SpectraGrow

Decode Your Soil 🌱
Maximize Your Yield! 🚀🌾

Members

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The Problem

🔴 Farming is Guesswork Without Data

- 126 million small & marginal farmers in India struggle with soil degradation.
- Phosphorus depletion leads to poor crop growth & financial losses.
- Soil testing is expensive, time-consuming, and inaccessible.
- Overuse of fertilizers causes environmental damage & high costs.

💡 Farmers need an easy, real-time way to check soil health!

The Solution - SpectraGrow

✅ **Instant Soil Health Prediction Using Just GPS**

- Farmers enter their **latitude & longitude**.
- AI fetches **phosphorus data from geospatial databases & satellites**.
- ML models analyze **soil quality & recommend optimal fertilizers**.
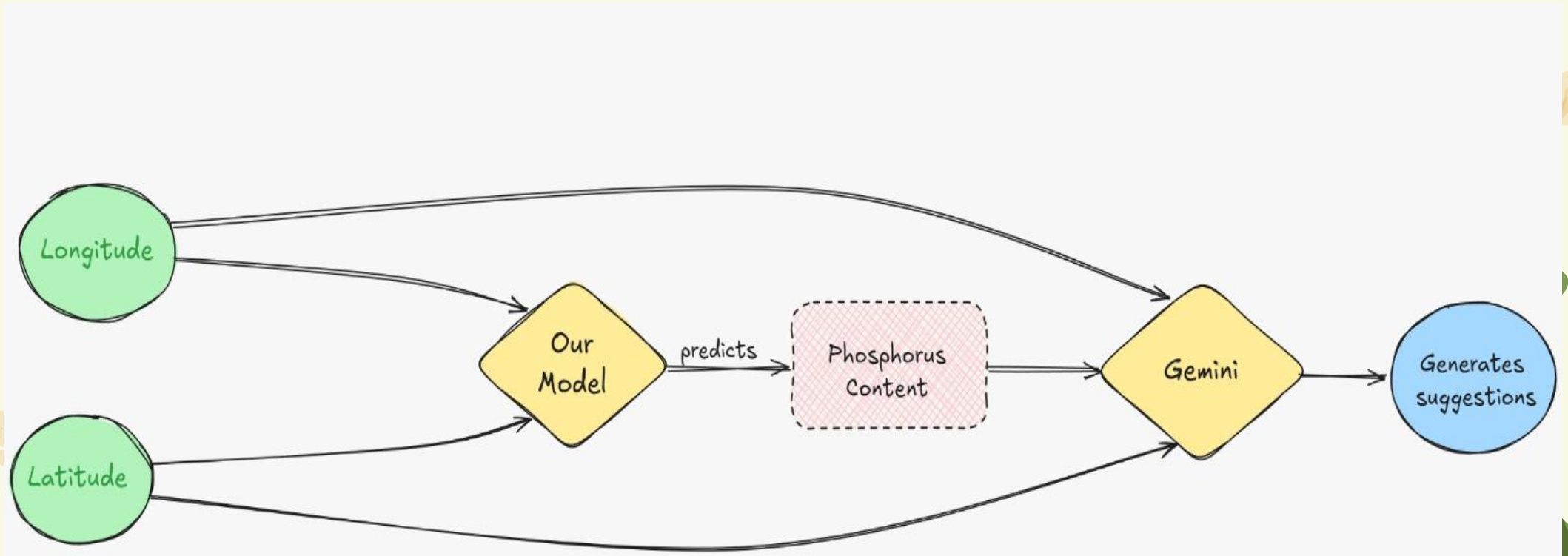- Accessible via **mobile-friendly app with regional language support**.

🚀 **No expensive tests. No waiting. Just instant AI insights!**

Features

AI powered Soil Analysis
Multilingual Support
Sustainability-Focused
Smart Recommendations

How it works?

Longitude → Our Model
Latitude → Our Model
Our Model → predicts → Phosphorus Content
Phosphorus Content → Gemini
Longitude → Gemini
Latitude → Gemini
Gemini → Generates suggestions

Why SpectraGrow? 🚀

💡 **What Makes Us Unique?**

- 🌍 **No Hardware Needed** – Only a phone & GPS!
- 🤖 **AI + Satellite Data** – More accurate than traditional soil tests.
- 📱 **Mobile-First & Multilingual** – Designed for small farmers.
- 💰 **Affordable & Scalable** – Making precision farming accessible to all.
- ♻️ **Sustainable** – Reducing over-fertilization & improving soil health.

Thank you