Ideation Phase
Empathize & Discover

Date	19 February 2026
Team ID	LTVIP2026TMIDS75186
Project Name	Rising Waters: A Machine Learning Approach to Flood Prediction
Maximum Marks	4 Marks

Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to helps teams better understand their users.
Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Target User Persona: Small & Marginal Farmer (Rain-dependent region in India)

<table>
<tr><td></td><td>THINKS & FEELS
Worried about sudden heavy rainfall and river overflow
Afraid of crop loss and damage to house and livestock
Feels helpless when floods occur without prior notice</td><td></td></tr>
<tr><td>SEES
Frequent news about floods in nearby districts
Rising river water levels during monsoon
Poor drainage and overflowing canals</td><td></td><td>HEARS
Government flood alerts through SMS or radio
Warnings from local authorities
News about climate change increasing extreme rainfall</td></tr>
<tr><td></td><td>SAYS & DOES
Regularly checks weather updates during monsoon
Moves livestock to safer areas when water rises
Stores food and essentials in advance</td><td></td></tr>
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PAINS

- Crop destruction due to sudden flooding
- Financial losses and debt burden
- Damage to home and belongings
- Lack of timely and location-specific alerts

GAINS

- Early flood prediction before water level becomes dangerous
- Better planning for crop protection
- Reduced financial loss
- Improved safety for family and livestock

How Our Solution Helps

The Machine Learning-based Flood Prediction System analyzes historical rainfall, river level data, temperature, and seasonal trends to predict flood risk levels in advance.

It provides early warnings to vulnerable regions, helps farmers and local authorities prepare proactively, reduces damage to crops and property, and improves disaster response efficiency.