Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	09 February 2026
Team ID	LTVIP2026TMIDS53912
Project Name	Visualization tool for electric vehicle charge and range analysis.
Maximum Marks	4 Marks

Technical Architecture:

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based interface where users view EV dashboard, story and submit contact form	HTML, CSS, JavaScript, Bootstrap 5
2.	Application Logic – Dashboard Integration	Handles embedding and rendering of Tableau Dashboard inside the website	JavaScript, Tableau Embed API
3.	Application Logic – Story Integration	Embeds Tableau Story and manages responsive display	JavaScript, Tableau Public
4.	Dataset Storage	EV dataset stored and processed within Tableau environment	Tableau Data Extract (TDE)
5.	File Storage	EV dataset files stored locally before upload to Tableau	Tableau Data Extract (TDE)
6.	Tableau Public API	Used to embed and display dashboard and story in website	Tableau Public Embed API
7.	Infrastructure (Web Hosting)	Website hosted on web server, dashboards hosted on Tableau Public Cloud:	Local Hosting / GitHub Pages / Render,Tableau Public Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Website built using open-source front-end frameworks	Bootstrap 5, HTML5, CSS3
2.	Security Implementations	Secure embedding of Tableau dashboards and form validation	HTTPS Protocol, Input Validation
3.	Scalable Architecture	Web-based modular structure allows addition of new dashboards and datasets	Modular Web Architecture, Cloud Hosting
4.	Availability	Dashboard available 24/7 via Tableau Public cloud	Tableau Public Cloud
5.	Performance	Optimized responsive UI and embedded dashboard loading	Bootstrap Grid System, Optimized Tableau Embed