

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

Date	16 February 2026
Team ID	LTVIP2026TMIDS40575
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 Upload & Integration	Upload EV dataset (CSV/Excel) Connect dataset to Tableau
FR-2	Data Cleaning & Processing	Remove missing/null values Format columns (Range, Battery Capacity, Charging Time) Filter incorrect or duplicate data
FR-3	Data Visualization Dashboard	Display charts (Bar chart, Pie chart, Line chart) Show EV range comparison Show charging time analysis
FR-4	User Interaction	Apply Filters like vehicle type , range View dashboards
FR-5	Data Analysis	Compare EV efficiency Identify high range EV models
FR-6	Report Viewing	View dashboards on web browser Access dashboard through Tableau Public

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The dashboard should be simple, user-friendly, and easy to understand.
NFR-2	Security	Dataset access controlled through Google Drive & Tableau Public permissions.
NFR-3	Reliability	System should correctly display EV data without errors or data loss.
NFR-4	Performance	Dashboard should load within few seconds after dataset optimization.
NFR-5	Availability	Dashboard available 24/7 through cloud hosting (Tableau Public).
NFR-6	Scalability	System should support adding more EV datasets in future without redesigning architecture.