6. Visualizing Housing Market Trends An Analysis of Sale Prices and Features using Tableau

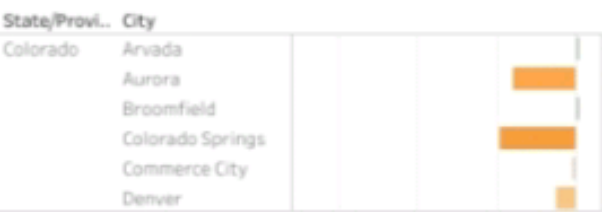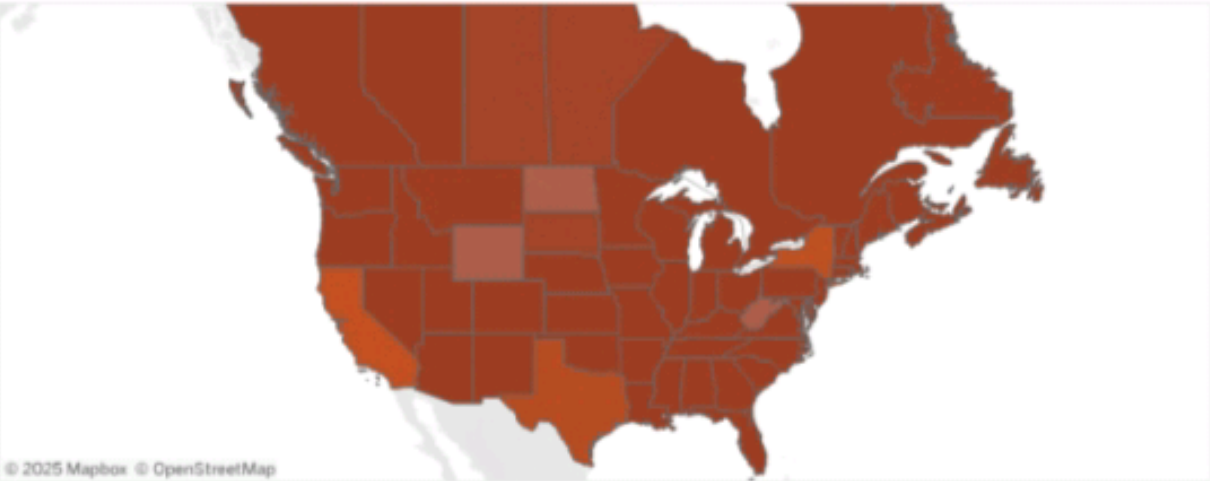https://www.kaggle.com/datasets/rituparnaghosh18/transformed-housing-data-2

map

Profit

-25,729   76,381

© 2025 Mapbox © OpenStreetMap

trend

Order Date

3K

barchart

State/Provi...	City
Colorado	Arvada
	Aurora
	Broomfield
	Colorado Springs
	Commerce City
	Denver

Actions

Sheet 2

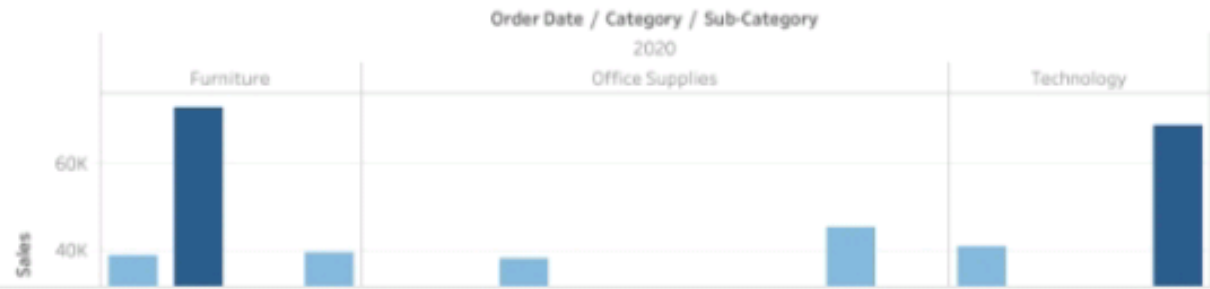© 2025 Mapbox © OpenStreetMap
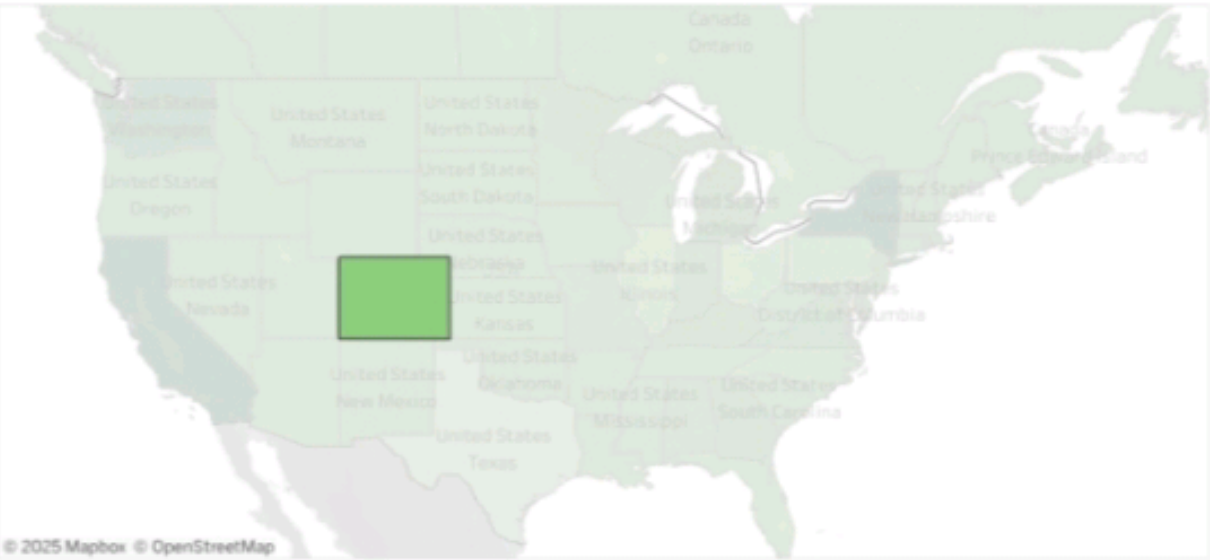
Sales

132   457,688

Category
☑ (All)
☑ Furniture
☑ Office Supplies
☑ Technology

Year of Order Date
2020 ▼
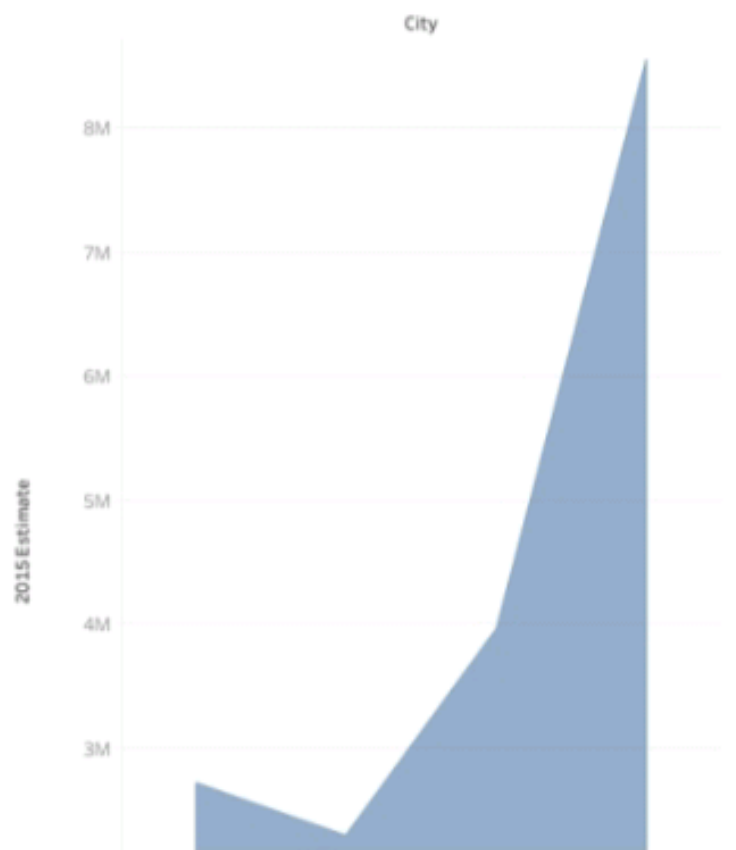
Sales by Category

Order Date / Category / Sub-Category

2020

| Furniture | Office Supplies | Technology |

60K

40K

Sales

2010 Census

City

2010 Census

8M
6M
4M
2M

Chicago, IL
Houston, TX
Los Angeles, CA
New York, NY

Area (KM2)

City

Area (KM2)

1600
1400
1200
1000
800
600
400

2015 Estimate

City

2015 Estimate

8M
7M
6M
5M
4M
3M

Population change

City

ulation Change

0.10
0.08
0.06
0.04
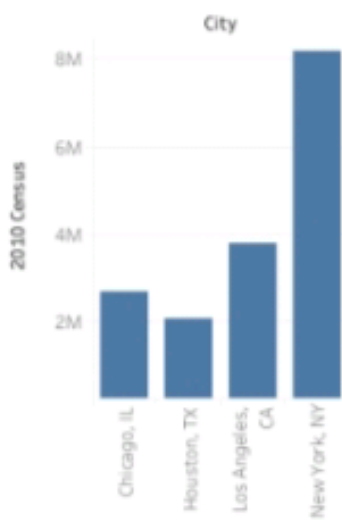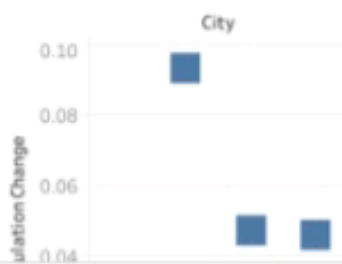
Drill up/downl

Category	Sub-Catego..	Manufacturer	
Furniture	Bookcases	Atlantic	358
		Bestar	-613
		Bush	-305
		DMI	90
		Global	207
		Hon	374
		O'Sullivan	-2,585
		Other	-79
		Riverside	-670
		Rush	340
		SAFCO	97
		Sauder	-846
	Chairs	Bevis	117
		DMI	486
		Global	8,920
		Hon	10,847
		Iceberg	254
		Novimex	-743
		Office Star	1,871
		Other	3,006
		SAFCO	2,465

Drill down/up

Parameters

Sub-Catego..	Order Date 2020	Order Date 2021	Order Date 2022	Order Date 2023
Accessories	6,403	10,197	9,664	15,672
Appliances	2,565	2,515	5,334	7,915
Art	1,434	1,486	1,463	2,271
Binders	5,203	7,633	10,649	7,941
Bookcases	-346	-2,755	128	-658
Chairs	7,145	6,342	5,948	7,788
Copiers	3,381	9,930	17,743	25,040
Envelopes	1,495	1,977	2,074	1,442
Fasteners	233	182	314	1,699
Furnishings	2,296	3,194	4,091	4,312
Labels	1,286	1,323	1,161	1,803
Machines	408	2,977	2,907	-2,831
Paper	6,589	6,580	9,089	12,254
Phones	12,119	10,458	9,521	12,952
Storage	4,187	3,507	6,227	7,363
Supplies	497	-25	-699	-944
Tables	-3,210	-3,500	-2,950	-8,092

Profit

-8,092   25,040

Parameters

Tooltips

Sheet 1

State/Province (group)
- Central
- East Coast
- South
- West Coast

Sales

0K   458K

mapping

Bullet Chart
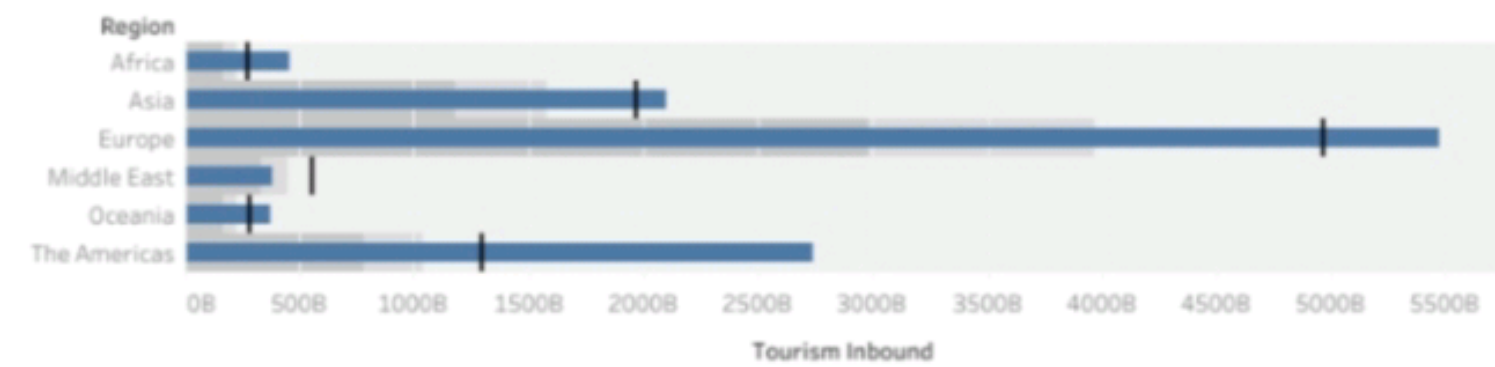
Bullet chart

Housing Sales and Market Trends Dashboard

This dashboard provides key insights into the housing market from May 2014 to May 2015. It highlights sales distribution, price trends, and property characteristics. The geographic map shows home sales density, while the daily price trend tracks fluctuations. Histograms display the distribution of house prices, bedrooms, and bathrooms. A heatmap analyzes the impact of property conditions and views on pricing. This tool aids in understanding market trends

Geographic Distribution of Home Sales

© Mapbox © OSM
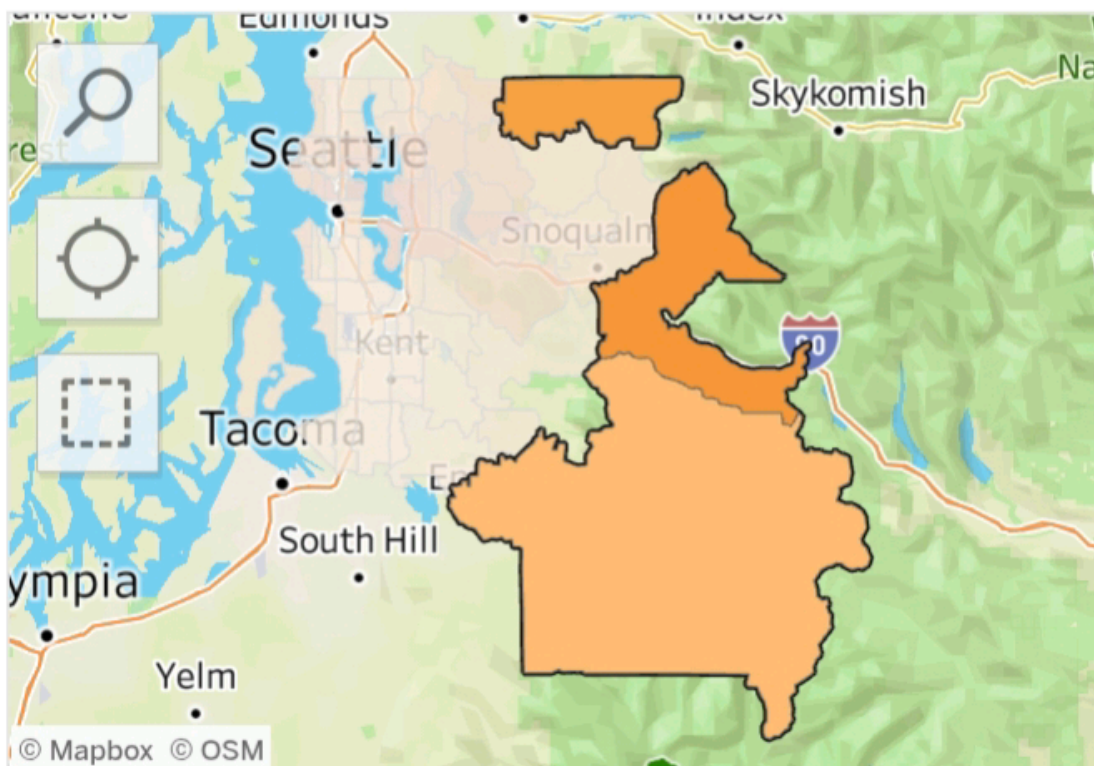
Daily Trend of Average House Sale Prices

600K

642,000

400K

359,475

200K

0K

Jul 29   Aug 8   Aug 18   Aug 28
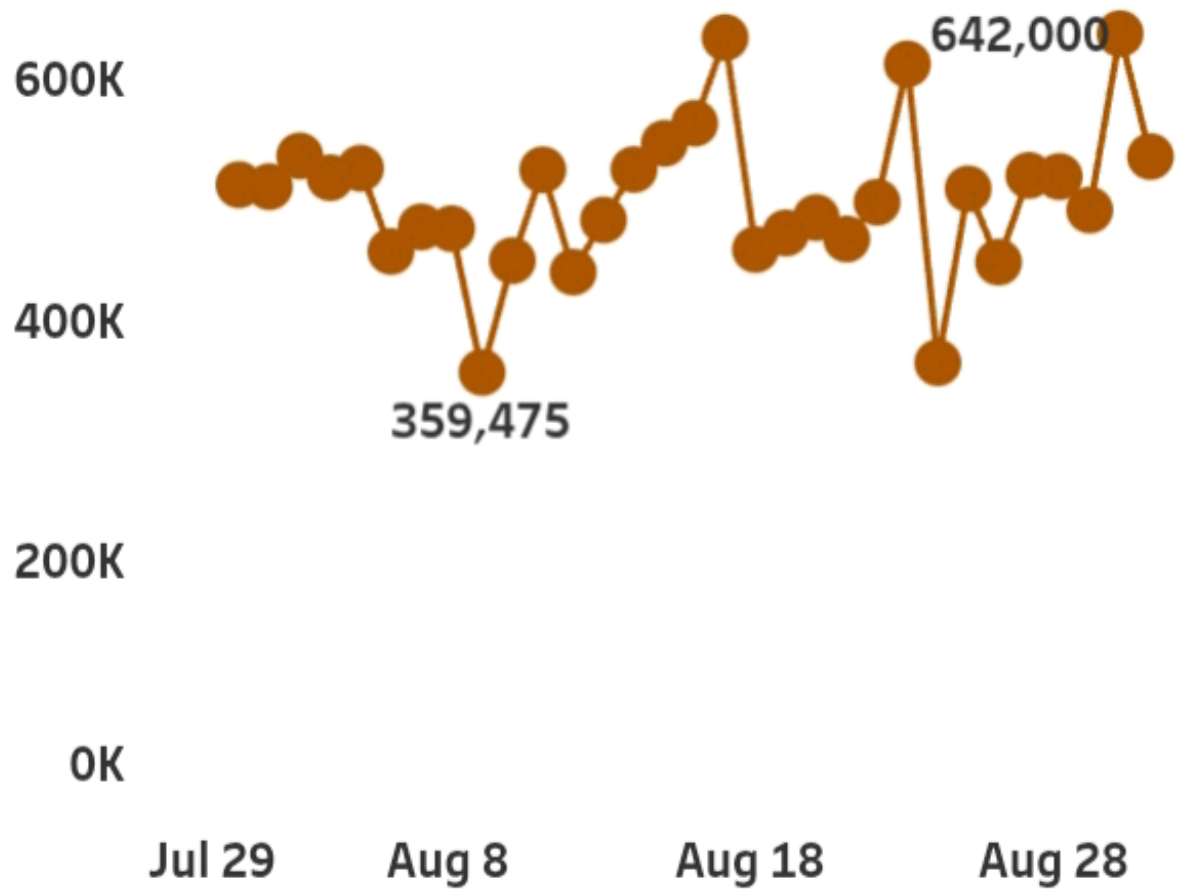
Filter On

Month, Year of Date

| August 2014 | ▼ |

Sqft Lot

| 520 - 1651359 | ⊂—Ɗ |

Sqft Living

| 370 - 7480 | ⊂—Ɗ |

Yr Built

| 1900 - 2015 | ⊂—Ɗ |

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

House Price Distribution

Price (bin)

Bedroom Count Distribution in Sold Homes

Bathrooms (bin)
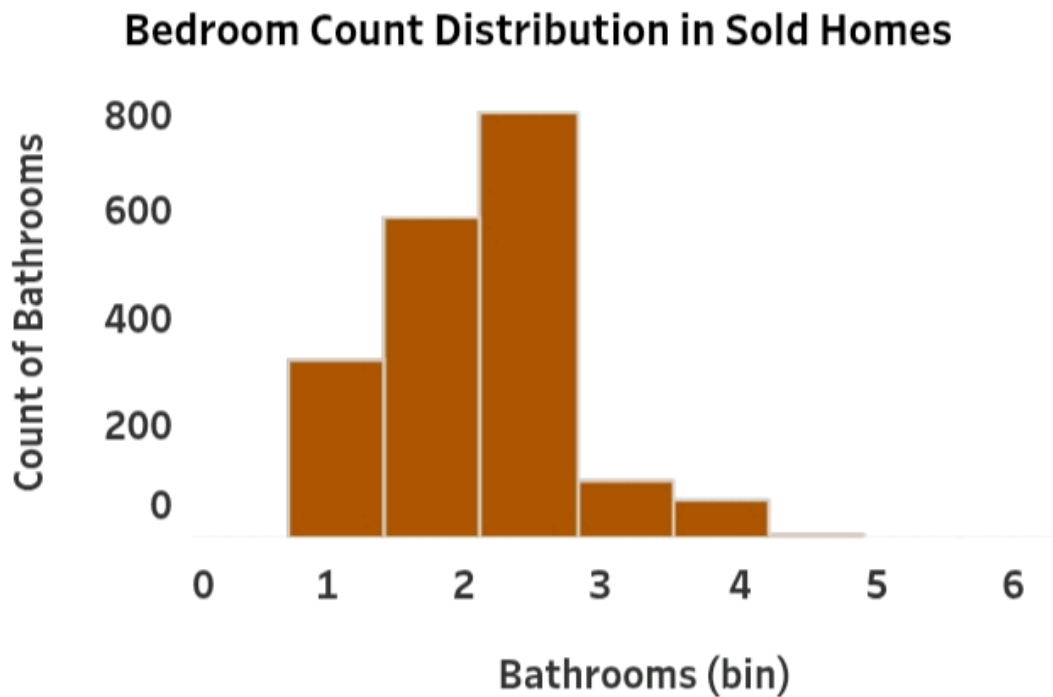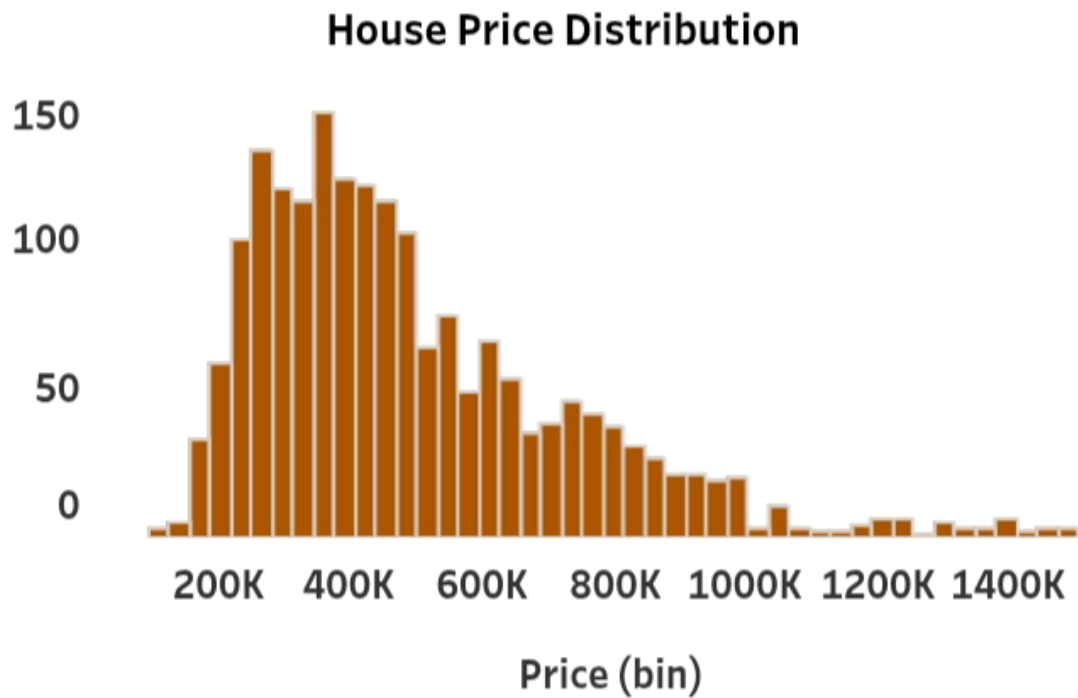
Heatmap: Property View & Condition vs. Price

	Fair- Badly worn	Average	Good	Very
Excellent		845,300	700,600	1,
Good		950,353	864,500	7
Average		752,826	634,542	7
Fair		654,750	545,475	6
No View	265,606	470,708	468,232	5

Bathroom Count Distribution in Sold Homes
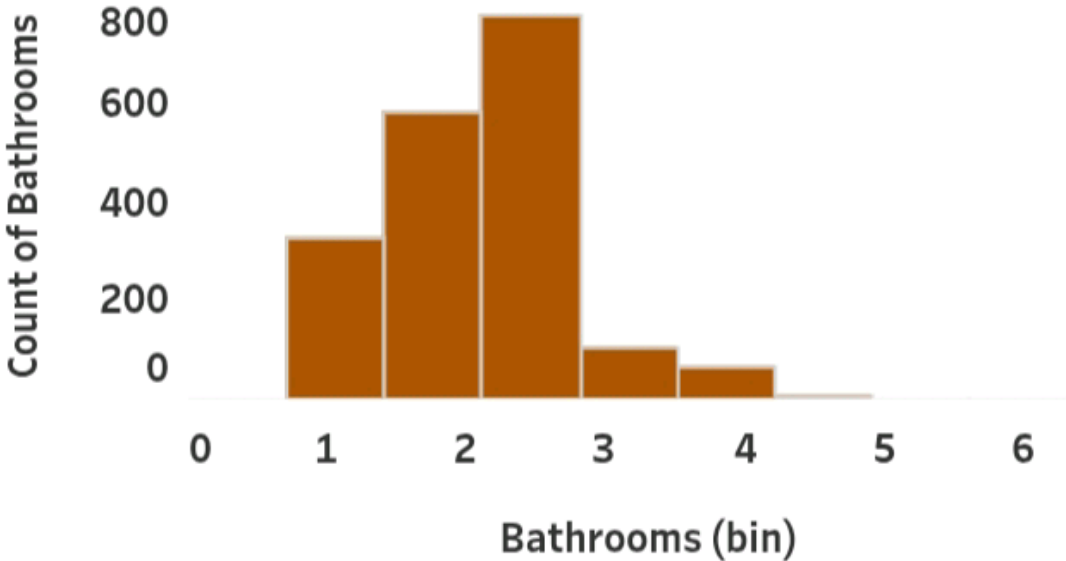
VISUALISING HOUSE MARKET TRENDS REPORT (USING TABLEAU)

Executive Summary

This project focuses on analyzing and visualizing housing market trends using Tableau. By leveraging publicly available housing data, we aim to uncover patterns in pricing, demand, and regional differences to aid decision-making for stakeholders such as buyers, sellers, and real estate investors.

Objectives

- Understand historical housing price trends.

- Identify high-demand regions or cities.

- Analyze average prices based on property types.

- Determine seasonal or economic influences on housing prices.

Dataset Description

- Source: [e.g., Kaggle / Zillow / Local real estate dataset]

- Size: ~20,000 records

- Columns Include:

- Date

- City/Region

- Median Price

- No. of Sales

- Property Type (e.g., Apartment, House, Condo)

- Size (sq. ft.)

- Bedrooms/Bathrooms

Data Preprocessing

- Removed duplicates and null entries

- Converted date columns into proper datetime formats

- Normalized region names for consistency

- Created calculated fields (e.g., Price per Sq. Ft.)

Tableau Visualizations

1. Trend Line: Median Housing Prices Over Time

- Line chart showing year-over-year changes

- Filterable by Region and Property Type

2. Map: Price Distribution by Region

- Choropleth map showing average housing prices

- Hover tooltips with median price, volume of sales

3. Bar Chart: Average Price by Property Type

- Comparison across apartments, houses, and condos

- Region as filter option

4. Heatmap: Monthly Sales Trends

- Helps identify seasonal peaks in property sales

5. Box Plot: Price Distribution

- Visualizing price ranges and outliers by city

Calculated Fields in Tableau

- Price per Sq. Ft. = Price / Area

- Year = YEAR(Date)

- Month = MONTH(Date)

- Custom region grouping

Dashboard Design

- Clean and interactive layout with filters for:

- Time Range

- Region

- Property Type

- Used actions like filter highlighting and drill-downs

- User-friendly titles and tooltips

Storyboard

1. Introduction to Housing Market Trends

2. Key Visualizations (linked from Dashboard)

3. Summary of Findings

4. Recommendations

Insights & Recommendations

- Certain cities show steady price increases -> investment opportunities

- Apartments are generally more stable in pricing than houses

- Seasonal peaks observed in spring and summer

- Recommendation to monitor macroeconomic factors influencing demand

Files Submitted

- Dataset (.csv)

- Tableau Workbook (.twbx)

- Dashboard Screenshot (.png)

- Story Screenshot (.png)

- Final Report (.pdf / .docx)

- Public Tableau Link

- (Optional) Video Demonstration