

Project Design Phase-I
Proposed Solution Template

Date	13 February 2026
Team ID	LTVIP2026TMIDS91295
Project Name	Visualization Tool for Electric Vehicle Charge and Range Analysis
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Electric vehicle users and researchers face difficulty understanding EV charging availability and vehicle range due to scattered datasets and lack of centralized visualization platforms. Existing tools provide static reports rather than interactive analysis, making decision-making slow and complex.
2.	Idea / Solution description	Develop an interactive web-based visualization tool using Flask and Tableau that analyzes EV charging stations and vehicle range data. The platform provides dynamic charts such as line graphs, stacked bars, maps, and bubble charts with filter options to help users explore EV performance and charging infrastructure efficiently.
3.	Novelty / Uniqueness	Combines EV charging infrastructure and vehicle range analysis in a single dashboard. Uses interactive filters, real-time insights, and visual storytelling instead of traditional spreadsheets or static dashboards. Designed specifically for academic and analytical use cases.
4.	Social Impact / Customer Satisfaction	Helps promote sustainable transportation by increasing awareness about EV infrastructure and performance. Enables researchers, policymakers, and users to make eco-friendly decisions through clear visual insights. Improves accessibility of EV data for non-technical users.
5.	Business Model (Revenue Model)	Freemium model with free public dashboard and premium analytics features for organizations. Potential revenue through data insights services, institutional subscriptions, and dashboard customization for EV companies or research institutions.
6.	Scalability of the Solution	The platform can scale by integrating real-time EV datasets, expanding to multiple countries, adding AI-based predictions, and supporting mobile-friendly dashboards. Cloud deployment allows easy expansion for large datasets and multiple users.