Farm.Connect

Seamlessly Cultivating Connectivity in Agriculture.

Overview

The proposed project aims to develop a comprehensive Agricultural Management System (AMS) that leverages the power of technology to provide farmers with a one-stop solution for managing their agricultural activities. The system will incorporate features such as a community forum, expert consultation, market updates, crop recommendations, yield and price predictions, pest prediction and control, image-based crop disease prediction, chatbot assistance, real-time monitoring using IoT, a marketplace for buying seeds and renting equipment, inventory management, and transaction history.

Objectives

1. To provide a platform where farmers can share their experiences and learn from each other.
2. To facilitate consultations with agricultural experts.
3. To provide real-time market updates and price predictions.
4. To offer personalized crop rotation, fertilization, and irrigation recommendations.
5. To predict yield, possible pest attacks, and crop diseases from images.
6. To monitor inventory storage, NPK levels, and moisture levels in real-time using IoT.
7. To provide a marketplace for buying seeds and renting equipment.
8. To manage inventories and transactions effectively.

Features/Specifications:

Community Forum:

A platform where farmers can share their experiences, ask questions, and learn from each other.

Expert Consultation:

Schedule calls or meetings with agricultural experts. Show available experts to talk and if wishes to talk, get the details about the issues they are facing and the time slot. Once submitted, send notification to the expert.

Market Updates:

Real-time updates on the market prices of various crops in their locality.

Crop Recommendations:

Recommendations on which crops to grow based on the seasons and crop rotation principle to maintain soil fertility.

Yield Prediction:

Predictions on the yield of the user's crops.

Personalized Recommendations:

Personalized crop rotation, fertilization, and irrigation recommendations based on the specific conditions of each farm.

Price Prediction:

Predictions on the future prices of crops.

Pest Prediction and Control:

Predictions on possible pest attacks based on the crop type and weather conditions, along with suggestions for preventive measures.

Crop Disease Prediction:

Users can upload images of their crops, and the system will use image recognition models to identify potential diseases and provide appropriate recommendations.

Chatbot Assistant:

A chatbot to help users navigate the system and answer their queries.

Real-time Monitoring using IoT:

Monitor inventory storage, NPK level and moisture level in real time.

Marketplace:

A place where users can view the sowing seeds available for buying with the seller details, and the equipment available for rent with the owner details.

Inventory Management:

Users can view their inventories (location, crops, equipment,etc). More details can be viewed after clicking it.

Equipment Status:

Users can view the details and current status of their equipments.

Crops Trading:

Users can choose to sell the crops stored in their inventory.

Buyers can see available crops and equipments which are available to buy..

Transaction History:

Users can view their transactions and monitor it.

Inventory Alerts:

Users receive notifications when their inventory is low or when their crops are ready for harvesting.

Expected Outcomes

1. Improved decision-making by farmers through access to real-time data and expert advice.
2. Increased efficiency in managing agricultural activities.
3. Enhanced community interaction among farmers.
4. Better crop yield and income for farmers through predictive modeling and personalized recommendations.