

Problem Statement: Agri-Tech

The agricultural sector faces immense challenges due to unpredictable weather patterns and climate change impacts. To tackle these issues effectively, there's a critical need for an AI-powered platform that integrates satellite imagery and weather data. This platform aims to provide farmers with timely insights and early warnings to enhance crop management and mitigate losses. Here are the key problems this platform seeks to address:

1. **Unpredictable Weather Patterns:** Farmers struggle with the unpredictability of weather, leading to crop failures and financial losses.
2. **Lack of Early Warnings:** Farmers often lack timely alerts about potential weather hazards like droughts, floods, and extreme weather events.
3. **Limited Technology Utilization:** Many farmers lack access to advanced technologies for integrating satellite imagery and weather data for decision-making.
4. **Risk of Yield Reduction:** Without proactive measures, farmers face risks of reduced yields, impacting food security and sustainability.
5. **Inefficient Resource Allocation:** Inadequate weather forecasting leads to inefficient resource allocation, affecting water usage, fertilizers, and labor.
6. **Vulnerability to Climate Change:** Climate change exacerbates weather unpredictability, making it challenging for farmers to adapt their practices.

This platform aims to empower farmers with accurate forecasts, early warnings, and actionable insights for resilient and sustainable farming practices.