Project Design Phase-I
Solution Architecture

Date	8 Feb 2026
Team ID	LTVIP2026TMIDS90945
Project Name	Virtualization Tool for Electric Vehicle Charge & Range Analysis
Maximum Marks	4 Marks

Solution Architecture:

The system collects electric vehicle data such as battery level and range and the data is sent securely to a cloud platform. It is cleaned and prepared for analysis. Machine learning is used to predict vehicle range and performance. Finally, dashboards are created in Tableau to show insights in a clear visual format.

Objectives

- To collect and process real-time EV charging and battery performance data securely.
- To analyze energy consumption patterns and predict vehicle driving range using Machine Learning.
- To create interactive dashboards using Tableau for clear data visualization and insights.
- To support fleet efficiency monitoring and data-driven decision making.

Solution Architecture Diagram: