

**Project Design Phase**  
**Problem – Solution Fit Template**

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Team ID	LTVIP2026TMIDS90283
Project Name	Rising waters: a machine learning approach to flood prediction

**Problem – Solution Fit Template:**

Floods are one of the most devastating natural disasters, causing severe damage to human life, agriculture, infrastructure, and the economy. Many flood-prone regions lack fast and accurate prediction systems. Traditional flood forecasting methods rely heavily on manual monitoring, historical data analysis, and delayed weather reports.

Because of this:

Authorities often receive late warnings.

Preventive measures are not taken on time.

Communities face unexpected losses.

Decision-making becomes reactive instead of proactive.

There is a strong need for an intelligent, automated, and accessible system that can analyze environmental conditions and predict the possibility of severe floods in advance

## Target Users

Disaster Management Authorities

Environmental Monitoring Departments

Government Agencies

Researchers

Communities in flood-prone regions

These users require quick and reliable predictions to reduce risk and plan preventive actions.

## Existing Situation

Currently, flood prediction systems:

Are not easily accessible to common users.

Depend on manual analysis.

Lack automation.

Do not provide instant decision support.

This creates a gap between available environmental data and actionable insights.