Project Initialization and Planning Phase

Date	12 July 2024
Team ID	SWTID1720077079
Project Title	Wild Blueberry Yield Prediction
Maximum Marks	3 Marks

Project Proposal (Proposed Solution)

This project employs a machine learning system for accurate blueberry yield prediction, addressing farmer challenges with unpredictable weather and soil conditions. It includes data collection, advanced modeling, user-friendly interface integration, and rigorous testing. Required resources: high-performance computing, and a skilled team of data scientists, engineers, designers, and testers. Goal: Empower farmers with reliable yield forecasts to improve decision-making and operational efficiency.

Project Overview	
Objective	Develop a ML system for accurate blueberry yield prediction.
Scope	Includes data collection, advanced modeling and rigorous testing for operational reliability.
Problem Statement	
Description	This project aims to create a machine learning system to predict blueberry yields accurately.
Impact	Enhances farmers' ability to make informed decisions and improve operational efficiency by providing reliable yield forecasts.
Proposed Solution	
Approach	Utilize scikit- learn for developing predictive models integrating historical yield data, weather patterns, soil health, and pest dynamics.
Key Features	Includes comprehensive data preprocessing, advanced feature engineering, scikit- learn based model development, user-friendly interface integration, and rigorous testing for reliability.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Core i5, 11th gen Nvidia GTX
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	512 GB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy, matplotlib, seaborn, pickle
Development Environment	IDE, version control	Jupyter Notebook, Git, Spyder
Data		
Data	Source, size, format	Kaggle dataset, 85 KB, CSV