Project Initialization and Planning Phase

Date	10 July 2024
Team ID	739726
Project Title	Rising Waters: A Machine Learning Approach To Flood Prediction
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	Develop a machine learning model to predict rising water levels and potential flood events.
Scope	Significant potential in mitigating flood damage, saving lives, and reducing economic losses.
Problem Statement	
Description	Predicting rising water levels and potential flood events to provide early warnings and improve disaster response.
Impact	Improved community safety, reduced property damage, better resource allocation for disaster management.
Proposed Solution	
Approach	Predictive modeling and pattern recognition.
Key Features	Predictive analytics, real-time monitoring, integration with weather data, and community alert systems.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**

Hardware		
Computing Resources	CPU/GPU specifications, number of cores	12th Gen Intel® Core™ i7, 3.0 GHz, 8 cores
Memory	RAM specifications	32 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	TensorFlow, Keras
Libraries	Additional libraries	numpy, pandas, scikit-learn, seaborn
Development Environment	IDE, version control	Jupyter Notebook, GitHub
Data		
Data	Source, size, format	Historical flood data, meteorological data, CSV format, 100 GB