Ideation Phase

Brainstorm & Idea Prioritization Template

Date: 18 February 2026

Team ID: LTVIP2026TMIDS53672

Project Name: Exploratory Analysis of Rainfall Data in India for Agriculture

Maximum Marks: 4 Marks

Project Overview

This project focuses on analyzing historical rainfall data across different regions of India to understand rainfall trends, seasonal variability, and regional distribution. The analysis aims to provide insights useful for agricultural planning, irrigation management, and risk assessment.

Brainstormed Ideas

- Analyze state-wise rainfall distribution over multiple years.
- Identify seasonal rainfall patterns (Monsoon, Winter, Summer).
- Detect drought-prone and flood-prone regions using rainfall variability.
- Visualize long-term rainfall trends using line graphs.
- Use statistical measures (mean, median, variance) to summarize rainfall behavior.
- Apply basic machine learning techniques for rainfall trend prediction.
- Create dashboards to present insights for agricultural stakeholders.

Idea Prioritization

After brainstorming, the team prioritized the following core focus areas:

1. Perform Exploratory Data Analysis (EDA) to understand rainfall patterns.
2. Develop visualizations to compare rainfall across regions and seasons.
3. Identify irregular rainfall events affecting agriculture.
4. Provide actionable insights for crop planning and irrigation management.

Final Selected Approach

The team selected Exploratory Data Analysis (EDA) combined with visualization techniques as the primary approach. This method enables clear understanding of rainfall trends and supports data-driven agricultural decision-making.

Expected Impact

The analysis will help farmers, agricultural experts, and policymakers make informed decisions regarding crop selection, irrigation scheduling, and risk management strategies.