Project Design Phase-I

Project Name	**Rising Waters: A Machine Learning Approach To Flood Prediction**
Maximum Marks	4 Marks

Rising Waters: A Machine Learning Approach To Flood Prediction:

Designing a flood prediction solution involves a combination of data collection, processing, analysis, and modeling. Below is a high-level architecture for a flood prediction system:

Data Acquisition:

Satellite Imagery: Utilize satellite data to monitor weather patterns, precipitation, and river conditions.

Sensor Networks: Deploy ground-based sensors to measure rainfall, river levels, soil moisture, and other relevant parameters.

Social Media and Crowd-Sourced Data: Monitor social media and other online platforms for real-time information from the affected areas.

Data Processing and Storage:

Data Ingestion: Collect and ingest data from various sources into a centralized data repository.

Data Cleaning: Clean and preprocess the data to handle missing values, outliers, and inconsistencies.

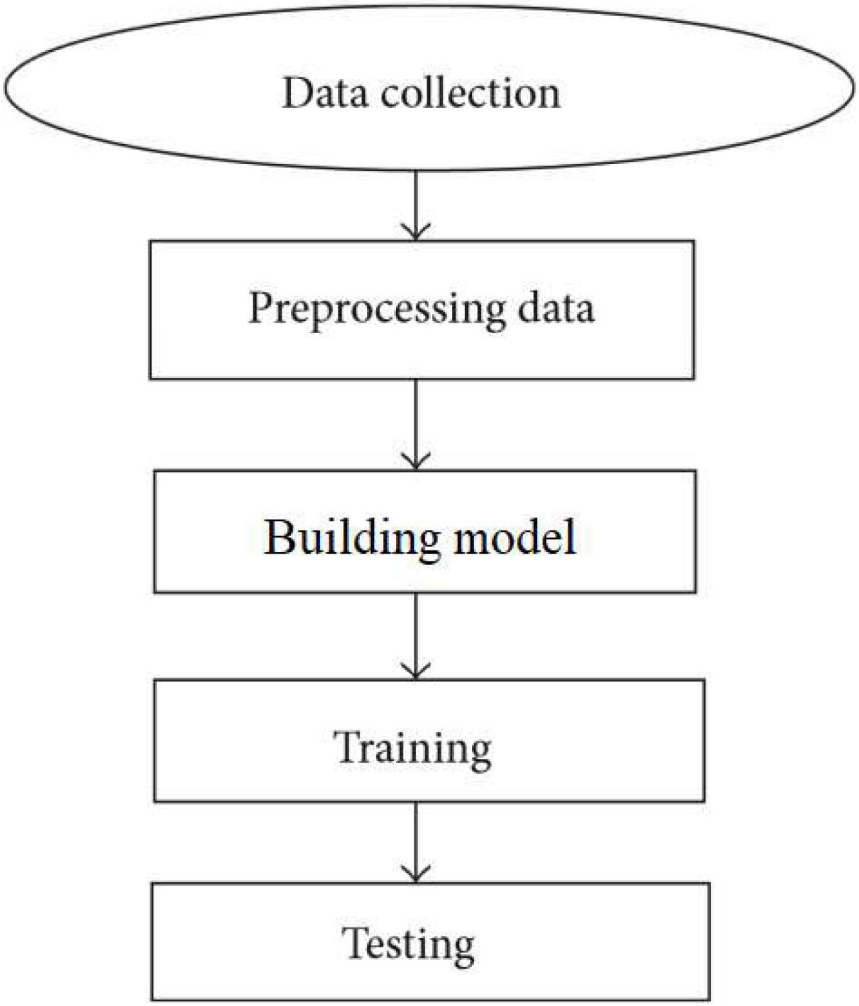
Data Storage: Store processed data in a scalable and reliable data storage system, such as a data warehouse or distributed storage.

Real-time Monitoring:

Streaming Analytics: Implement a real-time processing system to monitor incoming data streams for immediate insights.

Alerting System: Set up an alerting mechanism to notify relevant authorities and communities when certain thresholds are exceeded.

Example - Rising Waters: A Machine Learning Approach To Flood Prediction


Data collection
Preprocessing data
Building model
Training
Testing