AGRISATHI

AGRISATHI: CULTIVATING TOMORROW WITH TECH AND TRUST

Members Name :

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We are a duo of tech enthusiasts and social innovators passionate about building inclusive solutions. Our diverse skill set spans AI, full-stack development, UX/UI, and social impact innovation, united by a mission to empower India's rural economy.

AGRISATHI

LOGO :-

PROBLEM STATEMENT:-

India is home to over 120 million small farmers, yet over 80% lack access to timely advice, modern tools, or fair markets leading to crop loss, low income, and a widening digital divide in agriculture.

Problem	Statement
Lack of Crop-Specific Guidance	Farmers lack access to personalized, timely crop advice, leading to poor yield, misuse of inputs, and heavy dependence on guesswork.
Delayed Crop Disease Detection	Most farmers are unable to identify crop diseases early, resulting in widespread damage and increased financial loss.
Language & Literacy Barriers	Existing agri-tech tools are not accessible to farmers with low literacy or non-English language preferences.
Unverified Input Products	Farmers struggle to differentiate between safe and chemical-heavy crop inputs due to lack of verified, transparent sources.
Low Engagement in Learning	There are no gamified, rewarding platforms that encourage farmers to learn or adopt better agricultural practices regularly.
Inaccessible Expert Support	Farmers lack affordable, real-time access to agri-experts or trained peers for immediate decision-making support.

Target Audience:-

AgriSathi targets the underserved population of small and marginal farmers in India, the majority of whom lack access to modern agri-tools, early crop diagnostics, financial literacy, and digital advisory systems. The platform also engages agri-tech enablers, FPOs, and responsible agri-buyers looking to empower the grassroots food ecosystem. This dual approach aims to increase farm income, promote sustainable practices, and bridge the rural digital divide.

- Market Size: Over 120M+ smallholder farmers in India, contributing to a $400B+ agriculture economy
- Crop Loss: Over ₹60,000 crore annual loss due to unplanned cropping and untreated infestations
- Digital Gap: <30% of farmers access agri-apps or expert support in regional languages
- Sustainability Potential: Empowering 100M+ farmers through tech to adopt eco-friendly and profitable practices

Segment	Description
Small & Marginal Farmers (Primary)	Over 120M farmers with <2 hectares land, majority in Tier 2, 3, and rural zones—often lacking digital tools or expert access.
Digitally Inexperienced Users	A significant portion of farmers are unfamiliar with app-based systems; they require voice-first and regional-language-based guidance systems.
Agri-Experts & Agronomists	Domain experts who can be connected to farmers via live chat or AI, enabling timely, accurate crop and disease solutions.
Conscious Buyers & Organic Traders	Buyers of verified low-chemical produce, seeking trustable digital sourcing of pesticide-free farm goods.
FPOs & Agri Co-operatives	Farmer Producer Organizations looking for a scalable tech solution to support their members' productivity and access to verified inputs.
NGOs & Government Extension Bodies	Organizations working in rural empowerment that can deploy AgriSathi as a voice-assisted advisory and disease diagnosis platform at scale.

Proposed Solution

AgriSathi is an AI-powered, voice-first mobile platform designed to assist farmers with crop advice, disease detection, and expert support all in regional languages.
It empowers rural farmers through smart tools, verified input access, and gamified learning, ensuring sustainability and increased income.

1.Voice-First Assistance :

- Regional-language voice support ensures accessibility for low-literacy farmers across India.

2.AI Crop Diagnosis:

- Image-based detection of diseases, pests, and soil issues with actionable remedies.

3.Gamified Learning:

- Farmers earn AgriCreds through image uploads to redeem safe inputs.

4.Expert & Input Access:

- Offers live chat with agronomists and access to a trusted marketplace for pesticide-free farming products.

Tech Stack:-

- UI/UX (Figma): Designed for low-literacy users with voice-first, intuitive, and culturally contextual interfaces.
- Frontend (HTML, Tailwind, React): Mobile-first, responsive UI accessible on low-end devices across rural regions.
- Backend (Node.js / Python Flask): Powers real-time crop diagnostics, user actions, and expert interactions.
- AI/ML (Python, TensorFlow, OpenCV, Hugging Face, Google Cloud Voice): Enables disease detection via images, regional-language voice assistant, and smart crop recommendations.
- AgriCreds (JS + Points DB): Farmers share tips or questions, and others vote on that post. Helpful posts earn AgriCreds, which can be used for expert advice from agronomists.
- Payment Integration (UPI / Razorpay API): Seamless redemption of AgriCreds for certified seeds or bio-inputs.
- Database (MongoDB / Firebase): Secure and scalable farmer profiles, activity logs, and crop health records.

UI/UX
(Figma)

Frontend
(React Native, Node.js)

Backend
(Python, Flask)

AI/ML
(TensorFlow, NLP, Dialogflow or Azure Speech API)

NLP

Payment Integration
(UPi, OCEN, DigiLocker)

Database
(MongoDB)

Innovation:-

What Makes AgriSathi Truly Innovative?

- Voice-Powered Crop Assistance

A multilingual voice assistant enables farmers to ask real-time, crop related questions and get AI driven responses, even if they are not digitally literate.

- Smart Disease Detection via Image Recognition

Using AI and computer vision, farmers can click pictures of their crops to instantly detect diseases and receive actionable recovery steps.

- Community Support

Farmers can post questions, tips, or updates, and others can upvote/downvote. They earn "AgriCreds" for being helpful, which they can use to get expert advice from certified agronomists within the app.

- Location-Based Personalization

On login, the app automatically detects the farmer's region to tailor recommendations based on local climate, soil conditions, and crop calendar.

- Live Expert Chat & AI Farming Bot

A conversational AI bot answers routine queries, while real experts join live sessions for high-value agricultural advice, creating a hybrid support system.

IMPACT:-

• Economic & Social Impact :-

Problem	AgriSathi's Impact
Lack of accessible agricultural knowledge	Voice assistant and AI chatbot in regional languages
Crop losses due to late disease detection	Instant image based disease diagnosis and recovery suggestions
Poor engagement with traditional apps	Certain tasks with redeemable rewards (AgriCreds)
Limited access to expert support	AI + Real-time expert consultations and live talks
Regional diversity in crop requirements	Location-based personalization for accurate insights

• Additional Ripple Effects:-

- Digital Empowerment: Enables even digitally illiterate farmers to access farming knowledge using natural language voice input.
- Financial Inclusion: AgriCreds act as a reward economy, increasing access to eco-friendly farming materials without direct spending.
- Community Building: Gamified system and live expert events foster a connected, motivated farming community.

Feasibility:-

- <u>Technically sound:</u> Built with React Native using APIs for voice, location, and image detection.
- <u>Operationally practical</u>: Works with NGOs and SHGs for farmer onboarding.
- <u>Highly scalable</u>: Cloud backend and multilingual support enable easy regional rollout.
- <u>Cost-effective:</u> Open-source tools ensure fast, low-budget mobile app development.

EXECUTION PLAN:-

Phase 1: MVP Development & Pilot Launch:-
- Location detection
- Voice assistant (basic crop queries)
- Disease detection via image upload
- AgriCreds logic (backend)

Phase 3: AI Bot & Expert Ecosystem:-
- AI Chatbot for 24/7 general queries
- Live talk schedule feature with real agricultural experts
- Push notifications for disease outbreaks and weather alerts

Phase 2: Gamification & Marketplace:-
- Missions system to earn AgriCreds
- Verified crop marketplace using AgriCreds
- Backend panel for crop/seed suppliers
- Start partnerships with eco-certifying crop vendors.

Phase 4: Scaling and Integration:-
- Scale to 5+ states with language support
- Integrate with Krishi Vigyan Kendras, local cooperatives, or AgriTech startups
- Begin working on government tie-ups and CSR support for distribution

THANKYOU