

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

Date	30 June 2025
Team ID	LTVIP2025TMID50516
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	Dashboard Navigation	Navigate between multiple dashboards using buttons
FR-2	EV Data Visualization	State-wise EV charging station visualization Vehicle range and charging time comparisons Public vs private charging infrastructure Monthly trends and usage analysis
FR-3	Data Filtering	Filter data by state, city, charging type, and date
FR-4	Interactive Tooltips	Hover to view data values and insights in dashboards
FR-5	Public Access	View dashboards online through Tableau Public
FR-6	Data Import	Import and preprocess datasets using Python (CSV format)

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The dashboards are user-friendly and visually appealing, allowing intuitive exploration of EV data.
NFR-2	Security	Only authorized users can edit dashboards; viewers access through secure links.
NFR-3	Reliability	Dashboards load consistently with accurate data as uploaded.
NFR-4	Performance	Optimized charts ensure fast rendering even with large datasets.
NFR-5	Availability	Hosted on Tableau Public for 24/7 access with minimal downtime.
NFR-6	Scalability	Easily scalable to include more states, EV types, or years of data by updating the source file and dashboards.