Project Initialization and Planning Phase

Date	13 July 2024
Team ID	740073
Project Title	Exploratory Analysis of Rain Fall Data in India for Agriculture
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The project proposal report serves as a comprehensive document to outline the rationale, methodology, and expected outcomes of conducting an exploratory analysis of rainfall data in India for agriculture. It aims to secure support, funding, and collaboration from stakeholders interested in improving agricultural practices and resilience against climate variability

Project Overview	
Objective	The primary objective of this project is to conduct an exploratory analysis of rainfall data in India to gain insights that can aid agricultural planning and decision-making.
Scope	The project aims to provide a comprehensive understanding of rainfall patterns in India, support the development of robust predictive models, and enhance agricultural outcomes and resilience against climatic variability.
Problem Statement	
Description	This project focuses on conducting an exploratory analysis of historical rainfall data in India. The analysis aims to uncover temporal and spatial patterns, identify trends and anomalies, and understand the impact of rainfall on agricultural productivity. By integrating rainfall data with other relevant datasets, the project seeks to provide insights that can aid in better agricultural planning and decision-making.
Impact	An exploratory analysis of rainfall data in India, this project aims to provide valuable insights that will have a significant positive impact on agricultural productivity, risk mitigation, informed decision-making, policy support, predictive modeling, and economic stability for farmers.
Proposed Solution	
Approach	The project aims to provide valuable insights into rainfall patterns in India, support the development of robust predictive models, and enhance agricultural planning and decision-making, ultimately improving agricultural productivity and resilience.
Key Features	The proposed solution aims to provide a comprehensive and actionable analysis of rainfall data in India, supporting the development of robust predictive models, enhancing agricultural planning and decision-making, and ultimately improving agricultural productivity and resilience.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy, matplotlib, seaborn
Development Environment	IDE	Jupyter Notebook, pycharm
Data		
Data	Source, size, format	Kaggle dataset, 614, csv UCI dataset, 690, csv