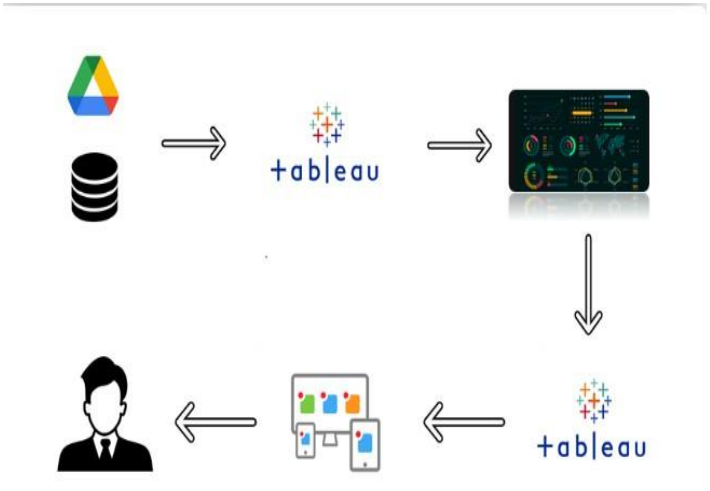
Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	3 February 2026
Team ID	**LTVIP2026TMIDS82973**
Project Name	**Visualization Tool for Electric Vehicle Charge and Range Analysis**
Maximum Marks	4 Marks

Technical Architecture:

Example: EV Data Visualization for Smarter Decision-Making in Electric Vehicle Adoption.



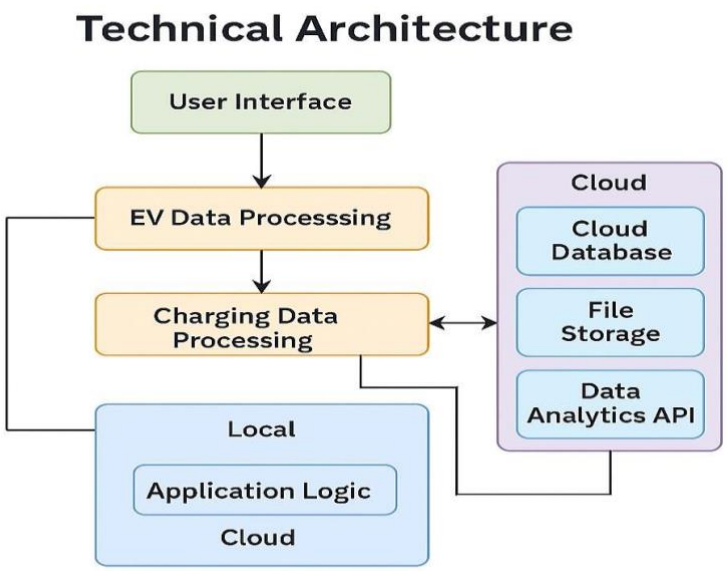


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How users interact with the dashboard	Tableau Public (Web-based UI)
2.	Application Logic-1	Logic to process EV dataset files	Python (for preprocessing, optional)
3.	Application Logic-2	Logic for dashboard interaction	Tableau Filters & Parameters
4.	Application Logic-3	Logic for presenting dashboard stories	Tableau Stories
5.	Database	Data type, file format and configuration	MySQL, CSV files(structured tabular data)

6.	Cloud Database	Storage or backup via cloud	Google Drive (optional)
7.	File Storage	File storage location and accessibility	Local Filesystem
8.	External API-1	External data integration (optional)	None used (Local CSV files only)
9.	External API-2	Other external sources (optional)	None used
10.	Machine Learning Model	Predictive analytics (Not applicable in this project)	Not Applicable
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local Server: Windows 10, Tableau Desktop Cloud Server: Tableau Public (hosted on Tableau Cloud)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List of open-source tools or libraries used	Python, Pandas (for data preparation)
2.	Security Implementations	Security measures and access controls	Tableau Public access controls

3.	Scalable Architecture	Design approach supporting scalability (local/cloud)	Tableau Cloud, Modular Data Sources
4.	Availability	Ensures the dashboard is always accessible	Tableau Public (24/7 hosted access)
5.	Performance	Optimized for responsiveness and speed during dashboard interaction	Filter optimization, Extracts in Tableau