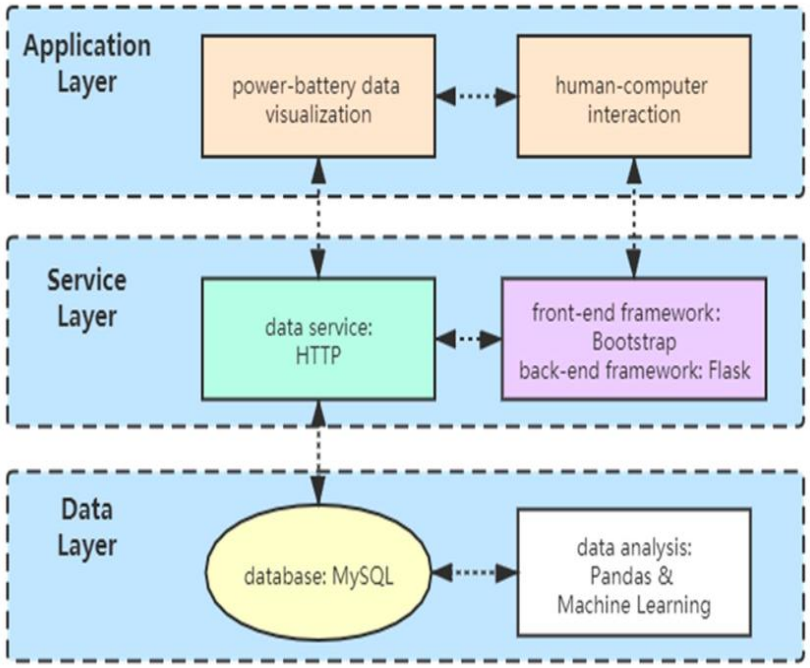
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	04 February 2026
Team ID	LTVIP2026TMIDS73146
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	4 Marks

Technical Architecture:



Guidelines:

1. The system processes housing data using Python preprocessing, Tableau visualization, and Flask web application.
2. Dataset and preprocessing run on local system, while dashboards are hosted on Tableau Public Cloud.
3. External interface used is Tableau Public and its embed visualization service.
4. Data is stored in local CSV dataset and Tableau dashboard cloud storage.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with dashboard via website	HTML, CSS, Bootstrap, JavaScript
2.	Application Logic-1	Website backend logic	Python Flask
3.	Application Logic-2	Data preprocessing logic	Python (Pandas, NumPy)
4.	Application Logic-3	Data Visualization Engine	Tableu
5.	Database	Housing dataset storage	CSV Dataset (Local Storage)
6.	Cloud Database	Not Used (Optional Future Scope)	Tableau Public Cloud Storage
7.	File Storage	Dataset storage	Local File System
8.	External API-1	Tableau Dashboard Embed Service	Tableau Public API
9.	External API-2	Not Used	—
10.	Machine Learning Model	Not Used	—
11.	Infrastructure (Server / Cloud)	Application Hosting	Local Server / Flask Server

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Used open-source web and analytics tools	Flask, Bootstrap, Pandas
2.	Security Implementations	Basic access control and secure hosting	HTTPS, Flask Security Config
3.	Scalable Architecture	Can scale by moving dataset to cloud	Cloud Hosting, Tableau Cloud
4.	Availability	Dashboard available via web browser	Flask Web Server
5.	Performance	Fast dashboard loading via Tableau Public	Tableau Optimization, Local Processing