Ideation Phase
Brainstorm & Idea Prioritization

Date	16 February 2026
Team ID	LTVIP2026TMIDS74755
Project Name	Rising waters: A Machine Learning Approach To Flood
Maximum Marks	4 Marks

Step-1: Team Gathering, Collaboration and Select the Problem Statement

The team discussed various real-world problems related to climate change and natural disasters. After brainstorming multiple ideas such as rainfall prediction, crop yield prediction, and weather forecasting, the team selected **Flood Prediction** as the problem statement due to its high social impact.

Floods cause severe damage to life and property every year, and early prediction can help authorities take preventive measures. The team collaborated to define the objective clearly:

To develop a Machine Learning-based system that predicts the occurrence of floods using environmental parameters.

Step-2: Brainstorm, Idea Listing and Grouping

The team generated different solution ideas, including:

- Rule-based flood prediction system
- Statistical analysis using historical rainfall trends
- Machine Learning classification models
- Deep learning-based weather prediction

After discussion, the ideas were grouped based on feasibility and accuracy. Machine Learning-based classification models were identified as the most practical and accurate solution.

Different ML algorithms such as Decision Tree, Random Forest, KNN, and XGBoost were shortlisted for implementation and comparison.

Step-3: Idea Prioritization

The ideas were prioritized based on:

- Accuracy of prediction
- Feasibility of implementation
- Availability of dataset
- Social impact

Machine Learning-based flood prediction using XGBoost was selected as the final approach because it provides higher accuracy and reliable results.

The solution was considered both technically feasible and socially impactful, making it the most suitable idea for implementation.