

Rising Waters: A Machine Learning Approach to Flood Prediction

DATE	28-02-2026
TEAM ID	LTVIP2026TMIDS89043
PROJECT NAME	Rising Waters: A Machine Learning Approach to Flood Prediction
MAXIMUM MARKS	5 MARKS

4.2 PROPOSED SOLUTION

Objective

To develop an intelligent **Machine Learning-based flood prediction system** that analyses historical and real-time environmental data to predict the likelihood of floods and provide early warnings to reduce damage and loss of life.

Solution Overview

The proposed system will:

- Collect historical weather and river data
- Preprocess and clean the dataset
- Train multiple machine learning models
- Select the best-performing model
- Deploy the model using a web application
- Provide flood risk prediction (Low / Medium / High)

Data Sources

The model will use reliable data from:

- India Meteorological Department
- Central Water Commission
- Public datasets (e.g., Kaggle flood datasets)

Alert Mechanism

Future enhancement:

- SMS alerts
- Real-time IoT sensor integration
- Government disaster management integration

Expected Outcome

- Early flood prediction
- Reduced damage and casualties