Satellite based ground water level detection

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Problem Statement :

Farmers in India face only a 30% chance of success when drilling borewells, risking ₹3–4 lakh each time—leading to debt, despair, and hundreds of farmer suicides every year due to failed groundwater detection.

Solution:

A mobile/web app that uses satellite data, crop patterns, soil maps, and machine learning to accurately predict groundwater presence, depth, and volume at the plot level—empowering farmers to make informed decisions before investing in a borewell.

USP

- First solution in India to combine satellite imagery, crop patterns, soil data, and machine learning for groundwater detection.
- Provides plot-level, real-time predictions of groundwater presence, depth, and volume.
- "Metal detector" style guidance—farmers get instant, location-specific results on their phone.
- Far higher accuracy than traditional guesswork, outdated maps, or single-source methods.
- Affordable, scalable, and easy to use for farmers, agri-businesses, and local governments.

Competition

Current alternatives include outdated government maps, expensive private surveyors, and traditional practices like coconut dowsing—all of which lack precision, scalability, or scientific validation. No existing solution provides affordable, plot-level, AI-driven groundwater detection for Indian farmers.

Socio-economic impact

Reduces failed borewells and financial loss, directly addressing a leading cause of farmer suicides. Saves families lakhs of rupees, increases agricultural productivity, and supports sustainable water management—improving rural livelihoods and community well-being.
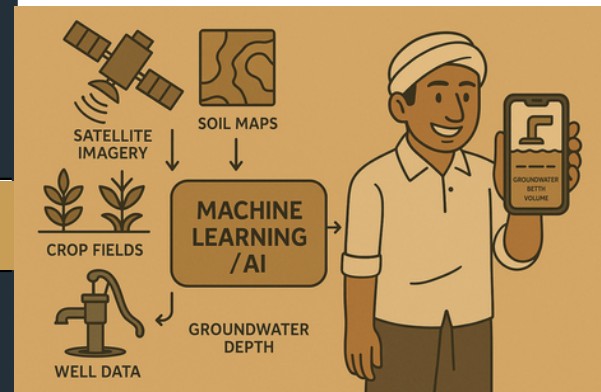
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