Real Estate Trends

Analysis by City, Neighborhood, and Type

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Introduction

❖ Real estate markets are:

- dynamic by prediction

- a times complex in nature

❖ Importance of data-driven insights are critical for decision making

❖ Achievable through strategically navigating market trends

Background

- The real estate market is influenced by
  - location
  - property type
  - economic conditions

- Cities and neighborhoods offer unique opportunities and challenges:
  - for buyers, sellers, and investors

- Analyzing historical sales data can provide:
  - valuable insights into market behavior
  - data-based strategic information for high sales
  - data-based decision for low buys for investors

Challenge

❖Navigating the real estate market requires:

- understanding complex trends

- factors that influence property values

❖Stakeholders need reliable data to:

- make informed decisions generally

- invest as buyers, sellers or serve as middle-men

Motivation

- To equip real estate stakeholders with data-driven actionable insights for best decisions
- To guide market decisions based on comprehensive analysis of sales data through trends and patterns
- To identify underlying factors that could influence future real estate transactions

Aim and Objectives

Aim

❖To analyze real estate sales trends and provide stakeholders with insights to guide their decisions

Objectives

- ❖Examine sales data by city, neighborhood, and property type
- ❖Identify trends in sales prices and property sizes
- ❖Explore property distribution in different neighborhoods

Key Questions

- What is the average sale price of properties in different cities?
- How does the property type affect the sale price?
- Compare sale price by the number of bedrooms
- Does square footage correlate with the sale price across different property types?

Key Questions

- Are some neighborhoods more expensive than others?
- How do sale prices fluctuate over time?
- Is there a difference in the size of properties among cities?
- Compare property types distribution within neighborhood?

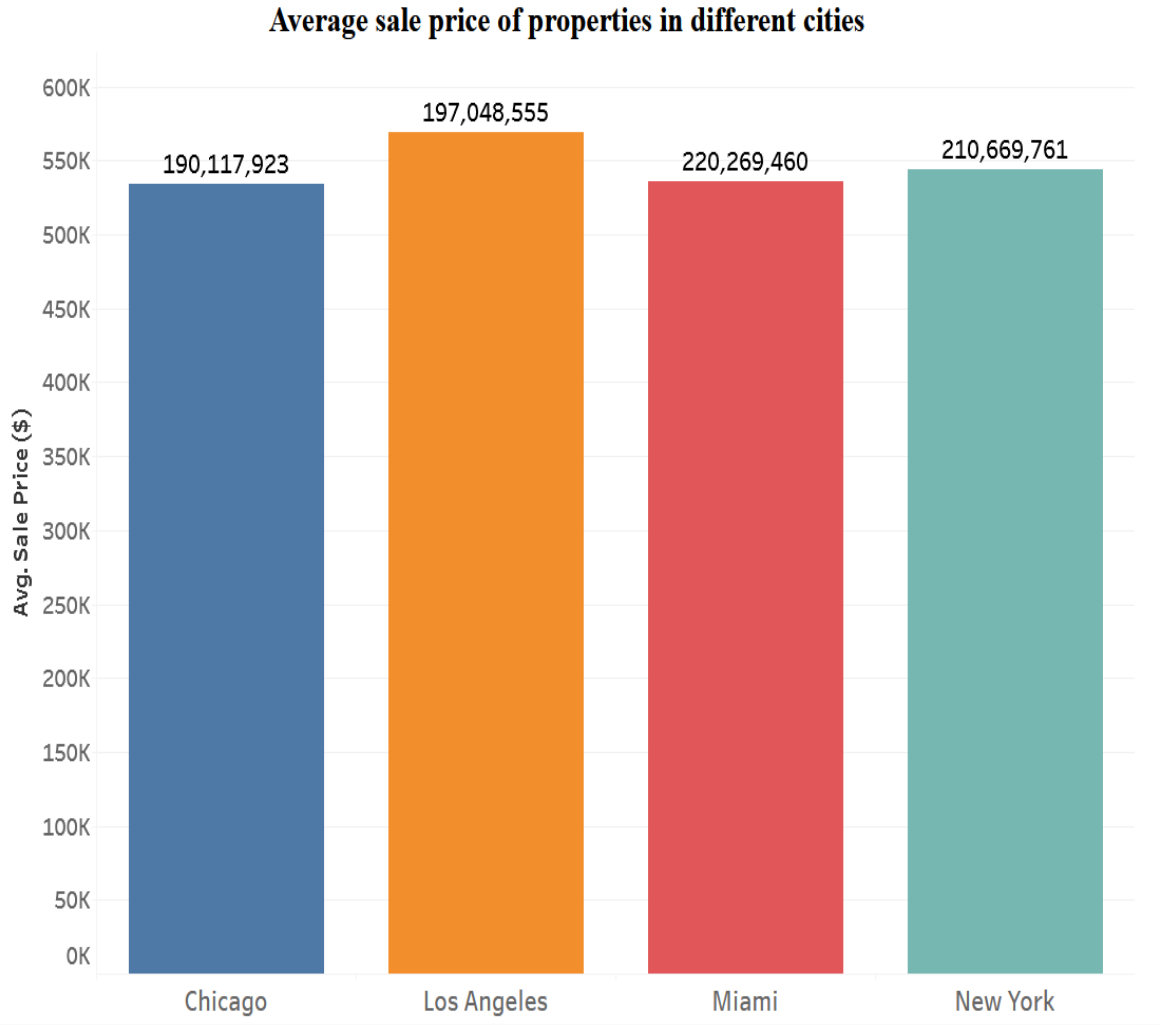
Methodology

- Analysis of a comprehensive dataset of real estate sales that was generated using Excel

- Used these tools:
  - Excel (21%)
  - Python (41%)
  - Tableau (38 %)

- Statistical methods for trends, averages, and distributions explorations

Results – *Average Sale by City*



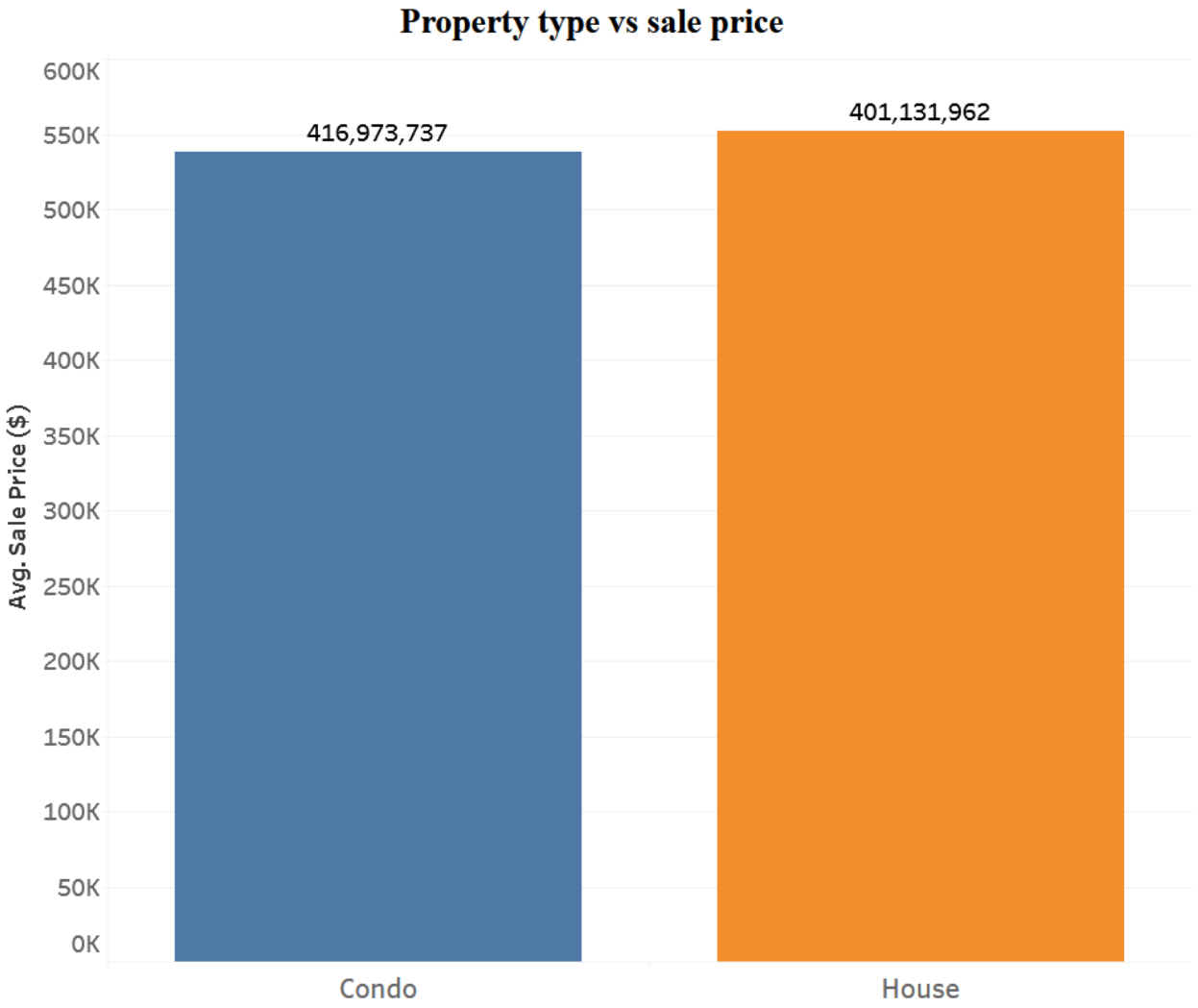
Marginal variations exist due to:

- City's overall cost of living
- Demand for real estate
- Other economic factors

- Average sale price varies by city in the order:

Los Angeles > New York > Miami > Chicago

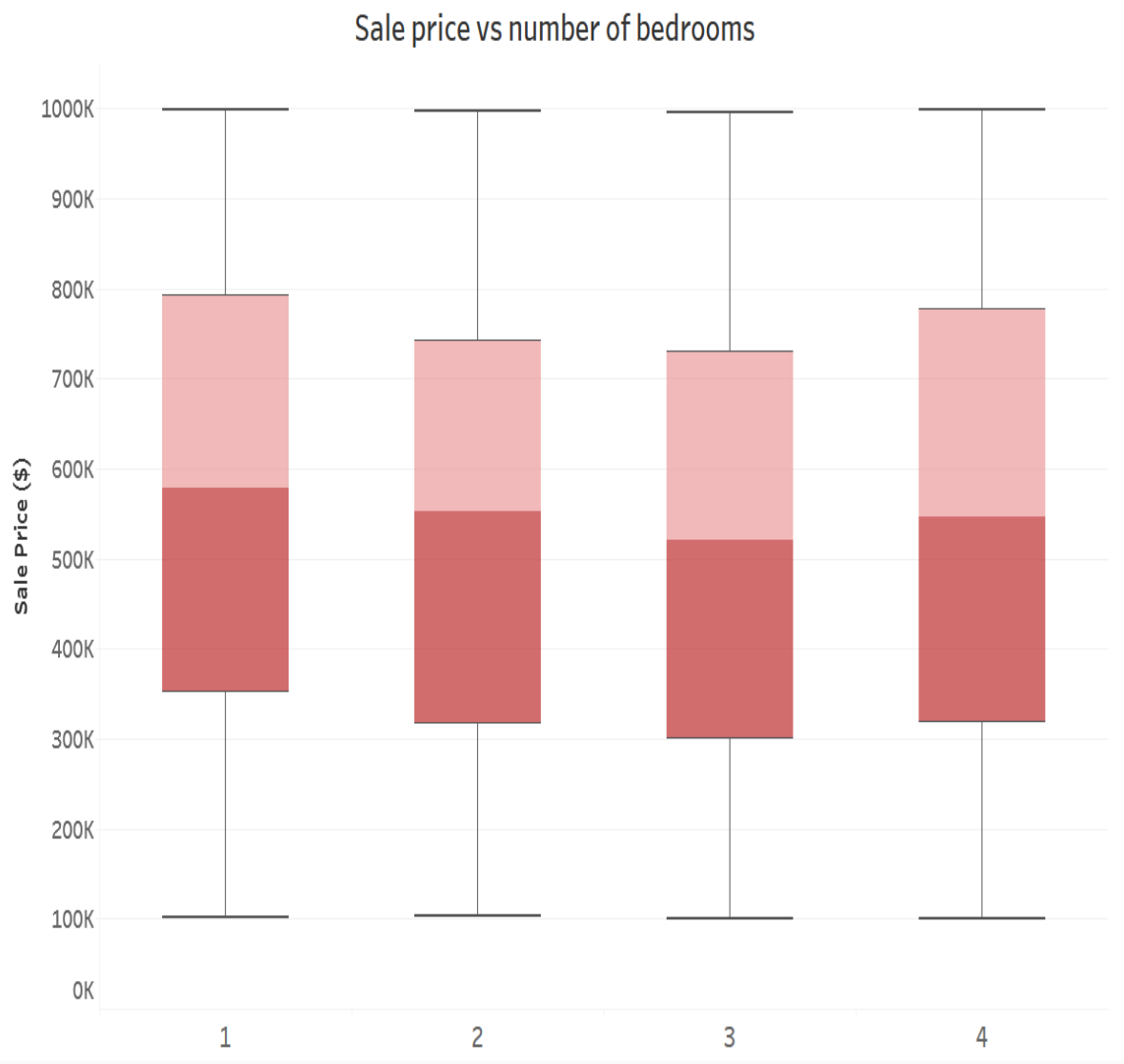
Results - *Property Type vs Sale Price*



- Houses are more expensive than condominiums
- Investors pay about 137,98USD more for houses

This could be due to complete privacy that comes with houses compared to partial privacy in shared apartments (condos)

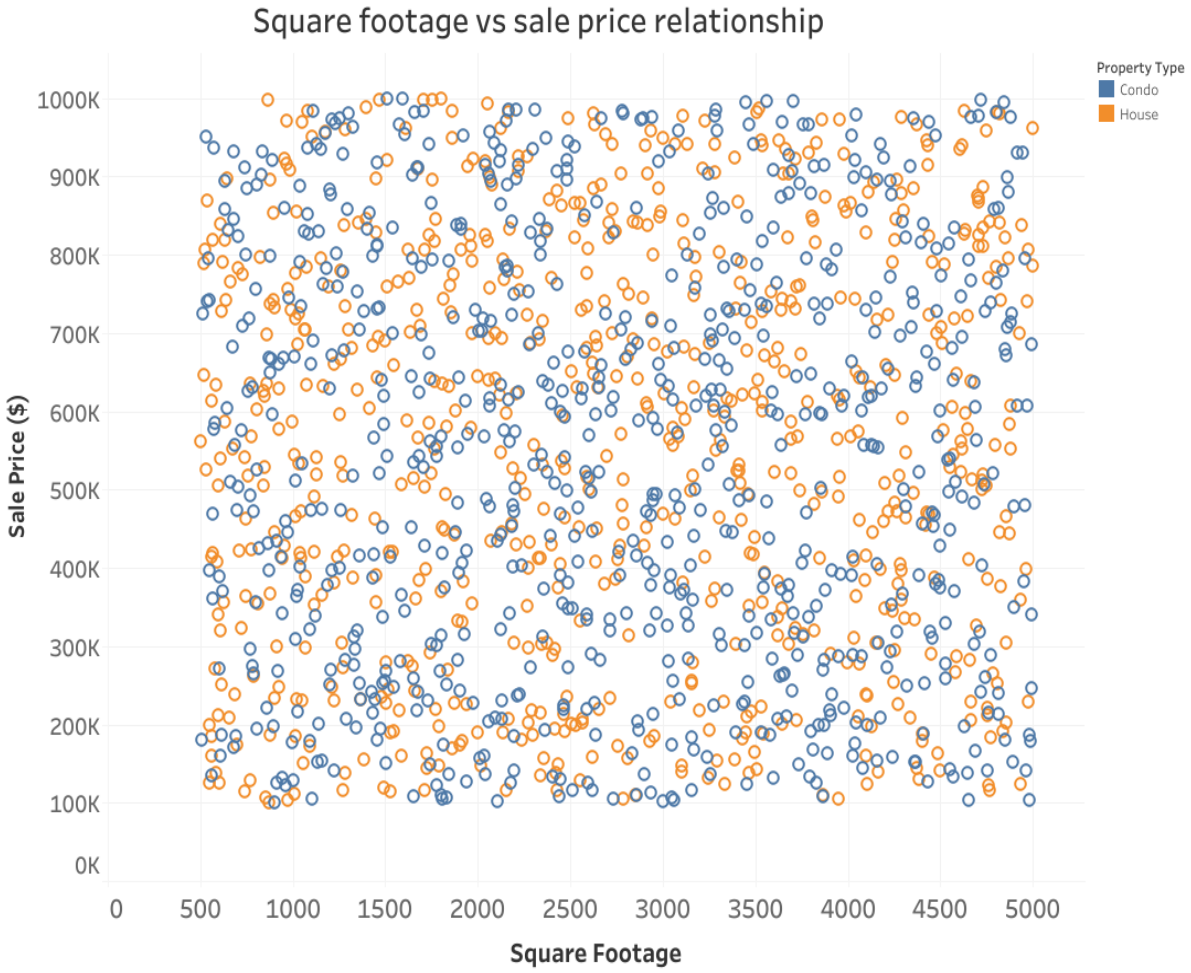
Results - *Sale Price vs Number of Bedrooms*



- There is no pattern in the box plots
- Marginal variations in mean, media

The number of bedrooms does not affect sale price.

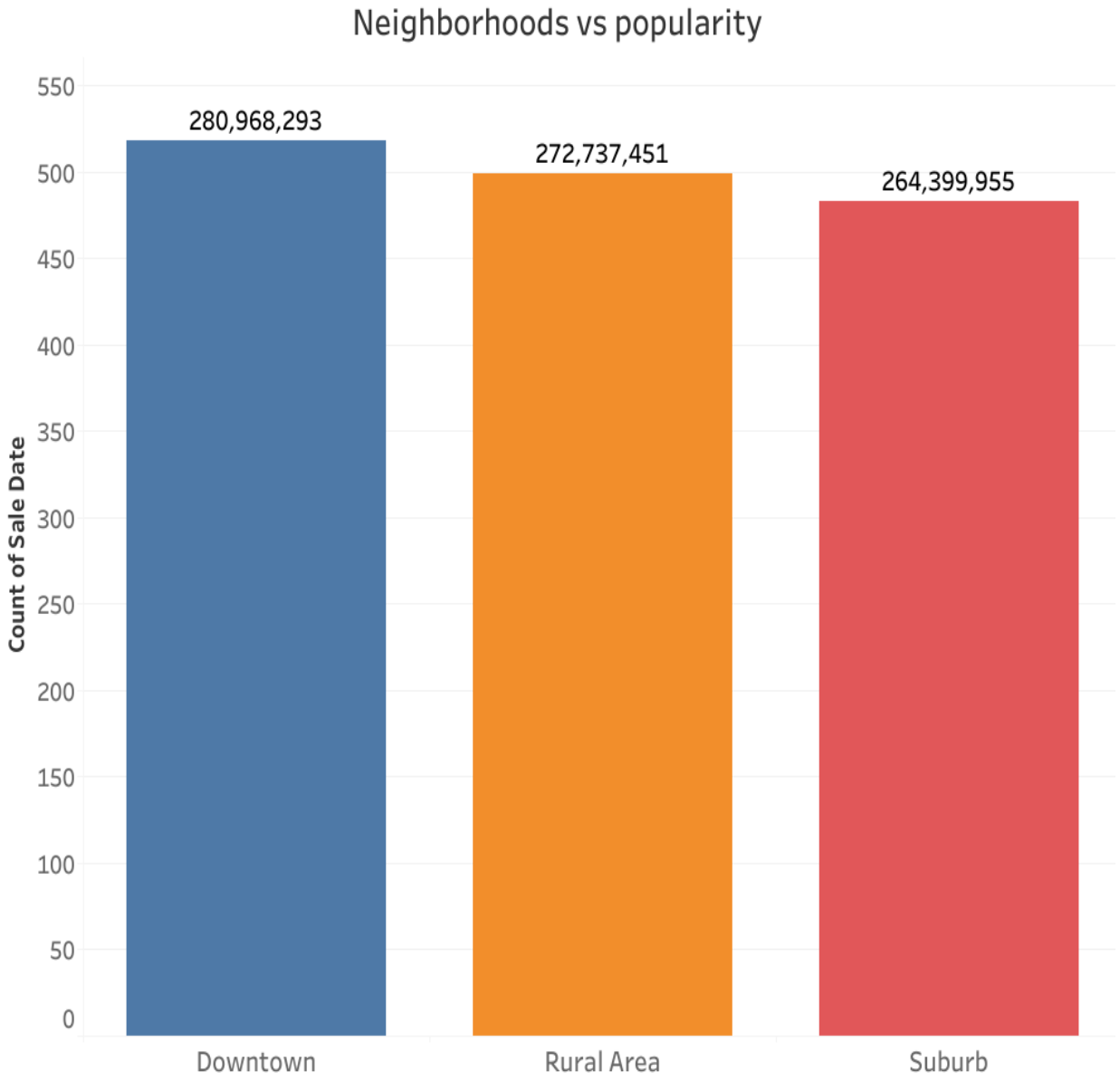
Results – *Square Footage vs Sale Price vs Property*



- R^2 value between square footage and sale price is 0.00015
- It shows a very weak relationship between them

Square footage does not affect sale price of property type (house and condos).

Results – *Neighbourhood vs Sale Price*

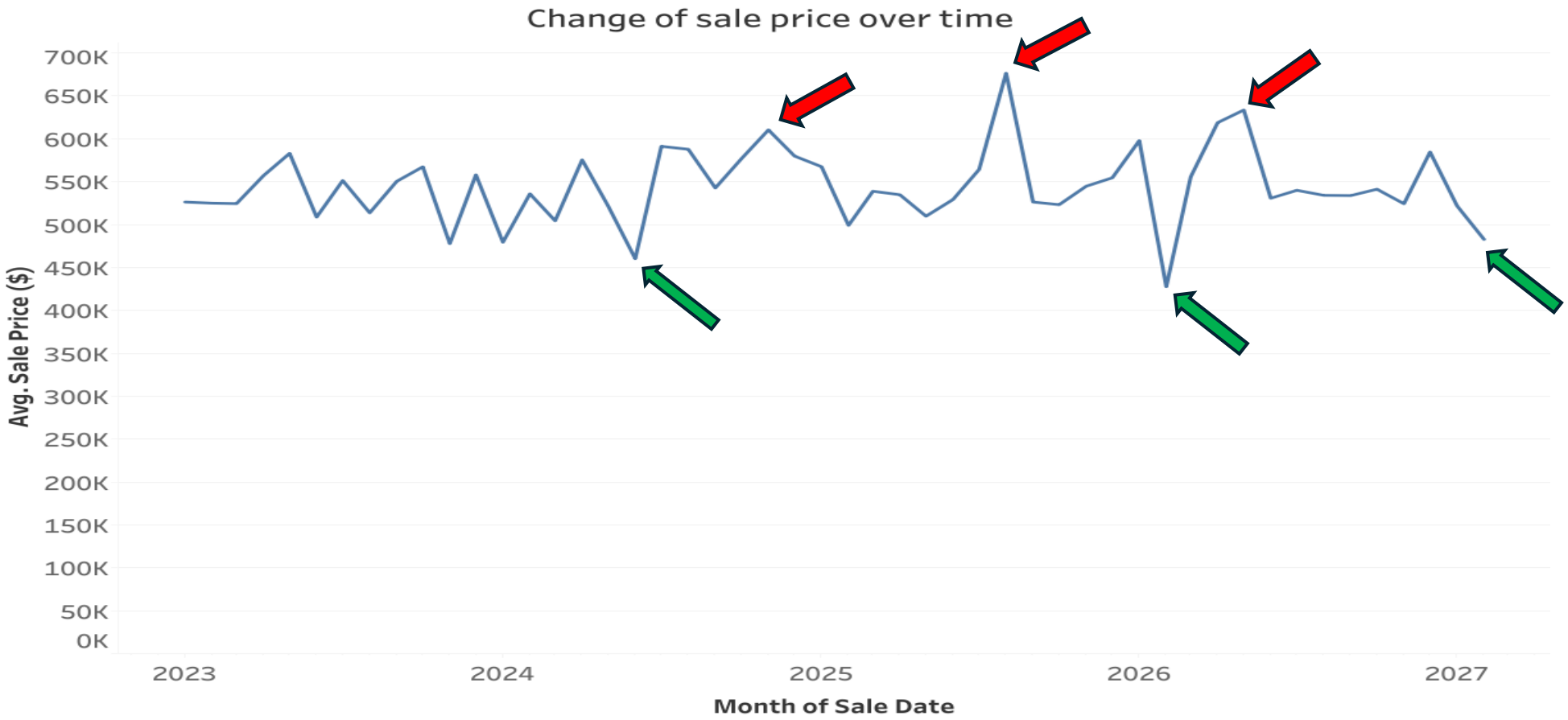


- **Suburb** and **Rural Area** have identical average sales, **Downtown** is relatively slightly lower

- **Downtown** has the highest number of sales, closely followed by **Rural Area** sales

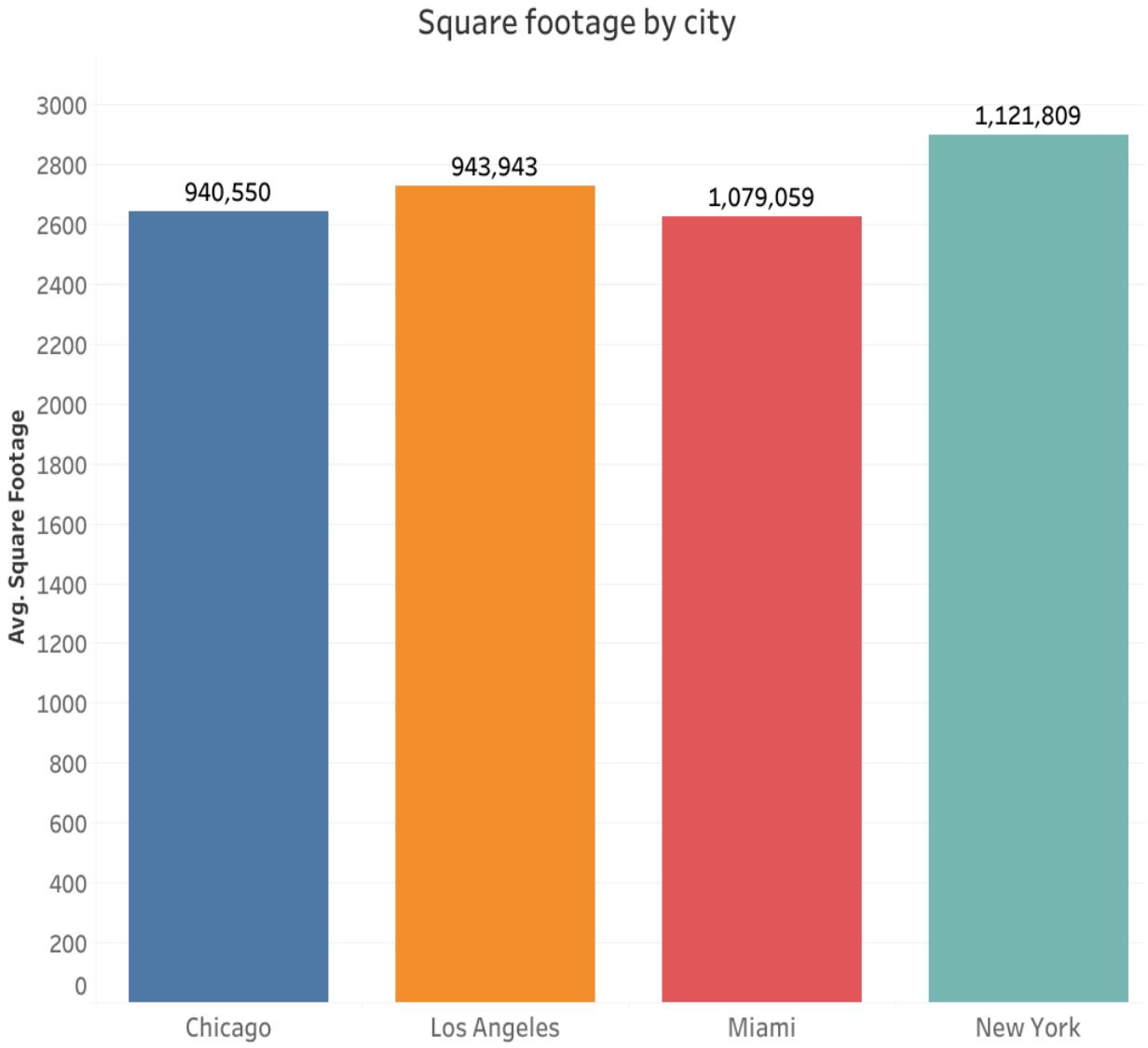
- Downtown areas are usually the most popular in terms of the number of sales due to a higher demand.

Results - *Sale Prices vs Time*



Investment Insight: The peak average sale prices (in red) could indicate periods of high demand or other favourable market conditions for sellers. The lower average sale prices (in green) might represent a more advantageous buying opportunity.

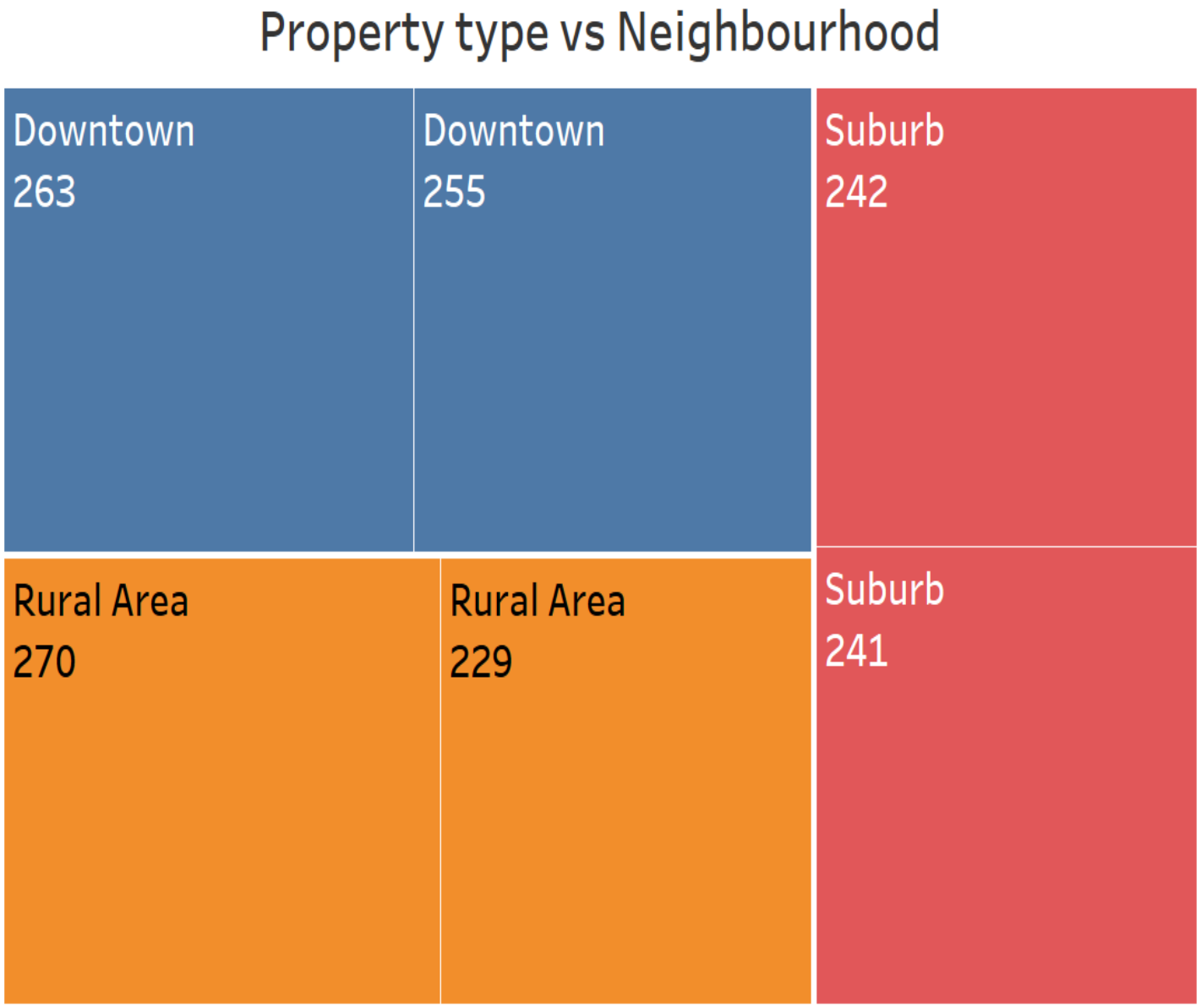
Results – *Property Size vs City*



- New York properties have the highest average square footage
- Each city shows a general wide range in property sizes
- The market is just diverse E.g., differences in average square footage among the cities

New York's high potential reflects the types of properties sold in it, or a preference for larger properties within the city. The market diversity may reflect varying market conditions, property types prevalent in each city, and urban vs. suburban living spaces.

Results – *Property Type vs Neighbourhood*



- Rural areas have a slightly higher number of condos (270) than houses (229)
- The distribution between condos and houses is nearly even in downtown areas, with a slight preference for condos

This could reflect the urban environment where condos are popular due to their convenience and the lifestyle they offer.

Conclusions

- Fluctuations in sales prices over time; market volatility
- Miami stands out as a hot spot for real estate activity
- Significant differences exist in property sizes among cities
- Miami has the highest number of real estate sales; robust market
- Real estate market is highly dynamic; sale prices vs other factors

Recommendations

❖Stakeholders should consider:

- Market trends

- Property sizes

- Targeting time

❖Further analysis focus on:

- Causes behind the observed trends for targeted strategies