

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

Date	27 June 2025
Team ID	LTVIP2025TMID48073
Project Name	visualizing housing market trends
Maximum Marks	4 Marks

Technical Architecture:

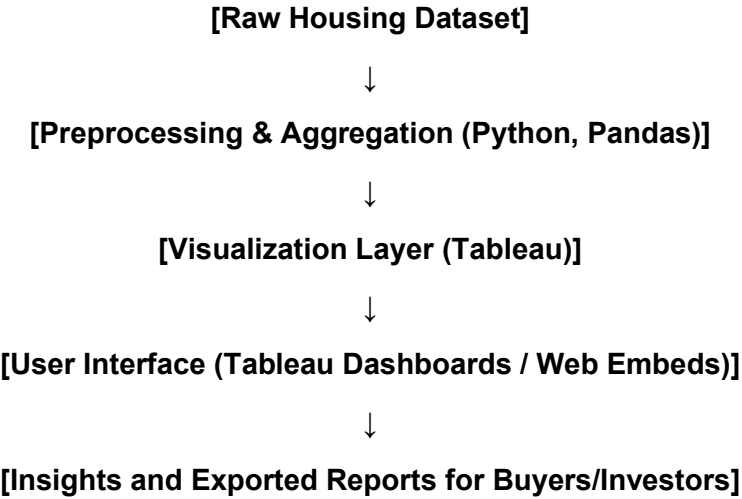


Table-1 : Components & Technologies:

S.No	Component	Description	Technology	
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1	User Interface	Visualization dashboards	Tableau Public, HTML Embed
2	Application Logic-1	Data processing and metric generation	Python (Pandas, NumPy)
3	Application Logic-2	KPI calculations, trend modeling	Tableau Calculated Fields
4	Application Logic-3	Recommendation logic based on house features	Custom filters in Tableau
5	Database	Source housing dataset	CSV file / SQLite
6	Cloud Database	Optional for larger housing data	Google Sheets / AWS S3
7	File Storage	Local and online Tableau extracts	Local File System, Tableau Online
8	External API-1	Location metadata (optional)	Google Maps API (optional)
9	External API-2	Weather impact analysis (optional extension)	OpenWeather API
10	Machine Learning Model	Forecasting renovation-based value uplift (future scope)	Scikit-learn (optional)
11	Infrastructure	Tableau Public / Local PC for deployment	Tableau Desktop, Web Browser

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used

S.No	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used