

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

Date	30 JUNE 2025
Team ID	LTVIP2025TMID48066
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	How User interacts with Dashboard,Filters etc.	Tableau public/tableau Online
2.	Data Source	Raw housing data (features,prices,locations,etc)	CSV,Excel
3.	Data Ingestion	Importing and Cleaning data	python,tableau prep
4.	Application Logic-	Business logic for grouping, filtering	Tableau Calculated fields
5.	Database	Central storage for Structured housing data	MySQL
6.	Cloud Database	For uploading and accessing housing datasets remotely	AWS S3,Google cloud Storage
7.	File Storage	File storage requirements	Tableau Dashboards

8.	External API-1	Purpose of External API used in the application	Google maps API
9.	External API-2	Purpose of External API used in the application	Zillow API
10.	Machine Learning Model	Purpose of Machine Learning Model	Scikit-Learn
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Tableau Server

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python,Jupyter
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SSL,IAM Roles
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Three-tier model
4.	Availability	Justify the availability of applications (e.g. use of load balancers, distributed servers etc.)	Cloud Load Balancer
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Caching in tableau