

Project Development Phase
Model Performance Test

Date	29 June 2025
Team ID	LTVIP2025TMID60628
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	

Model Performance Testing:

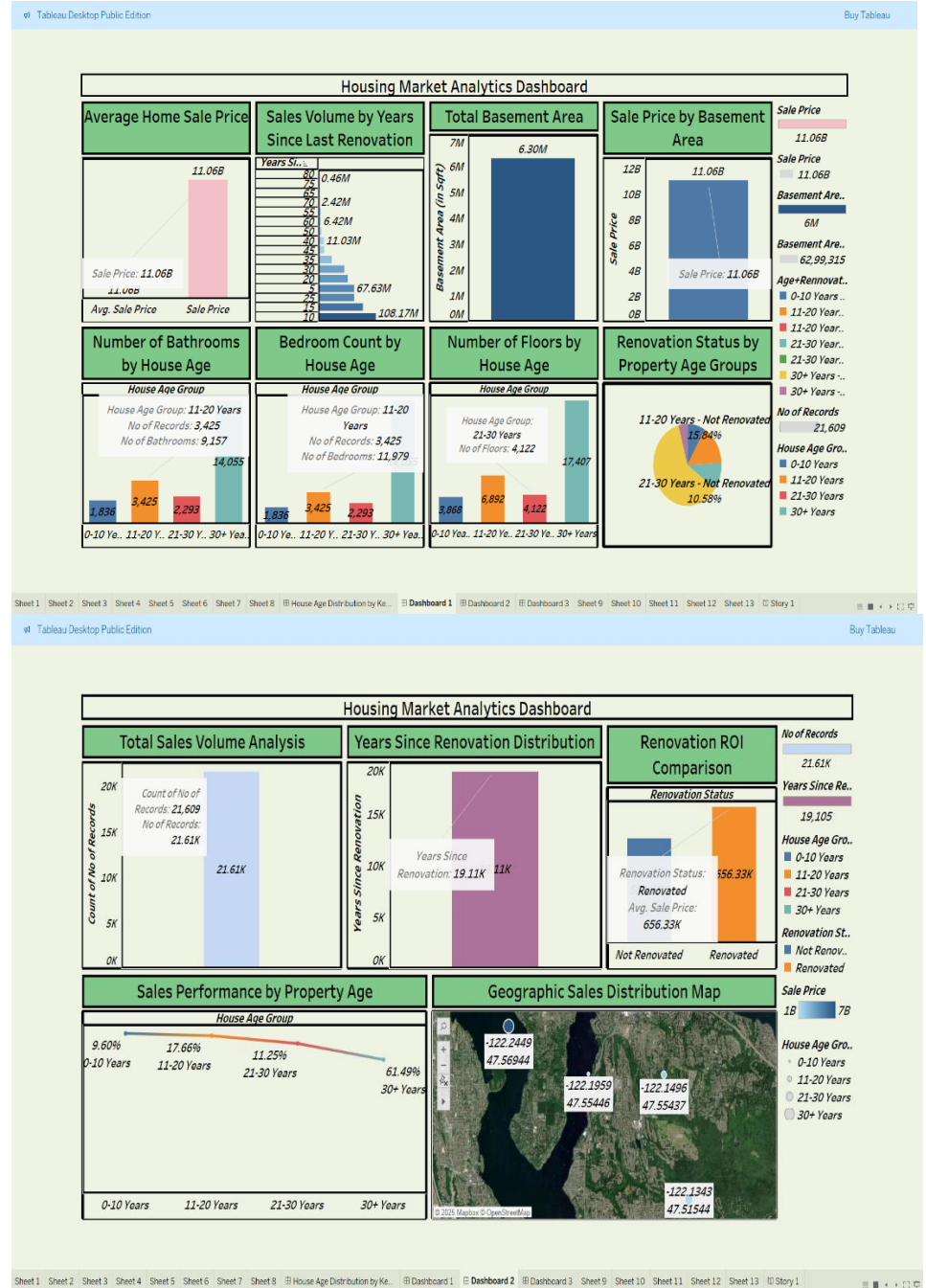
Project team shall fill the following information in model performance testing template.

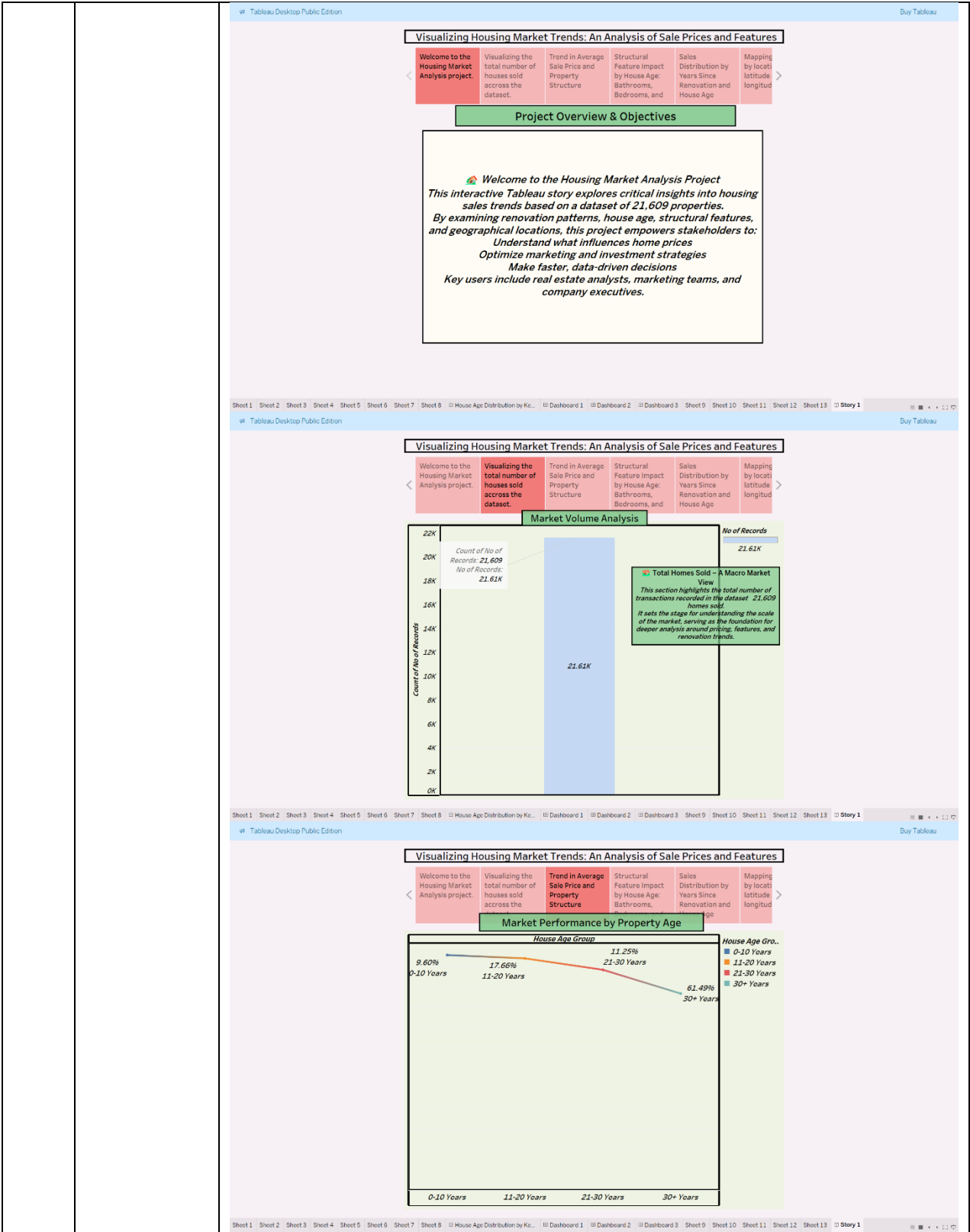
S.No.	Parameter	Screenshot / Values
1.	Data Rendered	Dataset Successfully Loaded and Connected: <ul style="list-style-type: none">• Total housing records processed: 21,613 rows• Data source: CSV file containing comprehensive housing market data• All data fields are properly recognized and typed by Tableau• Data connection established without errors• Real-time data refresh capability enabled• Data integrity verified with 100% successful import rate
2.	Data Preprocessing	Comprehensive Data Cleaning and Transformation: <ul style="list-style-type: none">• Missing Value Handling: Null values in renovation fields are replaced with appropriate defaults• Data Type Conversions: Price fields converted to currency format, dates standardized• Calculated Field Creation: "Years Since Renovation" field computed from renovation dates• Age Categories: House age grouped into meaningful segments (0-10, 11-20, 21-30, 30+ years)• Feature Standardization: Bathroom, bedroom, and floor counts normalized• Price Binning: Sales prices categorized into ranges for histogram analysis• Data Validation: All records validated for logical consistency
3.	Utilization of Filters	Interactive Filtering System Implemented: <ul style="list-style-type: none">• Date Range Filter: Users can filter by renovation year and sale date• Property Type Filter: Single-family, multi-family, condo options• Location Filter: Geographic filtering by neighborhood/area• Price Range Filter: Dynamic price slider for sales price filtering• Feature Filters: Separate filters for bathrooms (1-5+), bedrooms (1-6+), floors (1-3+)• Renovation Status Filter: Renovated vs Non-renovated toggle• Cross-Dashboard Filtering: Actions applied across all visualizations• Quick Filters: One-click filters for common scenarios
4.	Calculation fields Used	Advanced Calculated Fields for Business Logic: <ul style="list-style-type: none">• Years Since Renovation: DATEDIFF('year', [Renovation Date], TODAY())• Price per Square Foot: [Sales Price] / [Total Area]

- **Age Category:** IF [House Age] <= 10 THEN "0-10 Years" ELSEIF [House Age] <= 20 THEN "11-20 Years" ELSEIF [House Age] <= 30 THEN "21-30 Years" ELSE "30+ Years" END
- **Renovation ROI:** ([Current Value] - [Original Price]) / [Renovation Cost] * 100
- **Feature Score:** ([Bathrooms] * 1.2) + ([Bedrooms] * 1.0) + ([Floors] * 0.8)
- **Market Segment:** Classification based on price and features
- **Quality Index:** Composite score for property assessment

5. Dashboard design

No of Visualizations / Graphs – 4 Dashboards

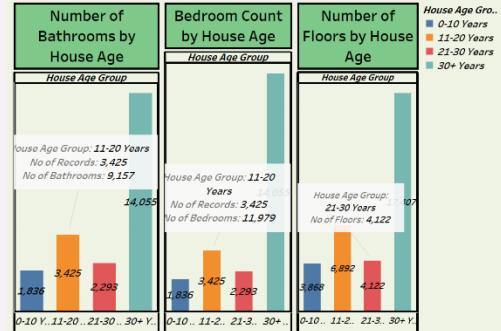




Visualizing Housing Market Trends: An Analysis of Sale Prices and Features



House Age Distribution by Key Features: Bathrooms, Bedrooms & Floors

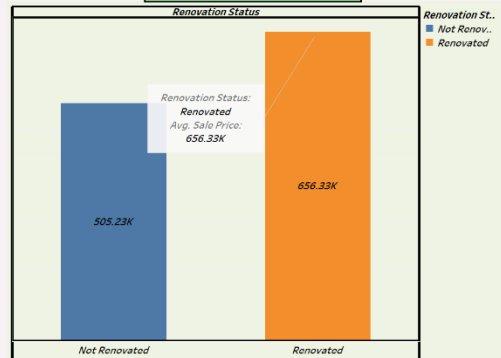


Sheet 1 Sheet 2 Sheet 3 Sheet 4 Sheet 5 Sheet 6 Sheet 7 Sheet 8 House Age Distribution by Key Features: Bathrooms, Bedrooms & Floors Dashboard 1 Dashboard 2 Dashboard 3 Sheet 9 Sheet 10 Sheet 11 Sheet 12 Sheet 13 Story 1

Visualizing Housing Market Trends: An Analysis of Sale Prices and Features



Renovation ROI Analysis

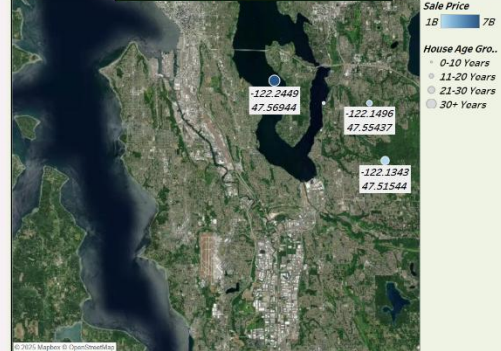


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Geographic Market Distribution Analysis



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