**Project Design Phase**
**Problem – Solution Fit**

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| Date | 15 February 2025 |
| Team ID | LTVIP2026TMIDS90945 |
| Project Name | Visualization Tool for Electric Vehicle Charge and Range Analysis |
| Maximum Marks | 2 Marks |

**Problem – Solution Fit:**

Identifying the difficulty faced by EV buyers, analysts, and policymakers in comparing vehicle performance and charging infrastructure data and providing a centralized Tableau dashboard that effectively solves this issue through clear, interactive visualizations.

**Purpose:**

- ❑ To solve the problem of scattered and unstructured EV data by consolidating it into a single interactive analytics platform.
- ❑ To increase adoption by designing the dashboard in a simple, user-friendly way that matches how users explore and compare vehicle information.
- ❑ To improve communication of EV performance insights through visual charts, filters, and performance indicators.
- ❑ To build user trust by providing accurate comparisons of range, battery efficiency, pricing, and charging availability.
- ❑ To understand the current EV ecosystem and improve decision-making for consumers and infrastructure planners through data-driven insights.

**Template:**

| S.NO | Section | Content |
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| 1 | Customer Segment | EV buyers, automobile analysts, EV dealerships, government policymakers, and infrastructure planners. |
| 2 | Jobs-To-Be-Done / Problems | Compare EV models based on range, battery, and price; analyze charging station availability; identify best value EV; support infrastructure planning. |
| 3 | Triggers | Rising fuel prices, EV subsidies, environmental awareness, new EV launches, and media coverage about EV growth. |
| 4 | Emotions: Before / After | **Before:** Confused, uncertain, overwhelmed by scattered data.<br>**After:** Confident, informed, clear decision-making. |
| 5 | Available Solutions | Brand websites, EV blogs, YouTube reviews, static comparison sites, government reports (limited integration and visualization). |
| 6 | Customer Constraints | Limited time for research, lack of technical knowledge, budget limits, and fragmented data sources. |
| 7 | Behavior | Search online comparisons, watch reviews, visit dealerships, manually compare specifications, and read policy updates. |

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| 8 | Channels of Behavior | **Online:** Google, EV websites, YouTube, social media.<br>**Offline:** Dealership visits, exhibitions, word-of-mouth. |
| 9 | Problem Root Cause | EV data is scattered, lacks centralized comparison, and does not integrate performance with charging infrastructure insights. |
| 10 | Your Solution | A Tableau-based interactive dashboard integrating EV specifications and charging data, enabling visual comparison and data-driven decision-making. |