

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	26 February 2026
Team ID	LTVIP2026TMIDS38235
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

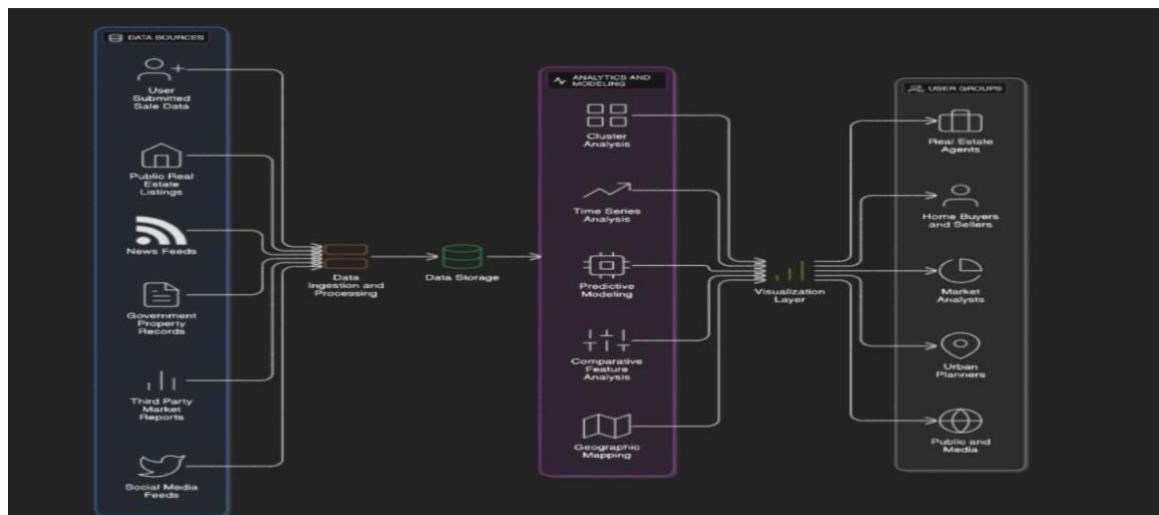


Table-1: Components & Technologies

S.NO	COMPONENT	DESCRIPTION	TECHNOLOGY
1.	User Interface	Web access to visual dashboards	Web UI using Tableau Public
2.	Application Logic-1	Data pre-cleaning and transformation	Python (Pandas, NumPy)
3.	Application Logic-2	Dashboard logic, filters, calculated fields	Tableau Desktop
4.	Application Logic-3	Interactive story design	Tableau Story Builder
5.	Database	Structured data In tabular format	CSV file (Transformed Housing Data)
6.	Cloud Database	Optional sync with Google Sheets or Tableau Online	Google Sheets / Tableau Cloud
7.	File Storage	Storing housing datasets	Google Drive / Local File
8.	External API-1	(Not used in current scope)	N/A
9.	External API-2	(Not used in current scope)	N/A
10.	Machine Learning Model	Future enhancement for price prediction	Python Regression Model (optional)
11.	Infrastructure	Deployment & Hosting	Local System, Tableau Public (Cloud)

Table-2: Application Characteristics:

S.NO	COMPONENT	DESCRIPTION	TECHNOLOGY
1.	Open-Source Frameworks	Python for preprocessing, Tableau Public for visualization	Python (Pandas, NumPy), Tableau Public
2.	Security Implementations	Dashboard access restricted via Tableau share settings and Google logins	Tableau account authentication
3.	Scalable Architecture	Scalable to new visualizations and datasets	Tableau Dashboards, CSV Expansion
4.	Availability	Available 24/7 via Tableau Public	Hosted on Tableau Public / Online
5.	Performance	Lightweight visuals, quick filter response, cache-enabled Tableau dashboards	Tableau's optimization engine

References

- <https://c4model.com/>
- <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processingduring-pandemics/>
- <https://aws.amazon.com/architecture>
- <https://public.tableau.com>
- <https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecturediagrams-2d20c9fda90d>