LORD OF THE PINGS
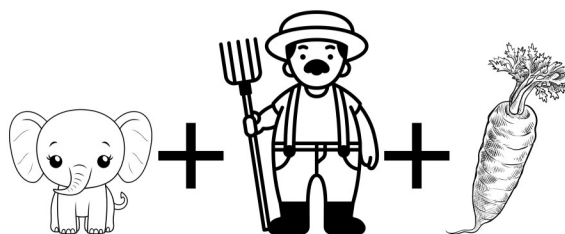
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KRISHI KRANTI : PS-5

Mobile & Web app for farmer and animals

Imagine Hackathon 2024

PRODUCT OVERVIEW

Krishi Kranti is a revolutionary **AI-powered platform** designed to **empower Indian farmers** with modern agricultural solutions.

- **Multilingual** Support with **Voice Integration** for accessibility.
- **Aadhar-Based Login** for personalized recommendations and **government verification**.
- **Crop Disease Detection** using C**NN, ResNet, VGG16, and Grad-CAM** for identifying causes, treatments, and precautions.
- **Cattle Disease** Prediction with AI-driven insights.
- **Smart Recommendations** for **crop lifecycle, challenges, and profit margin using XGBoost and weather-based APIs.**
- **Marketplace Integration** leveraging **web scraping** to ensure **affordable resources** and promote **local markets.**

PROBLEM

Illiteracy
A significant percentage of farmers are illiterate, limiting their access to digital and textual resources.

Crop Diseases
Lack of knowledge about crop diseases leads to reduced yield and financial losses.

Cattle Health Issues:
Inadequate resources to identify and treat cattle diseases.

Unoptimized Crop Management:
Farmers struggle with crop lifecycle management due to insufficient guidance on temperature, humidity, and other climatic factors.

Limited Market Access:
Farmers face difficulties in accessing affordable seeds, fertilizers, and other resources, leading to dependency on middlemen.

Low Technological Penetration:
Lack of technology adoption to provide actionable insights and personalized support.

Financial Instability
Limited access to affordable credit and financial services, resulting in high dependency on informal loans.

Fragmented Support Systems:
No unified platform to address agricultural, climatic, and livestock-related challenges simultaneously.

SOLUTION

- Krishi Kranti offers a unified, technology-driven platform to empower Indian farmers with innovative solutions:
- Multilingual Voice Support: Enables illiterate farmers to interact in their local language, making the platform accessible and inclusive.
- Crop Disease Diagnosis: AI models like CNN, ResNet, VGG16, and Grad-CAM analyze crop images to detect diseases and provide treatment, prevention, and safety measures.
- Cattle Health Prediction: Identifies cattle diseases and suggests remedies, ensuring healthier livestock and reducing losses.
- Smart Crop Management: Utilizes Aadhaar-linked addresses and climate APIs to provide crop lifecycle guidance based on location-specific temperature and humidity data.
- Market Integration: Facilitates buying and selling of seeds, fertilizers, and equipment directly between farmers and local markets using web scraping, minimizing costs and eliminating middlemen.
- Data-Driven Insights: AI models like XGBoost analyze climatic and financial data to offer personalized advice on crop challenges, growth, and profit margins.

Crop Disease Diagnosis

analyze crop images to detect diseases and provide treatment

Cattle Health Prediction:

Identifies cattle diseases and suggests remedies, ensuring healthier livestock and reducing losses.

Smart Crop Management: Utilizes Aadhaar-linked addresses and climate APIs to provide crop lifecycle guidance based on location-specific temperature and humidity data.

Multilingual Voice Support:

Enables illiterate farmers to interact in their local language, making the platform accessible and inclusive.

FUTURE SCOPE

SAMWAAD revolutionizes education for deaf and mute students by addressing challenges in accessibility, personalized learning, and community engagement. Integrating Gujarati Sign Language (SL) across all aspects, SAMWAAD tailors lessons to students' unique needs, ensuring inclusive and effective education.

Breaking Communication Barriers
Real-time SL for teaching, interaction, and assessments, removing reliance on text or audio formats

Interactive Learning:
Intuitive lessons in Math and Science through Sign Language videos and visual exercises.

Adaptive Learning with AI:
Personalized guidance & real-time feedback to help students overcome learning gaps, improve skills, and stay on track

Community Engagement:
Strong peer-teacher network for interactive discussions, games, and collaborative learning experiences.

SAMWAAD bridges the gap between traditional education and the specific needs of the deaf and mute community, making quality education accessible to all.