

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	26 June 2025
Team ID	LTVIP2025TMID50379
Project Name	Visualization Tool for Electric Vehicle Charge and Range Analysis
Maximum Marks	4 Marks

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

Objective:

To collaborate as a team, understand challenges faced by electric vehicle (EV) users related to battery charge, range prediction, and plan a data-driven visualization tool.

Activities Conducted:

- Discussion on EV adoption trends and user concerns
- Identified common user pain points such as charge anxiety and lack of intuitive insights into battery usage
- Agreed to work on a **visual analytics tool** to address these concerns

Final Problem Statement Chosen:

EV users lack access to an interactive visualization tool that provides clear, data-driven insights into battery usage, charging patterns, and estimated driving range under different conditions.

Step-2: Brainstorm, Idea Listing and Grouping

Goal:

Generate a wide range of ideas on what features the tool could offer, and organize them into logical groups.

Ideas Generated:

- Visual battery charge tracking over time
- Dynamic range estimation based on speed, terrain, and temperature
- Charging session history and patterns
- Interactive maps showing reachable range from current battery level
- Energy consumption breakdown (AC, headlights, acceleration, etc.)
- Suggestions for energy-efficient driving

Step-3: Idea Prioritization

- Charging Stations By Region and Type In India
- Different EV Cars in India
- Brand filtered by PowerTrain type
- Number of Models by Each Brand

Finalized Project Scope

Title:

Visualization Tool for Electric Vehicle Charge and Range Analysis

Description:

A user-friendly dashboard that helps EV users analyze battery charge levels, predict driving range based on key parameters, and visualize charging patterns using interactive graphs and maps.