

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	20 February 2026
Team ID	LTVIP2026TMIDS74497
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	User Registration	Registration via Email Form Sign up with Google Sign up with LinkedIn
FR-2	Data Upload & Integration	Upload vehicle charging data (.csv, .json) Connect to API (real-time EV stats)
FR-3	Data Visualization	Show charging patterns Show range trends Compare regions (India vs Global)
FR-4	User Dashboard	Personalized EV insights Weekly usage reports Download visual reports
FR-5	Alerts & Recommendations	Notify when charging anomalies occur Recommend optimal charging hours
FR-6	Admin Control Panel	User management Data moderation Add/Edit vehicle models & sources

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Clean, intuitive UI for EV users and analysts
NFR-2	Security	OAuth 2.0 login; encrypted user data storage
NFR-3	Reliability	Uptime 99.9% with failover support
NFR-4	Performance	Load time < 2s for charts and dashboards
NFR-5	Availability	Platform accessible 24/7
NFR-6	Scalability	Can support growing number of users and datasets