Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	12 June 2025
Team ID	LTVIP2025TMID48957
Project Name	Visualization Tool for Electric Vehicle Charge and Range Analysis
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Dataset Integration	Upload and prepare multiple datasets (e.g., EV specs, charging stations, India-specific EV data) in Tableau.
		Clean and preprocess data (e.g., filter null values, rename headers for clarity).
		Join or blend datasets if necessary in Tableau.
FR-2	Data Visualization	Create visualizations for EV cars based on price, brand, body style, powertrain, and efficiency.
		Create maps for charging stations by region and type.
		Build visualizations showing top speed vs. range for each brand.
		Filter data dynamically based on user input (e.g., dropdowns for brand, powertrain, etc.)
FR-3	Dashboard Development	Combine all visualizations into one interactive dashboard
		Add filters and action controls to the dashboard.
		Ensure responsiveness for both desktop and mobile vi

FR-4	Story creation in Tableau	Create Tableau Story to guide users through a sequence (e.g., problem overview → data insights → conclusion)
FR-5	Web Application UI	Design the front-end web page using HTML and CSS. Embed Tableau dashboards/stories into the HTML page. Ensure layout and styles are user-friendly and mobile compatible.
FR-6	Deployment & Sharing	Publish Tableau dashboard/story to Tableau Public. Generate shareable embed links. Deploy the HTML/CSS web application with Tableau embeds to a local or shared hosting platform.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The visualizations should be easy to understand and interactive for users with basic digital skills.
NFR-2	**Security**	Only public data is used, but the hosted HTML/CSS pages should not expose personal or sensitive info.
NFR-3	**Reliability**	Visualizations and embedded dashboards must consistently display correct and updated information with minimal errors.
NFR-4	**Performance**	The dashboard and visualizations should load within 3–5 seconds under normal network conditions.
NFR-5	**Availability**	The Tableau dashboards published on Tableau Public should be accessible 24/7 without downtime.
NFR-6	**Scalability**	The system should be able to integrate additional EV datasets, visualizations, or dashboard filters without major rework.