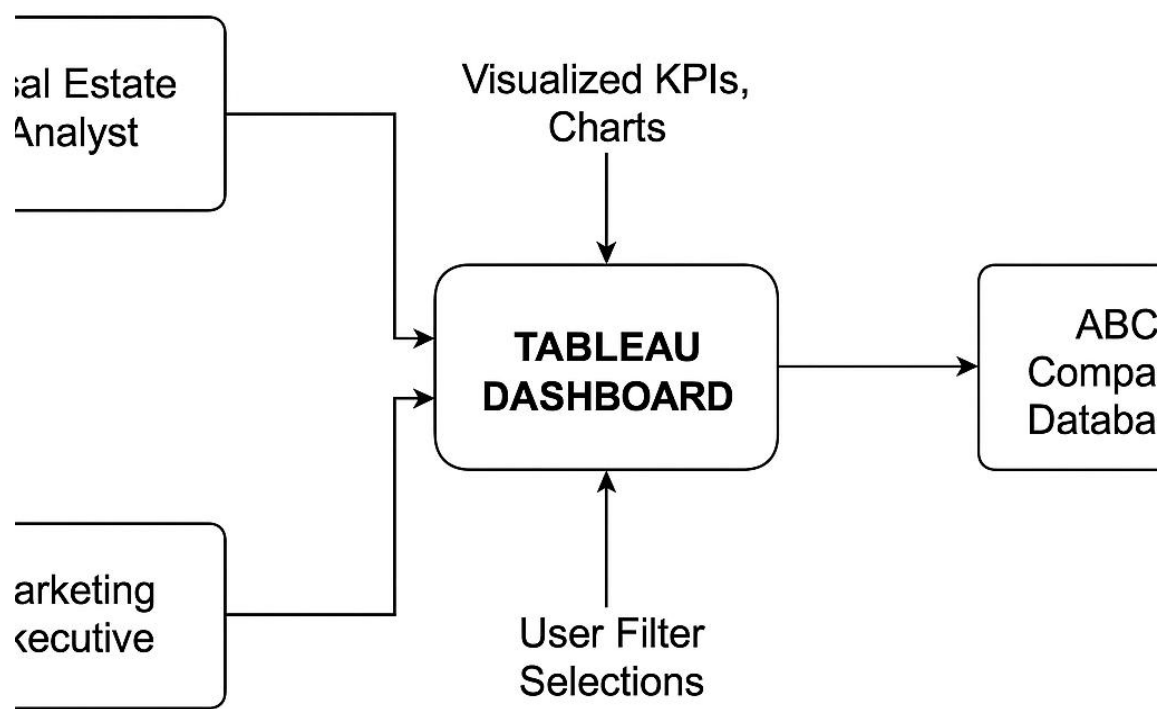


Smartbridge Summer Internship Project

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Project Name	Housing Market Trends Analysis

Data Flow Diagrams and User Stories Report

DATA FLOW DIAGRAM: LEVEL 0



DATA FLOW DIAGRAM: LEVEL 0

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## 1. Introduction

This report outlines the **Data Flow Diagrams (DFDs)** and **User Stories** that guided the development of a Tableau dashboard for analyzing housing market trends. The focus is on understanding how data moves through the system and how different types of users interact with the dashboard to gain meaningful insights.

## 2. Level 0 – Context Data Flow Diagram

This high-level DFD shows the interaction between **external users** and the **Tableau system**:

### External Entities:

- Real Estate Analyst
- Marketing Executive
- ABC Company Database

### System:

- Tableau Dashboard

### Data Flows:

- **Inputs:** Transformed housing data, user filter selections
- **Outputs:** Visualized KPIs, charts, dashboards

## 3. Level 1 – Detailed Data Flow Diagram

This breakdown shows internal processes in Tableau:

### Processes:

- Load and clean housing dataset
- Apply filters (by renovation, house age, features)
- Generate KPIs (avg price, basement area, count)
- Render charts (Histogram, Pie Chart, Grouped Bars)
- Export dashboard or report

### Data Stores:

- Cleaned Housing Dataset
- Filter Settings and User Inputs

**Outputs:**

- Interactive Dashboard
- Story Points
- Summary Visuals for Reports

**4. User Stories**

**USER STORIES**

Role	User Story
Real Estate Analyst	“As an analyst, I want to filter houses by renovation age so I can understand sale price trends.”
Marketing Executive	“As a marketer, I want to compare house features with prices so I can create better campaigns.”
Business Analyst	“As an analyst, I want to view grouped bar charts by age and features to detect design patterns.”
Company Executive	“As a decision-maker, I want to see high-level KPis so I can assess market status at a glance.”

Role	User Story
Real Estate Analyst	“As an analyst, I want to filter houses by renovation age so I can understand sale price trends.”
Marketing Executive	“As a marketer, I want to compare house features with prices so I can create better campaigns.”
Business Analyst	“As an analyst, I want to view grouped bar charts by age and features to detect design patterns.”
Company Executive	“As a decision-maker, I want to see high-level KPIs so I can assess market status at a glance.”
Data Team Member	“As a data user, I want to use story points to narrate insights clearly to stakeholders.”

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## 5. Conclusion

These diagrams and stories provide a clear foundation for Tableau dashboard design. Understanding user needs ensures the final product is both functional and insightful. The DFDs outline the data movement, while user stories align functionality with real-world business goals.