SMART INDIA HACKATHON 2024

Team Name: **Kisan-tech Titans**

Team Size : **6 members**

Theme : **AGRICULTURE, FOODTECH & RURAL DEVELOPMENT**

Project Name : **Kisan.AI**

AGRICULTURE, FOODTECH & RURAL DEVELOPMENT

Developing solutions, keeping in mind the need to enhance the primary sector of India - Agriculture and to manage and process our agriculture produce.

Team Member:

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PS No.	Problem Statement Title	Organization	Description
SIH1554	Smart Irrigation System for Precision Farming (Hardware)	Ministry of Agriculture and Farmers Welfare	Background: Water scarcity is a major challenge in agriculture, leading to inefficient water use and reduced crop yields. Traditional irrigation methods often result in overuse or underuse of water. Description: Develop a smart irrigation system that utilizes sensors and IoT technology to monitor soil moisture levels and weather conditions. This system will provide real-time data to farmers, enabling them to make informed decisions on irrigation scheduling, thus optimizing water usage and enhancing crop yield. Expected Solution: A smart irrigation module integrated with moisture sensors and a mobile application to provide farmers with timely irrigation alerts and recommendations based on real-time data.
SIH1596	Student Innovation (Software)	AICTE, MIC-Student Innovation	Developing solutions, keeping in mind the need to enhance the primary sector of India - Agriculture and to manage and process our agriculture produce
SIH1638	AI-Driven Crop Disease Prediction and Management System (Software)	Ministry of Agriculture and Farmers Welfare	Background: Crop diseases can devastate yields, leading to significant financial losses for farmers. Early detection and timely intervention are crucial for effective management. Description: Develop an AI-driven system that analyzes crop images and environmental data to predict potential disease outbreaks. This system will provide farmers with actionable insights and treatment recommendations to mitigate risks. Expected Solution: A mobile and web-based application that utilizes machine learning algorithms to identify crop diseases and suggest preventive measures and treatments based on real-time data.
SIH1639	Sustainable Fertilizer Usage Optimizer for Higher Yield (Software)	Ministry of Agriculture and Farmers Welfare	Background: Excessive and improper use of fertilizers leads to soil degradation and reduced agricultural productivity, negatively impacting farmers' income. Description: Create a data-driven solution that recommends optimal fertilizer types and quantities based on soil health, crop type, and weather patterns, ensuring sustainable agricultural practices. Expected Solution: An application that analyzes soil data and provides tailored fertilizer recommendations, promoting sustainable farming while enhancing crop yield and farmer income.
SIH1640	Assured Contract Farming System for Stable Market Access (Software)	Ministry of Agriculture and Farmers Welfare	Background: Farmers often face uncertainties in market access, leading to fluctuating incomes. Contract farming can provide stability by ensuring farmers have guaranteed buyers for their produce. Description: Develop a comprehensive platform that facilitates assured contract farming agreements between farmers and buyers. This platform will enable transparent communication, secure contracts, and timely payments, ensuring farmers have a reliable market for their crops. Expected Solution: An online marketplace that connects farmers with potential buyers, offering tools for contract management, price negotiation, and secure payment processing, thereby enhancing income stability and reducing market risks
SIH1647	Development of AI-ML based models for predicting prices of agri-horticultural commodities such as pulses and vegetable (onion, potato, onion) (Software)	Ministry of Consumer Affairs, Food and Public Distribution	The Department of Consumer Affairs monitors the daily prices of 22 essential food commodities through 550 price reporting centres across the country. The Department also maintains buffer stock of pulses, viz., gram, tur, urad, moon and masur, and onion for strategic market interventions to stabilize the volatility in prices. Decisions for market interventions such as release of stocks from the buffer are taken on the basis of the price trends and outlook. At present, the analyses of prices are based on the seasonality, historical and emerging trends, market intelligence inputs, crop sowing and production estimates. ARIMA based economic models have also been used to examine and forecast prices of pulses.

Technology Used

Frontend
Intro
Website

Backend
Admin Panal
website

AI Features
webpage