Project Initialization and Planning Phase

Date	01 December 2024
Team ID	739791
Project Title	Rice Crop Monitoring-Time Series Analysis
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	To develop a cost-effective and user-friendly system for real-time monitoring of rice crop health, enabling timely interventions and improved yield outcomes.
Scope	The project aims to provide small- and medium-scale rice farmers with a comprehensive monitoring solution. It will include hardware for field data collection, software for data analysis, and a user interface for actionable insights.
Problem Statement	
Description	Rice farmers face challenges in monitoring the health and growth of crops due to limited access to advanced technologies. Traditional methods of crop health monitoring are labor-intensive, time-consuming, and prone to inaccuracies.
Impact	By solving this problem, farmers can make data-driven decisions to optimize irrigation, pest control, and fertilizer application. This will result in higher yields, reduced resource wastage, and better economic outcomes for farmers, contributing to food security and sustainable agriculture.
Proposed Solution	
Approach	The solution will leverage IoT sensors, satellite imagery, and AI-

	based analytics to monitor crop health indicators such as soil moisture, temperature, pest infestation, and nutrient levels. The system will provide real-time alerts and recommendations via a mobile application.
Key Features	**IoT-Enabled Sensors, AI-Powered Analysis, Satellite Integration, User-Friendly Interface, Scalability.**

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Python frameworks	e.g., Flask
Libraries	Additional libraries	e.g., tensorflow
Development Environment	IDE, version control	e.g., Jupyter Notebook, VScode
Data		
Data	Source, size, format	e.g., Kaggle dataset.