

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	30 June 2025
Team ID	LTVIP2025TMID50516
Project Name	EV Visualization Tool for Electric Vehicle Price and Range Analysis
Maximum Marks	4 Marks

Technical Architecture:

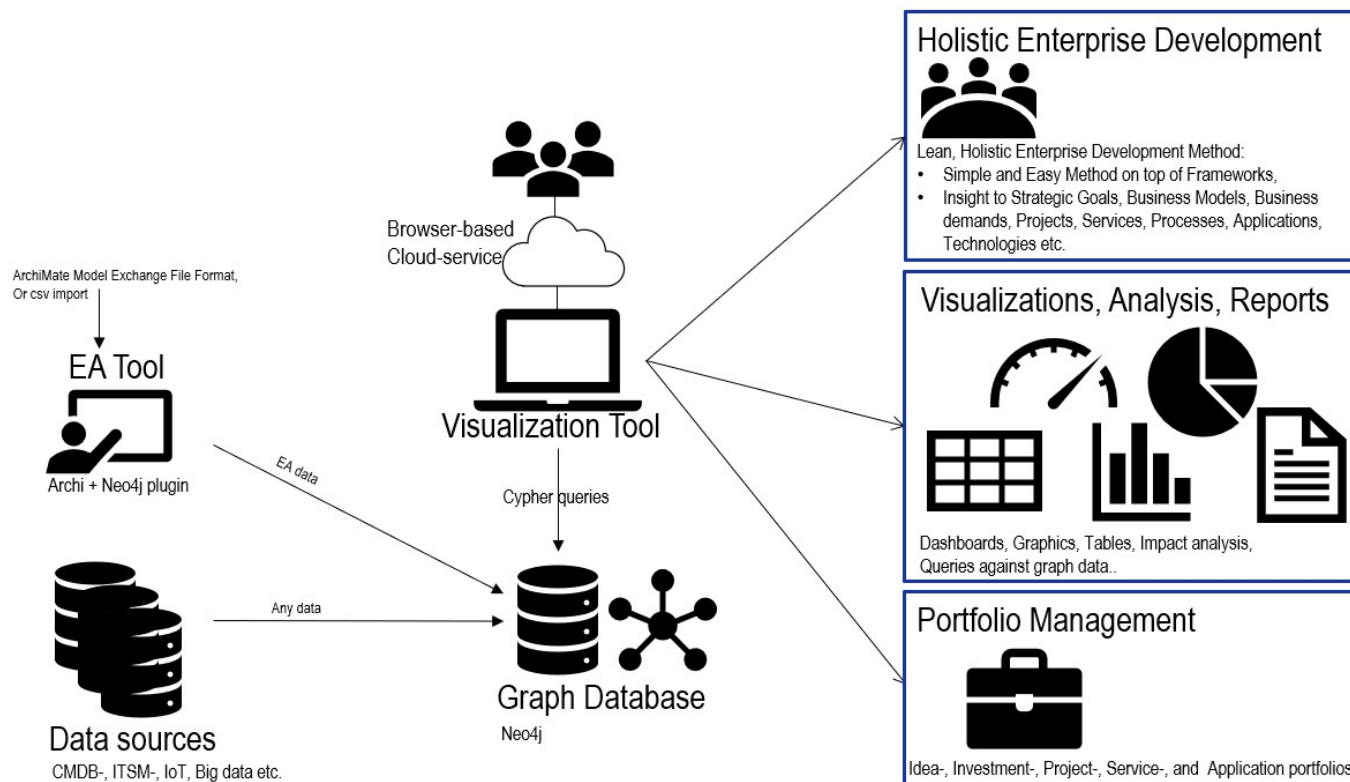


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	. How users interact with the tool	Tableau Public Web UI
2.	Application Logic-1	Data preprocessing and transformation	Python (Pandas, NumPy)
3.	Application Logic-2	CSV file merging and cleaning	Python (Pandas)
4.	Application Logic-3	Dashboard design and user interaction setup	Tableau Public Dashboards
5.	Database	Data stored in structured files (CSV format)	CSV Files (Locally stored)
6.	File Storage	Stores the preprocessed data files and original datasets	Local Filesystem
7.	Infrastructure (Server / Cloud)	Application developed and visualized on local system	Local System + Tableau Public Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Data manipulation and processing libraries	Python (Pandas, NumPy, Matplotlib)
2.	Security Implementations	Tableau Public requires login; local files stored securely	Tableau account authentication
3.	Scalable Architecture	Dashboards can be updated with new data and republished	Modular CSV + Tableau design
4.	Availability	Hosted on Tableau Public – available online 24/7	Tableau Public Cloud Platform
5.	Performance	Lightweight dashboards, optimized charts, small data load	Technology used, data size ensures fast

