Data Visualization Report

Date	31 January 2026
Team ID	LTVIP2026TMIDS28502
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau

Title: Data Visualization and Preprocessing Report

Project Name: Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Team ID: LTVIP2026TMIDS28502
Dataset: Transformed_Housing_Data2.csv
Tool Used: Tableau Desktop

1. Preprocessing Steps

Data preprocessing is an important step to ensure that the dataset is clean, structured, and ready for visualization and analysis.

1.1 Data Collection

The housing dataset named **Transformed_Housing_Data2.csv** was collected and stored locally. This dataset contains information such as sale price, house age, renovation status, basement area, bedrooms, bathrooms, and floors.

1.2 Data Connectivity

The dataset was connected to Tableau Desktop using the Text File connection option. Tableau successfully loaded the dataset and displayed all fields for analysis.

1.3 Data Cleaning

The following cleaning steps were performed:

- Verified dataset for missing or null values

- Ensured numeric columns such as Sale Price and Basement Area were correctly identified as measures

- Ensured categorical fields such as Renovation Status were correctly identified as dimensions

- Verified data consistency across all records

1.4 Data Classification

Dimensions identified:

- Renovation Status

- Bedrooms

- Bathrooms

- Floors

Measures identified:

- Sale Price

- Basement Area

- House Age

1.5 Data Validation

The dataset was validated by previewing records in Tableau to ensure correctness and completeness.

Outcome:
The dataset was successfully prepared for visualization.

2. Business Questions with Visualizations

The following business questions were defined and answered using Tableau visualizations.

Business Question 1: What is the total number of housing records?
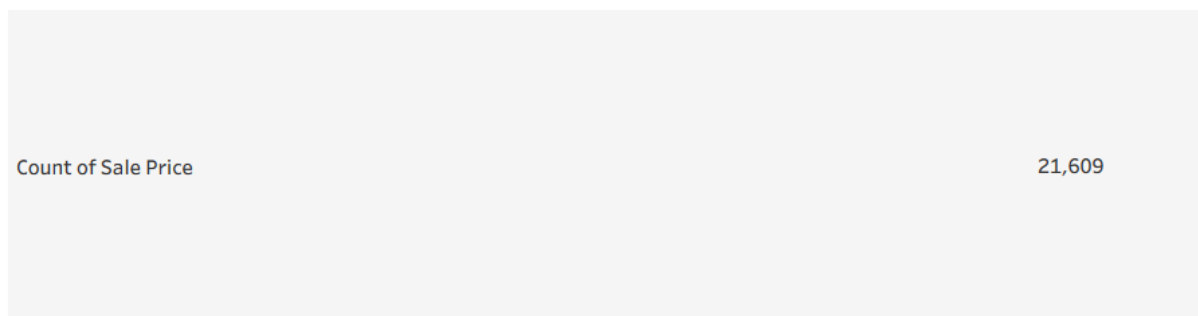
Visualization Used: KPI Indicator
Fields Used: COUNT(Number of Records)

Purpose:
To understand the total number of houses available in the dataset.

Insight:
This KPI provides an overview of the dataset size and scope.

Count of Sale Price   21,609

Business Question 2: What is the average sale price of houses?

Visualization Used: KPI Indicator
Fields Used: AVG(Sale Price)

Purpose:
To understand the average housing price.

Insight:
Helps identify overall market pricing level.

Avg. Sale Price	₹5,11,618.56

Business Question 3: How does renovation affect house sale prices?
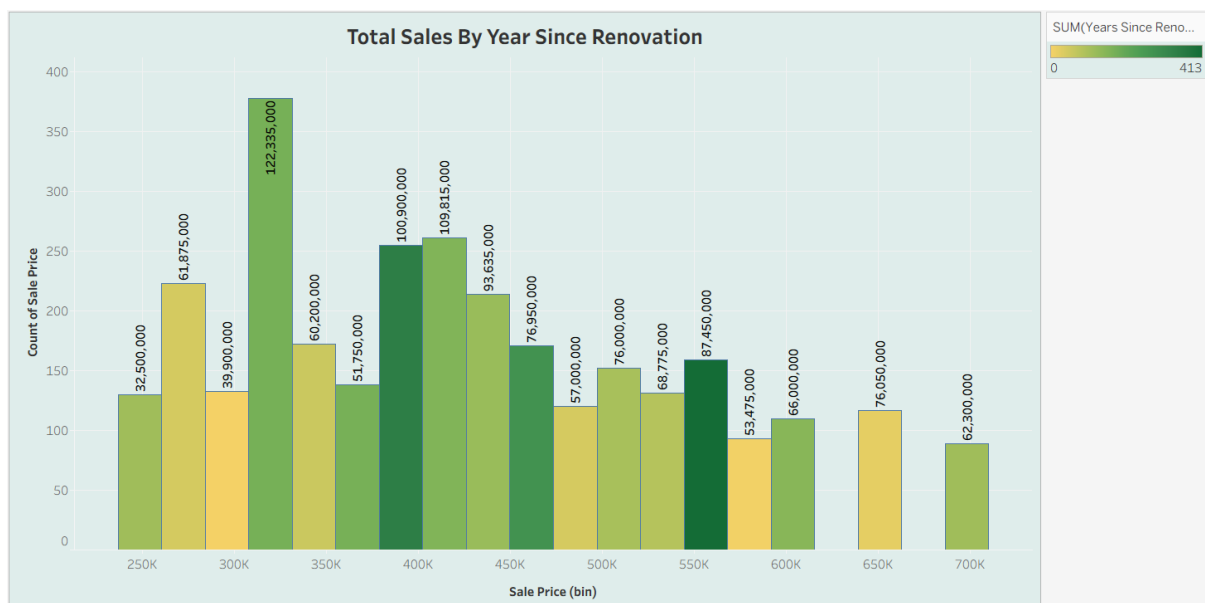
Visualization Used: Bar Chart
Fields Used:

- Columns: Years Since Renovation

- Rows: SUM(Sale Price)

Purpose:
To analyze the impact of renovation on housing price.

Insight:
Recently renovated houses show different pricing trends.

Business Question 4: What is the distribution of house age based on renovation status?
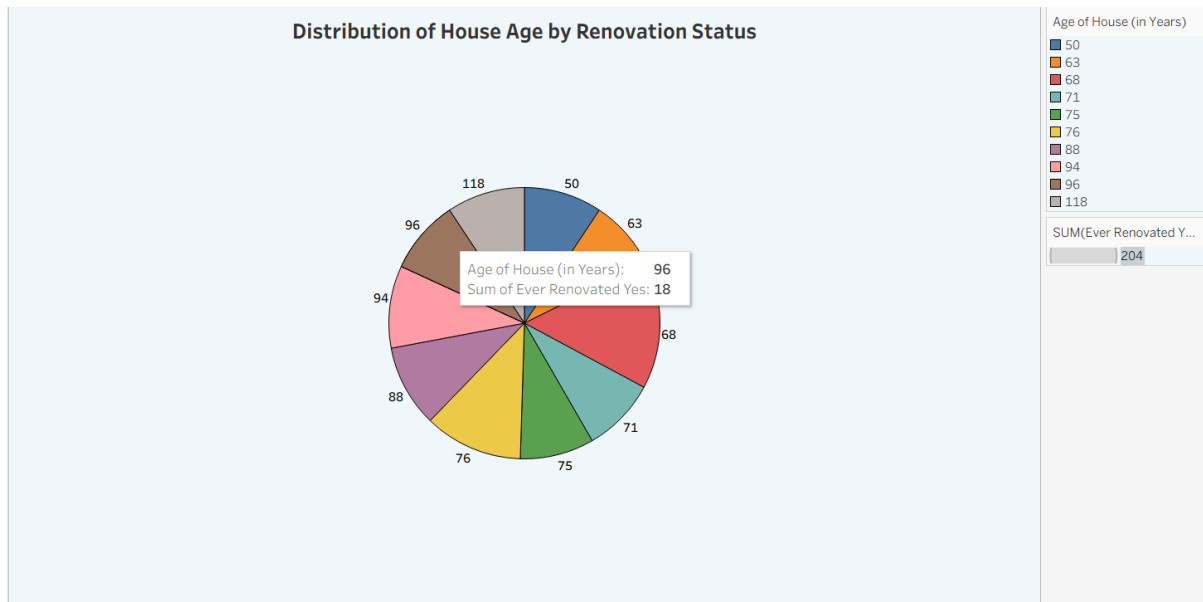
Visualization Used: Pie Chart
Fields Used:

- Color: Renovation Status

- Angle: Number of Records

Purpose:
To analyze age distribution and renovation relationship.

Insight:
Shows proportion of renovated vs non-renovated houses.

Distribution of House Age by Renovation Status

Business Question 5: How are housing features distributed based on age?

Visualization Used: Bar Chart
Fields Used:

- House Age

- Bedrooms

- Bathrooms

- Floors

Purpose:
To analyze structural characteristics of houses.

Insight:
Shows housing design patterns across different age groups.

House Age distribution by No of Bathrooms, Bedrooms and Floors