

Phase 1 (Conception Phase)

Title: Smart Farming Platform

Abstract:

For millions of people, agriculture is their main source of income and the core of many economies. Farmers have to deal with a lot of difficulties such as unpredictable weather patterns, decreasing soil quality, pest problems and changing prices in the market. These problems make it difficult to make profitable choices and significantly reduce agricultural production and earnings when combined with a lack of accurate and reliable data.

By creating a web application that provides practical information on crop health, yield forecasting, soil conditions and market trends, the Smart Farming Platform aims to close this technology gap. This platform offers a complete solution that helps commercial and small scale farmers maximize sustainability and production by combining machine learning models for analysis, React.js for frontend development and FastAPI for backend services.

The goal is to create smart farming platform that combines market, weather, soil and satellite data to give farmers real time insights and predictive analytics, enhancing profitability, sustainability and productivity through easily accessible, data driven decision making.