

Project Design Phase Solution Architecture

Date	28 June 2025
Team ID	LTVIP2025TMID51574
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	4 Marks

Solution Architecture:







Solution architecture helps bridge the gap between real estate business challenges and data-driven technology solutions. In this project, it provides the structure and flow needed to collect, process, and visualize housing sales data to support informed decision-making.

Objectives:

- Find the most efficient tech stack for solving the problem of understanding housing market trends.
- Define how data flows from collection to visualization.
- Outline key tools and platforms used (e.g., Tableau, CSV data, Python).
- Provide a clear overview for stakeholders on how the dashboards are created and used.

Description of Solution Architecture:

This solution is built around data visualization using Tableau. The architecture includes the following stages:

1.  Data Collection: Raw housing sales data is obtained in CSV format.
2.  Data Cleaning (Optional): Null values, duplicates, or unnecessary fields are removed using Excel or Python.
3.  Tableau Processing: Cleaned data is imported into Tableau Desktop. Various visualizations such as bar charts, pie charts, and histograms are built.
4.  Dashboard Compilation: These visualizations are assembled into interactive dashboards and stories.
5.  Publication: The final dashboards are published to Tableau Public for easy online access.
6.  Stakeholder Access: Analysts, marketing teams, and executives can access dashboards through shareable links.

Example - Solution Architecture Diagram:

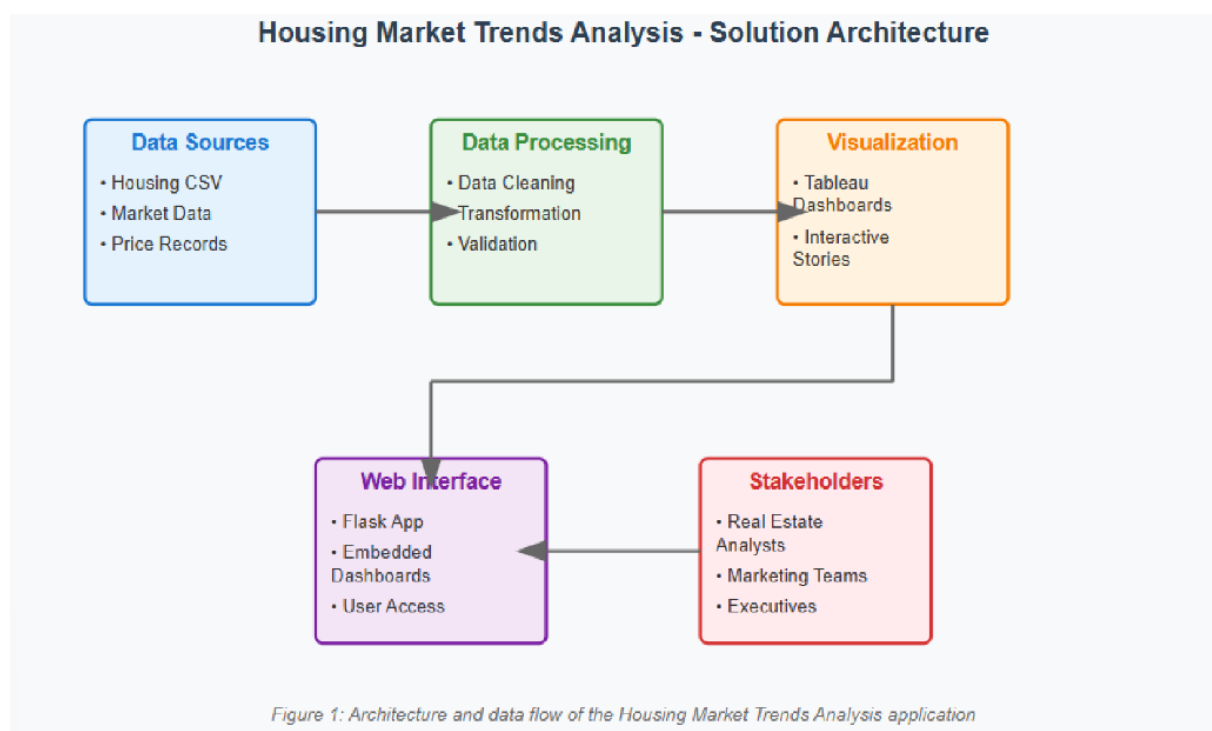
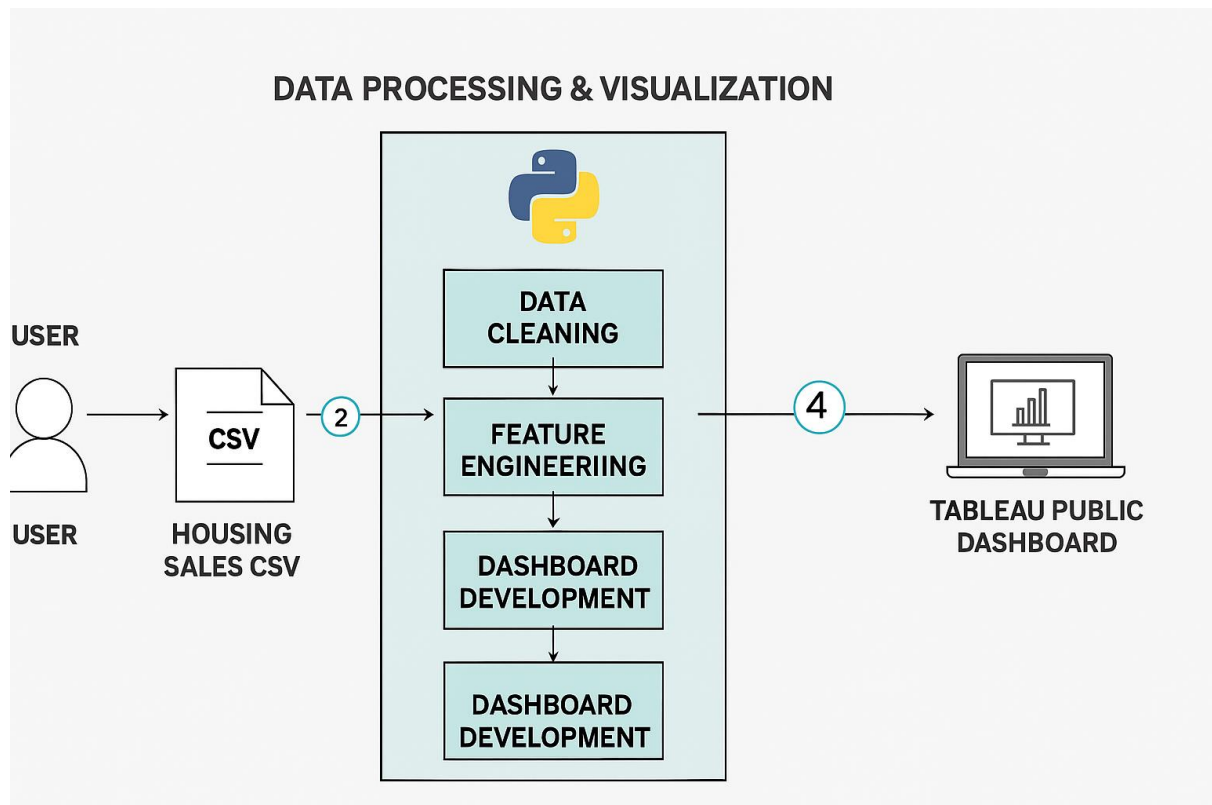


Figure 1: Architecture and data flow of the Housing Market Trends Analysis application