integration

Most studies do not integrate multiple AI tools into a single farming system

No Market Price Prediction

Previous systems ignore market trends that affect farmer profits

Limited Farmer-Centered Solutions

Many models are not designed for real-world farmer usability

No Complete Aloe Vera Farming Support

Existing research does not cover the full aloe vera farming cycle

Problem & Proposed Solution

Problems

Uncertain Crop Yields

Late Disease Detection

Market Price Uncertainty

Incorrect Fertilizer Use

Low Productivity & Financial Losses

AI-Based Solution

AI-Powered Smart Aloe Vera Farming System

Increase *Crop Yield*	Early Disease Control	Better Market Decisions	Optimal Fertilizer Use

Non-Functional Focus

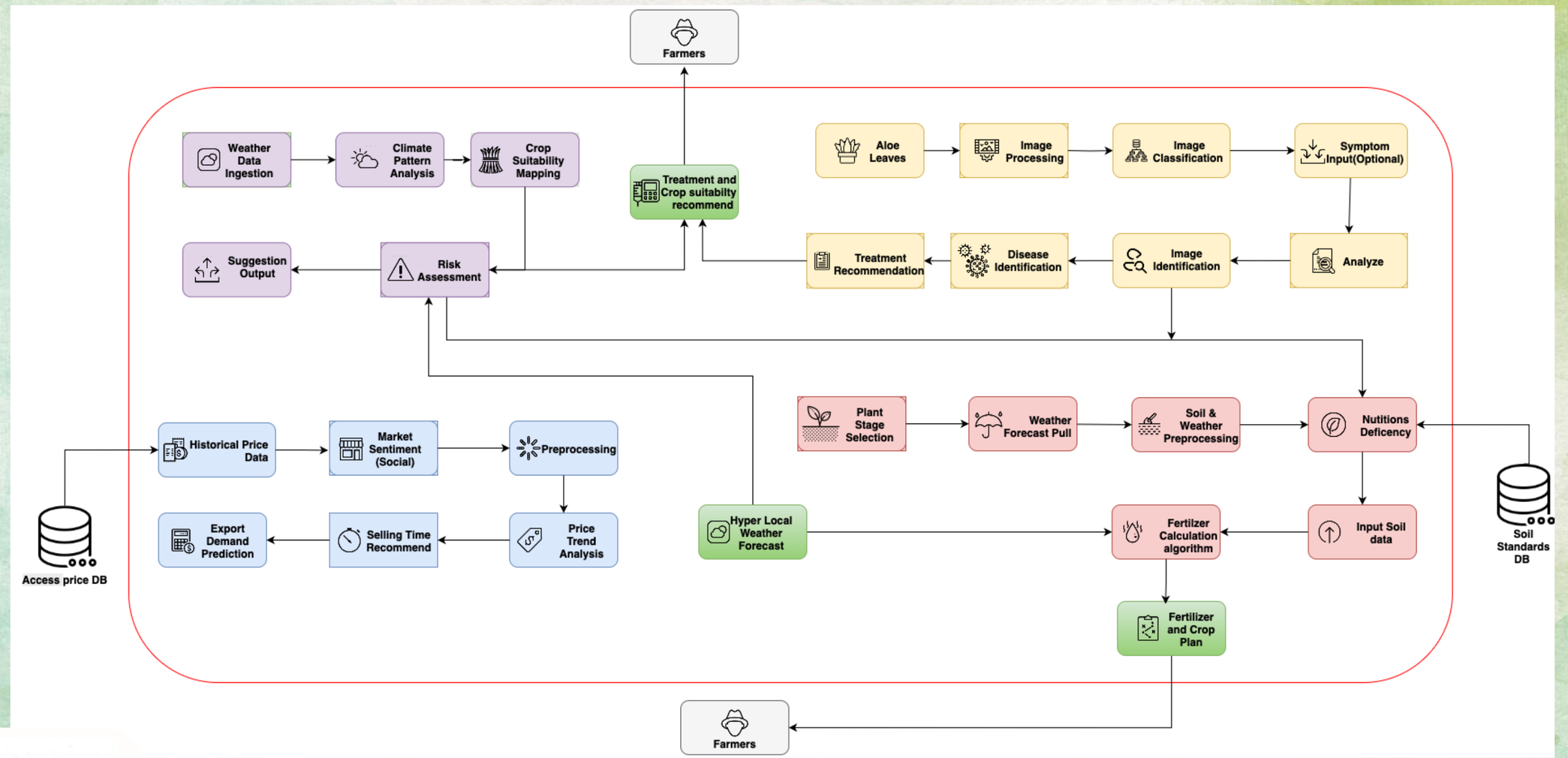
Real-time sensor data processing within seconds

Store-and-forward buffering during network failures

Secure API communication and data storage

Simple mobile dashboard for farmers.

System Diagram



Commercialization

Application cost: Rs.6000(Per Month)

Target Audience:

Aloe Vera Farmers

Entrepreneurs

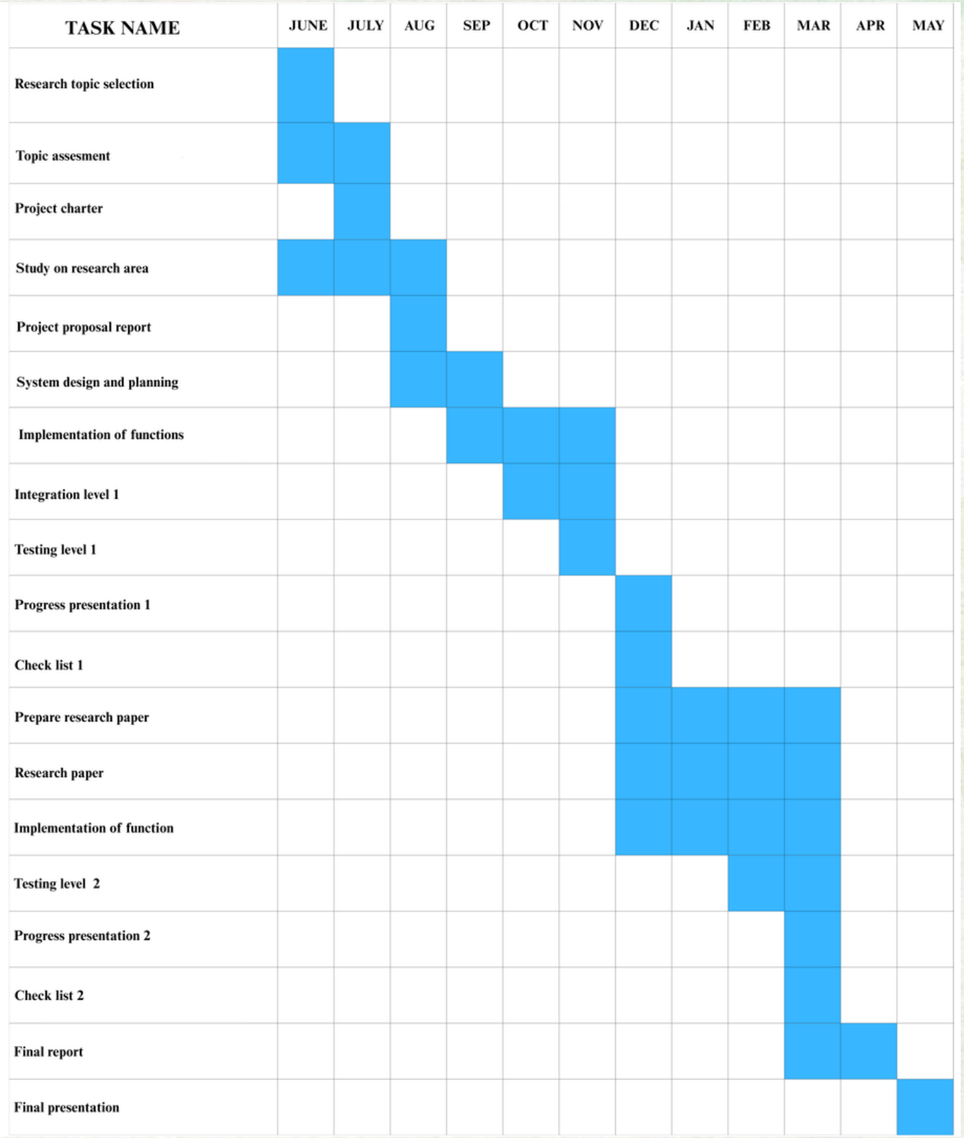
FREE PLAN

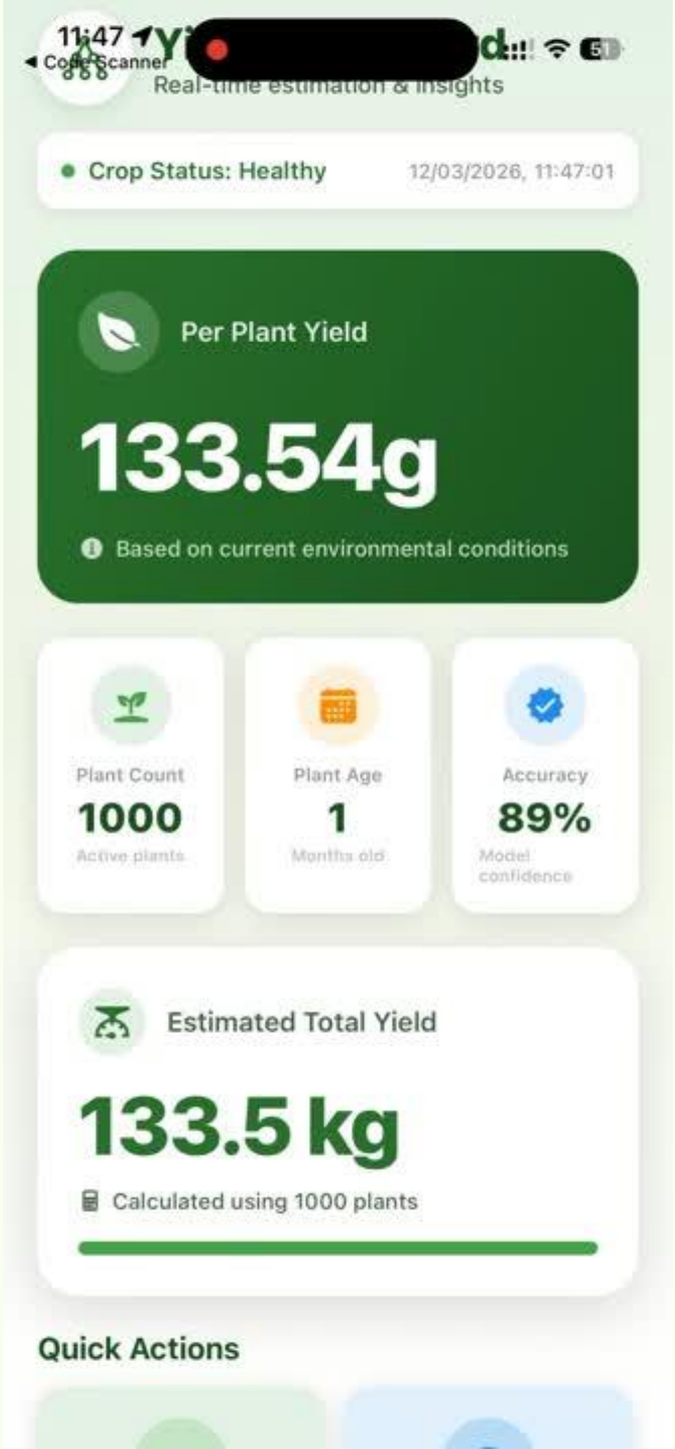
Free

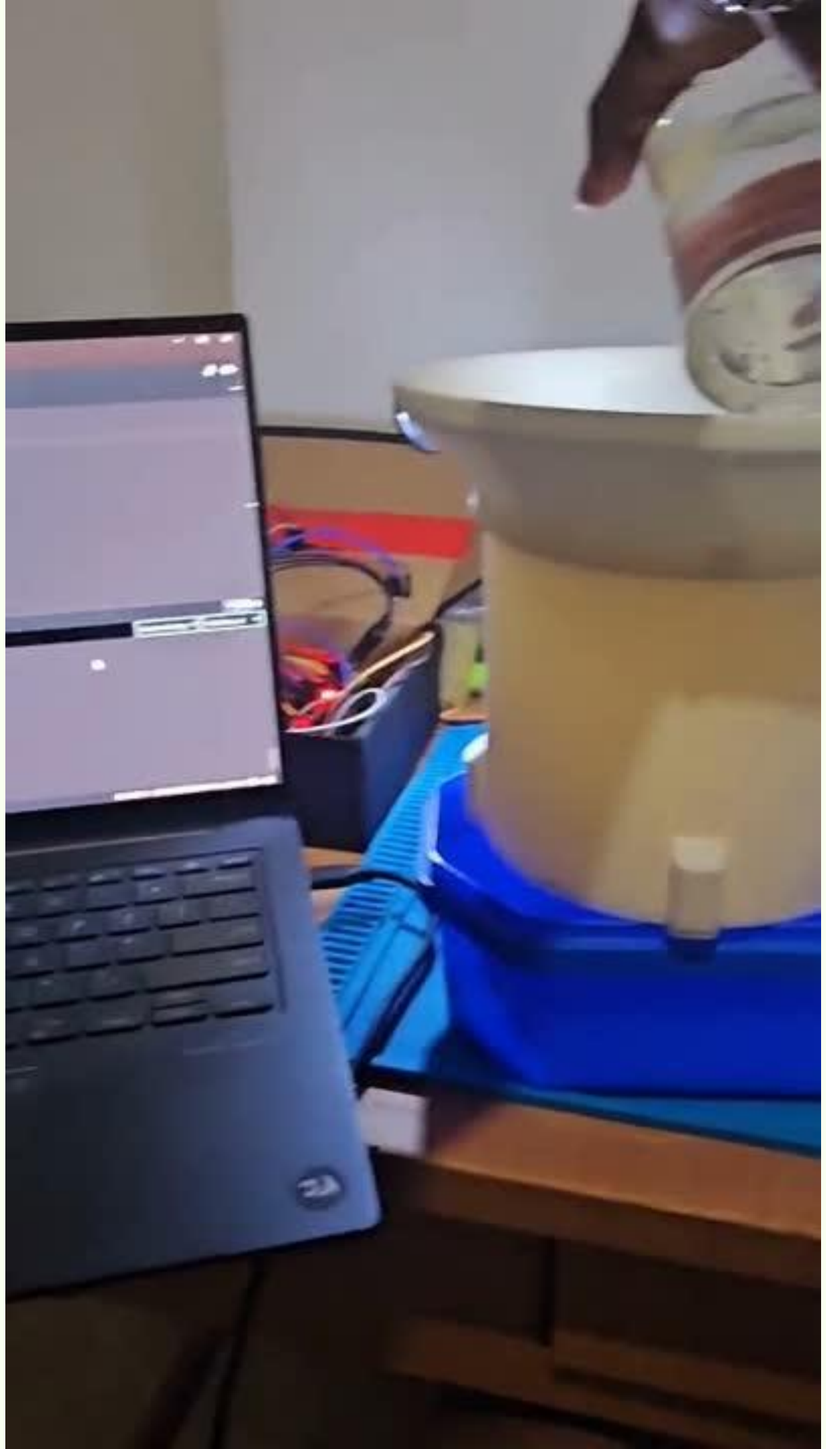
PREMIUM PLAN

Rs.6000
per month

Gantt Chart


TASK NAME
JUNE
JULY
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
Research topic selection
Topic assesment
Project charter
Study on research area
Project proposal report
System design and planning
Implementation of functions
Integration level 1
Testing level 1
Progress presentation 1
Check list 1
Prepare research paper
Research paper
Implementation of function
Testing level 2
Progress presentation 2
Check list 2
Final report
Final presentation


11:47
Code Scanner
Real-time estimation & insights
Crop Status: Healthy
12/03/2026, 11:47:01
Per Plant Yield
133.54g
Based on current environmental conditions
Plant Count
1000
Active plants
Plant Age
1
Months old
Accuracy
89%
Model confidence
Estimated Total Yield
133.5 kg
Calculated using 1000 plants
Quick Actions



Thank You !