Project Design Phase-I
Proposed Solution Template

Date	30 January 2026
Team ID	LTVIP2026TMIDS24926
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 often face difficulty in accurately estimating remaining battery charge and driving range, leading to range anxiety and inefficient trip planning. There is a lack of simple and visual tools to analyze EV charge and range effectively.
2.	Idea / Solution description	The proposed solution is a visualization tool that analyzes electric vehicle battery charge and estimates driving range using vehicle data and driving conditions. The tool presents the results using interactive graphs, charts, and indicators for easy understanding.
3.	Novelty / Uniqueness	The system provides real-time visual representation of EV charge and range with condition-based adjustments (city/highway driving), making range estimation more intuitive compared to traditional numeric displays.
4.	Social Impact / Customer Satisfaction	The solution reduces range anxiety, improves confidence among EV users, and promotes wider adoption of electric vehicles, contributing to environmentally sustainable transportation.
5.	Business Model (Revenue Model)	The tool can be offered as a subscription-based service to EV manufacturers, fleet operators, or integrated into mobile applications with premium analytics features.
6.	Scalability of the Solution	The solution is highly scalable and can be extended to support multiple EV models, realtime sensor data, GPS integration, and large user bases through cloud deployment.