DVT PRJOECT

BOSTON HOUSE SALE

30/06/2024
FASNA

CONTENTS

PROBLEM STATEMENT:

Consider that you are a Lead Data Analyst at a Real Estate company in Boston that has provided you
with the House Pricing dataset. You have been given a task to explore the data, create different plots
and interpret useful insights/findings. Your end goal here will be to create a storyboard that you
have to present to the Senior Management and the story has to have an end objective and should
follow a logical flow to display that you are heading towards achieving the end objective. This will
help the Senior Management in taking some decisive actions on the current House Recommendation
System in place. This storyboard will be an open-ended story for you to explore various different
features in the data and try to showcase different plots. Make sure to have minimum clutter in the
plots, follow a consistent color scheme across all the plots, and use proper colors to highlight a
specific insight. Moreover, your plots on all the dashboards should be interactive and
responsive. There should be 1 dashboard that should cover the summary of the story as well as your
recommendations.

Data set overview
Few of the details of car claim insurance data set provided for analysis is captured in the table below .

Name	Description
Sales_ID	Serial No of transaction
Sale Price	Price at which the house was sold for (USD)
Property_ID	Address
Street Number	Street number
Street Name	Street name
Unit	The unit number of the house (Taken from the address)
Area	Area / Locality
First Price	Upper limit of price range put up by the seller (USD)
Last Price	Lower limit of price range put up by the seller (USD)
First Date	Date at which the condo first became available for sale
Close Date	Date at which the condo was sold
Interior(Sq Ft)	Sq Feet of condo (Total)
# of Bed	No of bed rooms

# of Bath	No of bathrooms
# of Rooms	Total number of rooms
Condo Fee	The fee associated for maintaince, public common property etc
Tax	Property tax (USD)
RC	This is a boolean value. RC -0 allows home owners to stictly use the condo for residential purposes only RC - 1 allows home owners to use the property aas residential as well as Small commerical establishments (Like having a boutique, florist, boulangere/Bakery in their home)
Name	Description
Sales_ID	Serial No of transaction
Sale Price	Price at which the house was sold for (USD)

Property_ID   Address

Executive Summary

The tableau dashboards are intended to analyse House sale in details and to support further decision making in providing better sale.

This project is an open ended problems .we need to analyze different variables impacting high or low claim amount and claim frequency and build a story accordingly.

We will try to analyse uni variate and /or multivariate analysis to identify the relationship and impact of each variable in house sale.

URL for the assignment submitted

https://public.tableau.com/app/profile/poovi.p/viz/DVT_fasna _boston/STORYBOARD

INSIGHTS

Insight #1: General Sales Overview
Time Period: Analysis covers 1988-1994, with significant sales starting in 1990.
Total Properties and Sales:
Total Properties: 417
Total Sale Price: $69M (less than both Total First Price $79M and Total Last Price $73M)

Property Types:

Residential & Commercial properties constitute 66.19% of the sales.

Highest sales in Residential & Commercial combined properties.

Insight #2: Most and Least Sold Properties

Top 5 Most Sold Streets: Cambridge, Mass Avenue, Harvard St., Mt. Auburn St, Linnaen St.

Top Grossing Street: Cambridge Pky ($50,10,000 with a waiting period of 26 days)

Least Sold Street: Sciarappa St (least sales despite high potential, longer waiting period of 162 days)

Insight #3: Area, Street, and Feature Analysis

Area Analysis:

Area M and HS contribute to 70% of sales.

Area M has fewer properties but higher sales compared to HS.

Area HS has higher average waiting periods.

Street Analysis:

Cambridge Pky: Highest sales, low waiting period, increasing interior square feet and costs with more rooms.

Mass Avenue: Second highest but less room count in commercial properties.

Feature Analysis:

Positive correlation between internal square feet, tax, and condo fee for residential properties.

Commercial properties have lower taxes and condo fees but more beds, baths, and rooms.

Insight #4: Bed, Bath, and Room Analysis

Residential Properties: Start with 3 rooms, up to 7 rooms.

Commercial Properties: More beds and rooms compared to residential, up to 8 rooms.

Square Footage and Costs: Generally higher for residential homes, with notable increases at 6th room.

Insight #5: Sales Trend Behavior

Monthly Trends:

Best sales in July-August.

Decline in sales during December-January.

Yearly Trends:

Sharp rise in August 1993.

Positive growth in 1994-1995.

39.98% increase in 1993, with a steady 0.72% annual increase otherwise.

Insight #6: Demographics and Property Characteristics

Area-wise Distribution: Higher concentration in areas M and HS.

Property Types: Majority are Residential and Commercial combined.
Listing Duration: Shortest listing period is 14 days, longest is 110 days.
Street-wise Distribution: More properties on Harvard St.
Unit Counts: Higher count for Unit-3 properties.
Heatmaps:
Most properties have 5 rooms, 1 bath, 2 beds.
Highest square feet in M area, Harvard St.
RC vs. Tax: Higher taxes for combined residential and commercial properties.

Insight #7: Sales Specifics
Max Sale Price: $16,851,983
High Sales Area: Area M (sale price $16,935,000)
Monthly High Sales: July and August
High Sales Street: Cambridge Pky
Tax and Condo Fee Analysis: Higher in M area and on Mass Ave Street.

RECOMMENDATIONS

1: Focus on High-Demand Periods
Increase marketing efforts and open house events during the months of July and August to leverage higher sales trends.

2: Target High-Potential Streets
Develop targeted marketing strategies for top grossing streets like Cambridge Pky and Mt. Auburn St to maximize sales in these areas. Investigate and address reasons for lower sales on streets like Sciarappa St to unlock their potential.

3: Optimize Area-Based Strategies
Focus resources on areas M and HS, which contribute significantly to sales.
Implement differentiated strategies for areas with high waiting periods to reduce these times and boost sales.

4: Tailor Strategies for Property Types
Given the higher costs for residential properties, emphasize their premium features in marketing to justify higher prices.
For commercial properties, highlight the lower taxes and fees and the higher number of beds and rooms to attract business buyers.

5: Improve Sales in Specific Areas

Offer promotions or discounts in the 3rd quarter to replicate the high sales seen in 1993.
Provide incentives for quick closings to reduce the average waiting period.

6: Leverage Demographic Insights
Concentrate development and sales efforts in areas with a higher concentration of properties (M and HS).
Adjust listings and marketing for properties with longer durations to reduce their market time.

7: Enhance Features for High Return
Invest in properties with more rooms and higher square footage, as these are positively correlated with higher sale prices and taxes.

8: Monitor and Adjust Based on Trends
Regularly analyze sales trends to adjust strategies promptly and take advantage of emerging patterns.

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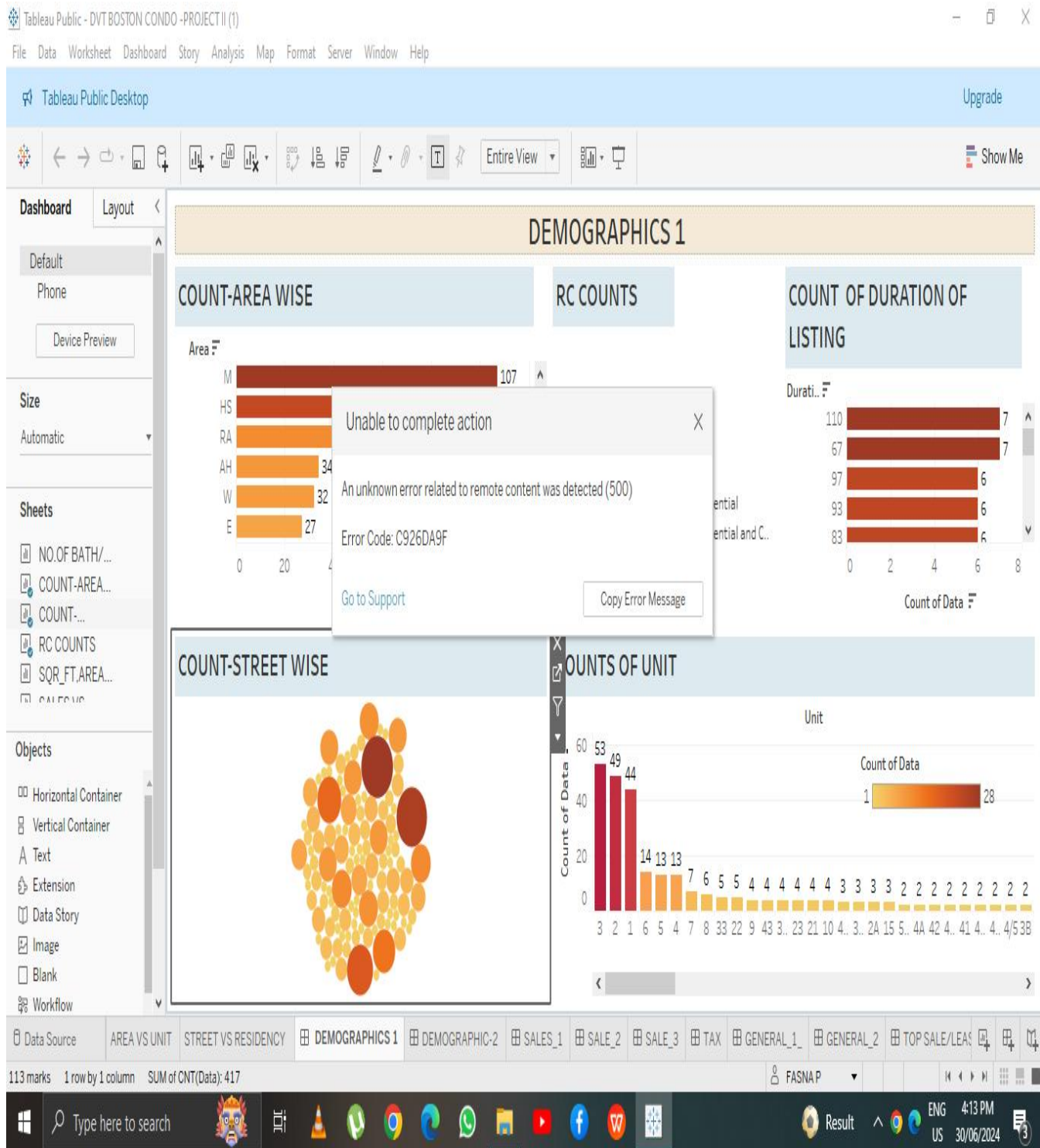
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