

Project Design Phase
Proposed Solution Template

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| Date | 30 June 2025 |
| Team ID | LTVIP2025TMID50516 |
| Project Name | Visualization Tool for Electric Vehicle Charge and Range Analysis |
| Maximum Marks | 2 Marks |

Proposed Solution Template:

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | Electric vehicle users often face range anxiety and lack clarity about their vehicle's battery usage, energy consumption, and charging behavior due to the absence of interactive, data-driven visualization tools. |
| 2. | Idea / Solution description | The project proposes a web-based visualization tool that provides users with interactive dashboards to monitor battery charge trends, predict driving range, and analyze charging patterns using real or simulated EV data. |
| 3. | Novelty / Uniqueness | Unlike basic EV dashboards, this tool focuses on advanced visual analytics, integrating multiple parameters (like terrain, speed, consumption) into a user-friendly dashboard that supports informed driving decisions. |
| 4. | Social Impact / Customer Satisfaction | The solution helps EV users reduce range anxiety, plan trips confidently, and understand their energy usage better, encouraging wider EV adoption and promoting sustainable transport. |
| 5. | Business Model (Revenue Model) | The tool can be offered as a SaaS product to EV manufacturers or fleet operators, or through freemium access for individual users with premium insights or analytics as paid features. |
| 6. | Scalability of the Solution | The solution is scalable to integrate real-time data from multiple EV models, charging stations, and could be extended to mobile apps or onboard vehicle systems in the future. |