Project Initialization and Planning Phase

Date	15 March 2024
Team ID	LTVIP2024TMID24876
Project Title	Rising Waters: A Machine Learning Approach to Flood Prediction
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

Develop a machine learning model using historical weather and river data to accurately forecast f loods, providing early warnings to mitigate risks and reduce damage. Expected outcomes include timely alerts for residents and improved disaster management strategies.

Project Overview	
Objective	Accurately forecast floods with data-driven models for early warnings, reducing impacts on lives and infra structure, and enhancing disaster preparedness and planning.
Scope	Accurately forecasting floods to provide early warnings, support disas ter preparedness, and minimize impacts on lives and infrastructure.
Problem Statement	
Description	Flood prediction uses machine learning to analyze historical and real-time data, forecasting flood events with high accuracy. This provides early warnings and supports proactive disaster management efforts.
Impact	Detecting phishing websites is crucial for cyber safety as it helps prevent financial losses, identity theft, malware prevention and other malicious activities.
Proposed Solution	
Approach	Machine learning techniques play a crucial role in detecting phishing websites by enabling the identification of patterns and characteristics that distinguish phishing websites from legitimate ones. These techniques can analyze various features of a website, such as its URL, content, and user behavior, to predict whether it is a phishing website or not.

Key Features	-Implementing machine learning model such as Logistic Regression, , Random Forest or other models for detecting the websites. - Predicting the credibility of a website using its url.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., intel i5 / AMD Ryzen 5, 4 cores
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., scikit-learn, pandas, numpy, joblib, regex, tldextract, socket, bs4, whois, favicon, re, google
Development Environment	IDE, version control	e.g., Jupyter Notebook
Data		
Data	Source, size, format	e.g., Kaggle dataset, 836 , csv