

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

|               |   |
|---------------|---|
| Date          | 2 Feb 2026  |
| Team ID       | LTVIP2026TMIDS24926   |
| 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   | Filter EV Data                | Users can filter EVs by brand, price, or charge level.                 |
| FR-2   | Display Charge Distribution   | Shows donut chart of EV charge level distribution.                     |
| FR-3   | Compare Range by Brand        | Displays range comparison across EV brands using bar chart.            |
| FR-4   | Sort by Battery/Range         | Allows sorting EVs by battery capacity or driving range                |
| FR-5   | Show Price vs Range           | Scatter plot comparing EV price and range.                             |
| FR-6   | Show Summary Cards            | Displays average charge, range, and battery capacity in summary boxes. |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description   |
|--------|----------------------------|---|
| NFR-1  | <b>Usability</b>           | Easy-to-use dashboard with clear charts and filters for users to explore EV charge and range data.      |
| NFR-2  | <b>Security</b>            | Data is securely managed with access control (if private), ensuring no unauthorized edits or leaks.     |
| NFR-3  | <b>Reliability</b>         | Delivers consistent, error-free visual insights with stable performance during use.                     |
| NFR-4  | <b>Performance</b>         | Fast dashboard loading and smooth filter interactions ensure an efficient user experience.              |
| NFR-5  | <b>Availability</b>        | Hosted on Tableau Public or other platforms to ensure it's accessible anytime with high uptime.         |
| NFR-6  | <b>Scalability</b>         | Supports future expansion with more EV data, filters, and visualizations without affecting performance. |

