KINGS COUNTY REAL ESTATE AGENCY PRESENTATION
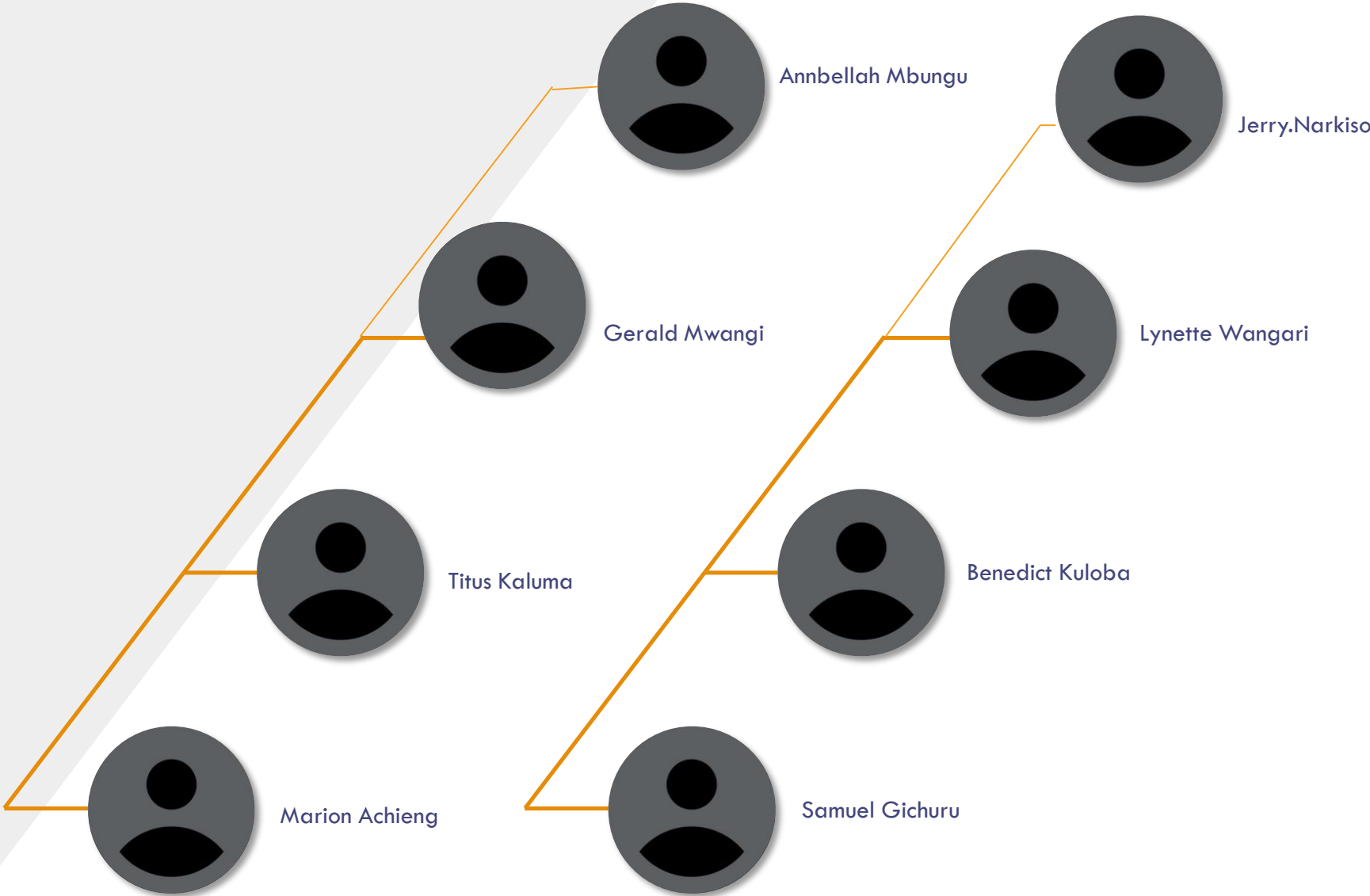
BUSINESS UNDERSTANDING

BACKGROUND INFORMATION

King County, Washington, is a diversified area encompassing urban, suburban, and rural areas. The housing market is fiercely competitive, fueled by substantial demand from homebuyers and investors. The county provides a variety of housing alternatives, including single-family houses, condominiums, townhouses, apartments, and luxurious estates. The county is home to exceptional schools and educational organizations, including the University of Washington.

The county's robust transportation system effects home demand and pricing. Hiking, skiing, boating, and fishing are all outdoor recreational activities. King County homes provide a desirable balance of natural beauty, economic prospects, and quality of life amenities, making them a popular choice for both homeowners and investors. However, successfully navigating the housing market involves careful study, planning, and consideration of individual requirements and preferences.

Overview

Kings county real estate agency tasked us a project to analyses home prices and market trends using their King County House Sales dataset.

We employed data analytics and predictive modelling whose key purpose was to develop insights that will assist homeowners in understanding how different predictor features affect the projected value of their property.

Challenges

King County's real estate investment market is thriving. Brokers face inquiries about home renovations, waterfront views e.tc and how they affect the price of a house and by how much.

Business Problem

Kings county real estate agency faces a lot of question from prospective clients about which features i.e. home renovation, number of bedrooms waterfront, view etc. will affect value to their property and by how much.

OBJECTIVES

To determine current market trends and best-performing features.

To investigate popular features and preferences across time.

To Investigate how home renovations affect sale price.

To inspect seasonal trends and optimal time to sell.

DATA UNDERSTANDING

The project extracts data from the King County House Sales dataset, which is a csv file. It contains 21 columns, 21,597 rows.

The dataset provides King County's residential sales values from May 2014 to May 2015.

KEY FEATURES

- Square footage
- Bedrooms and bathrooms:
- Location
- Condition and grade
- Year built
- View and waterfront:
- Floors:
- Neighborhood features

FINDINGS

INVESTIGATING HOME RENOVATIONS EFFECT ON SALE PRICE

A. How does adding floors affect the sale price of a home?

Houses with 2 to 3 floors value increased fetching prices of up to 1 million dollars.

Avg Price Variation Based on Number of Floors

B. How does the addition of bedrooms affect the sale price of a home?

Gradual increase in the number of bedrooms show a significant increase in the price of the house these could be attributed to the number of members in a given family
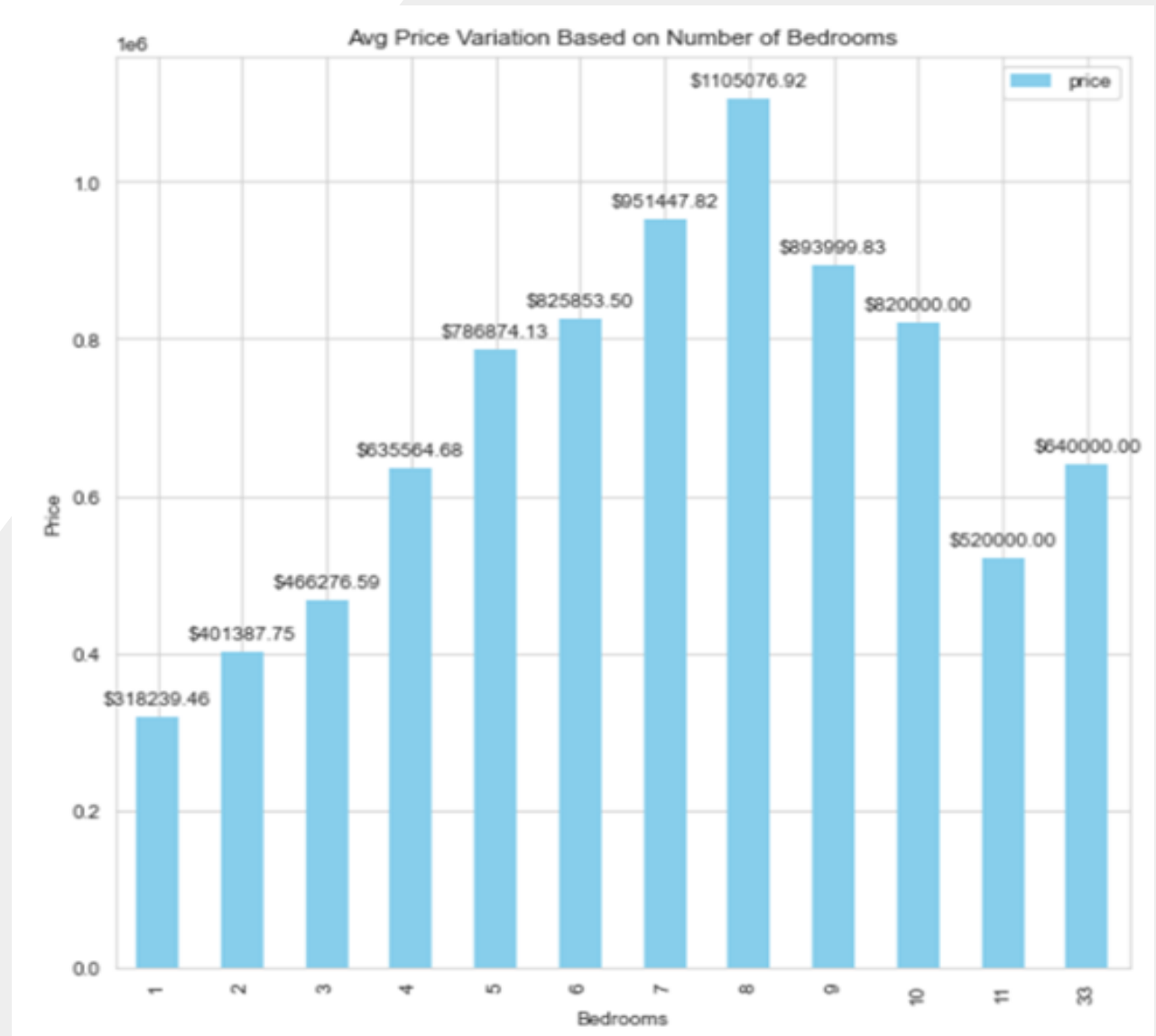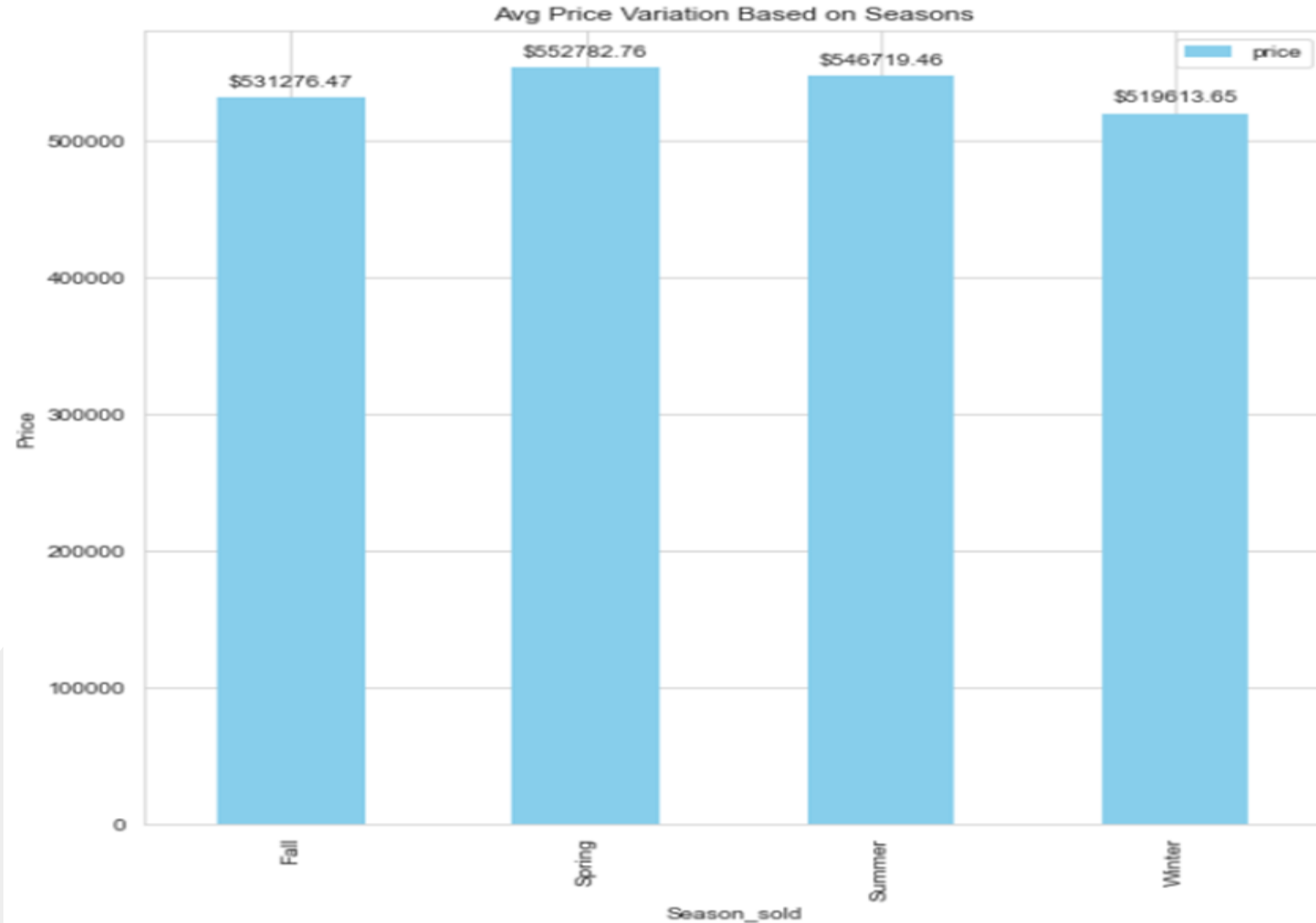
INSPECTING SEASONAL TRENDS

A. Do home sales and prices follow seasonal patterns?

Yes, there are more sales in the summer and spring.

B. When is the greatest time to sell a home for the highest possible price?

Summer season

Avg Price Variation Based on Seasons

Season_sold	Price
Fall	$531276.47
Spring	$552782.76
Summer	$546719.46
Winter	$519613.65

# DETERMINING CURRENT MARKET TRENDS AND BEST-PERFORMING FEATURES

A. What factors distinguish top-performing properties in terms of sale price?

Houses between good and very good condition are preferred.
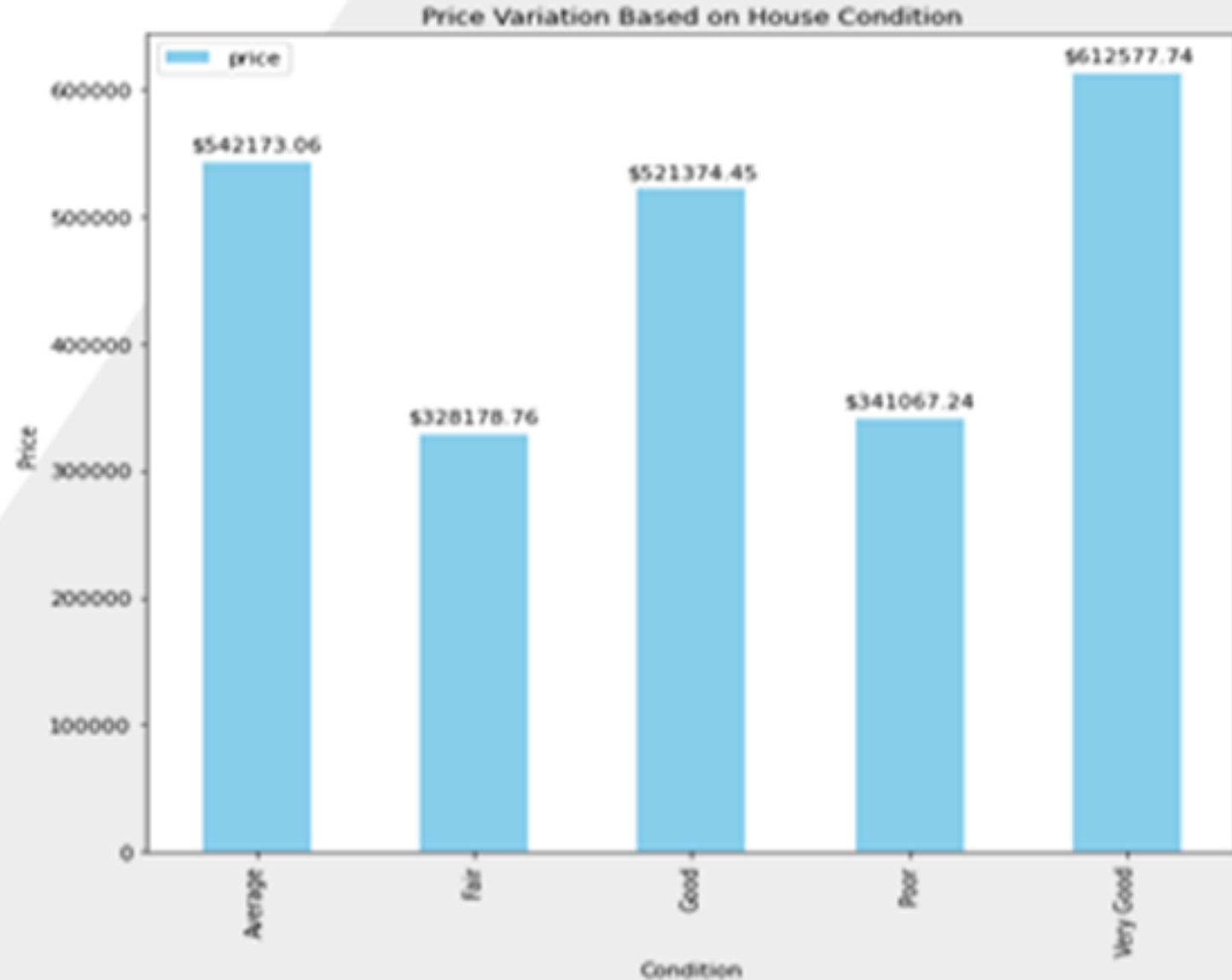
B. Which variables (e.g. Bedrooms and floors) of the residences raise sale prices?

House condition, waterfront, view and number bedrooms.


Price Variation Based on House Waterfront
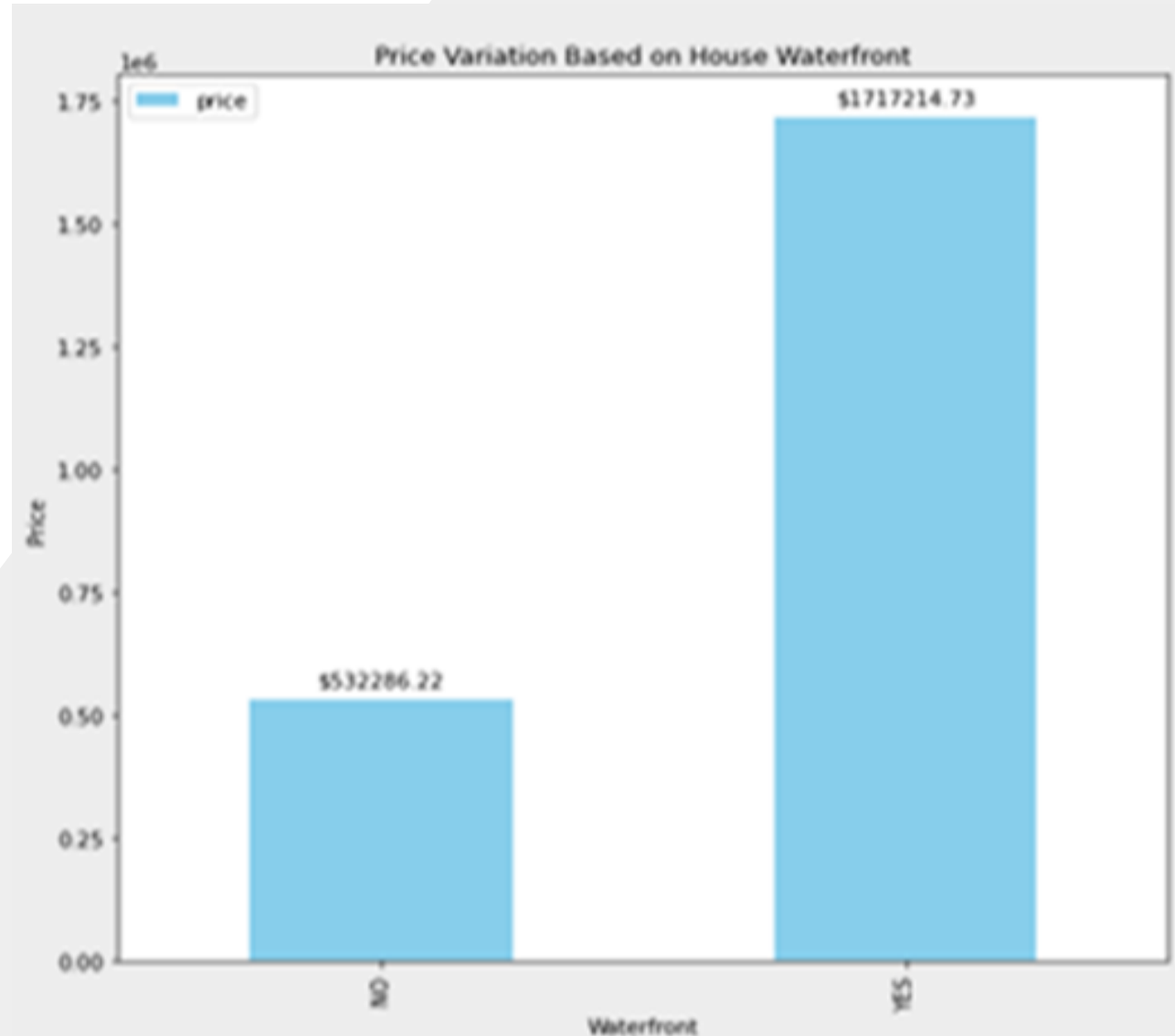
INVESTIGATING POPULAR FEATURES AND PREFERENCES ACROSS TIME

A. Which housing features and attributes have proven most popular and successful throughout time?

Houses with 2 to 3 bathrooms and houses with 2000 to 3000 square feet of living space. Were more popular among home users.
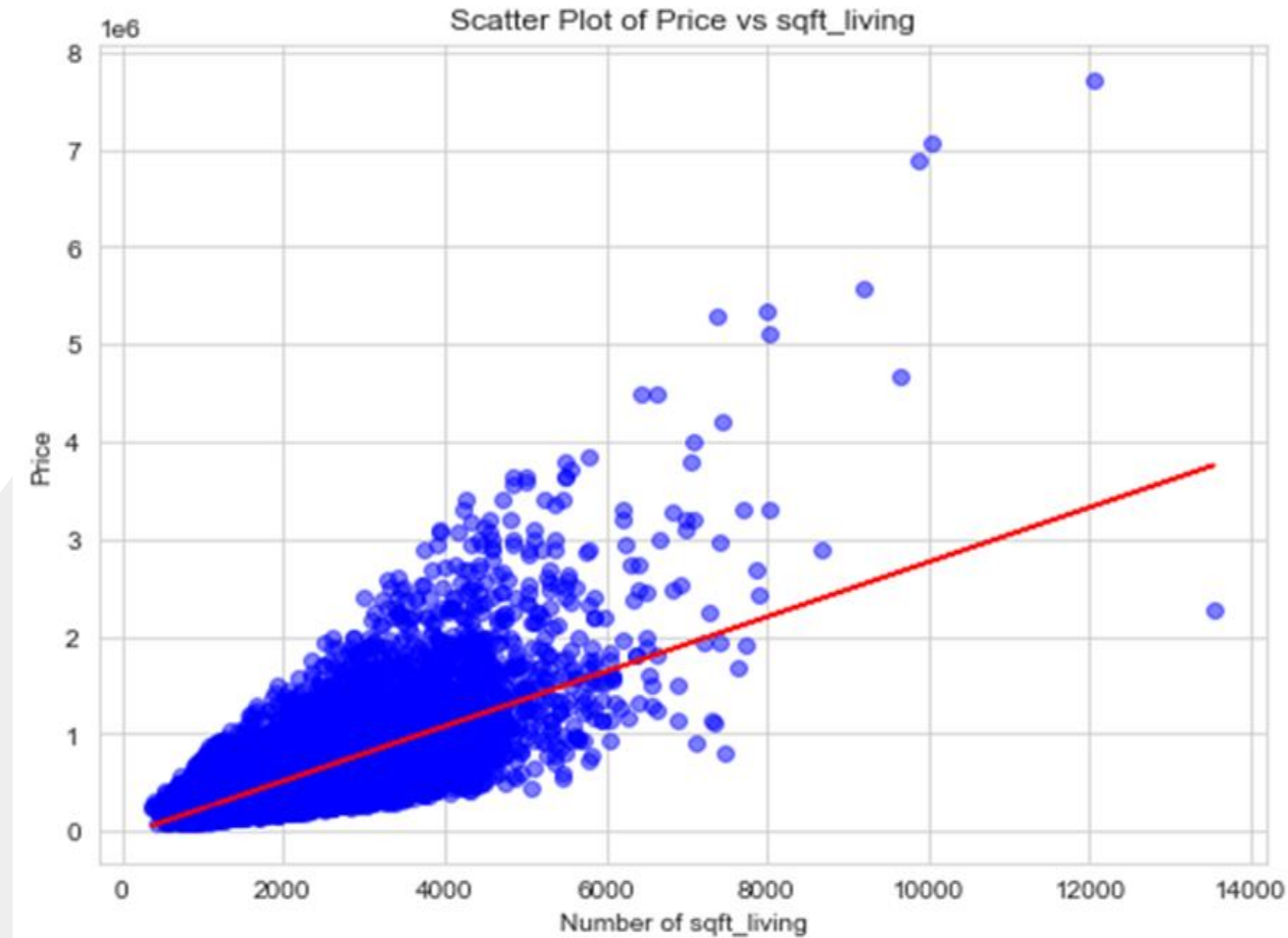

Distribution of bathrooms
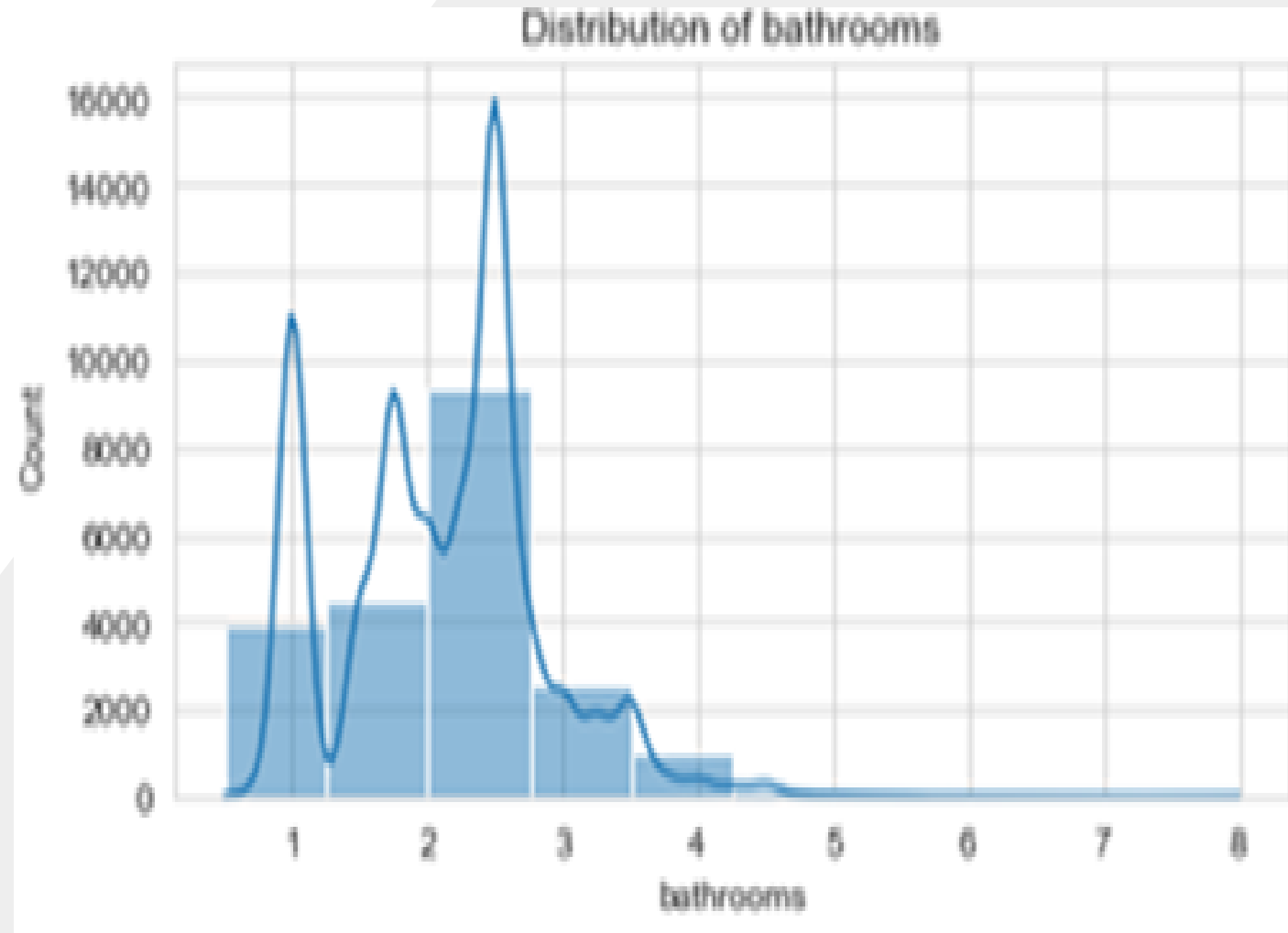
B. What types of home features appeal to potential buyers? Newer houses less than 60 years old since it was built were best preferred by buyers.

Distribution of age_built
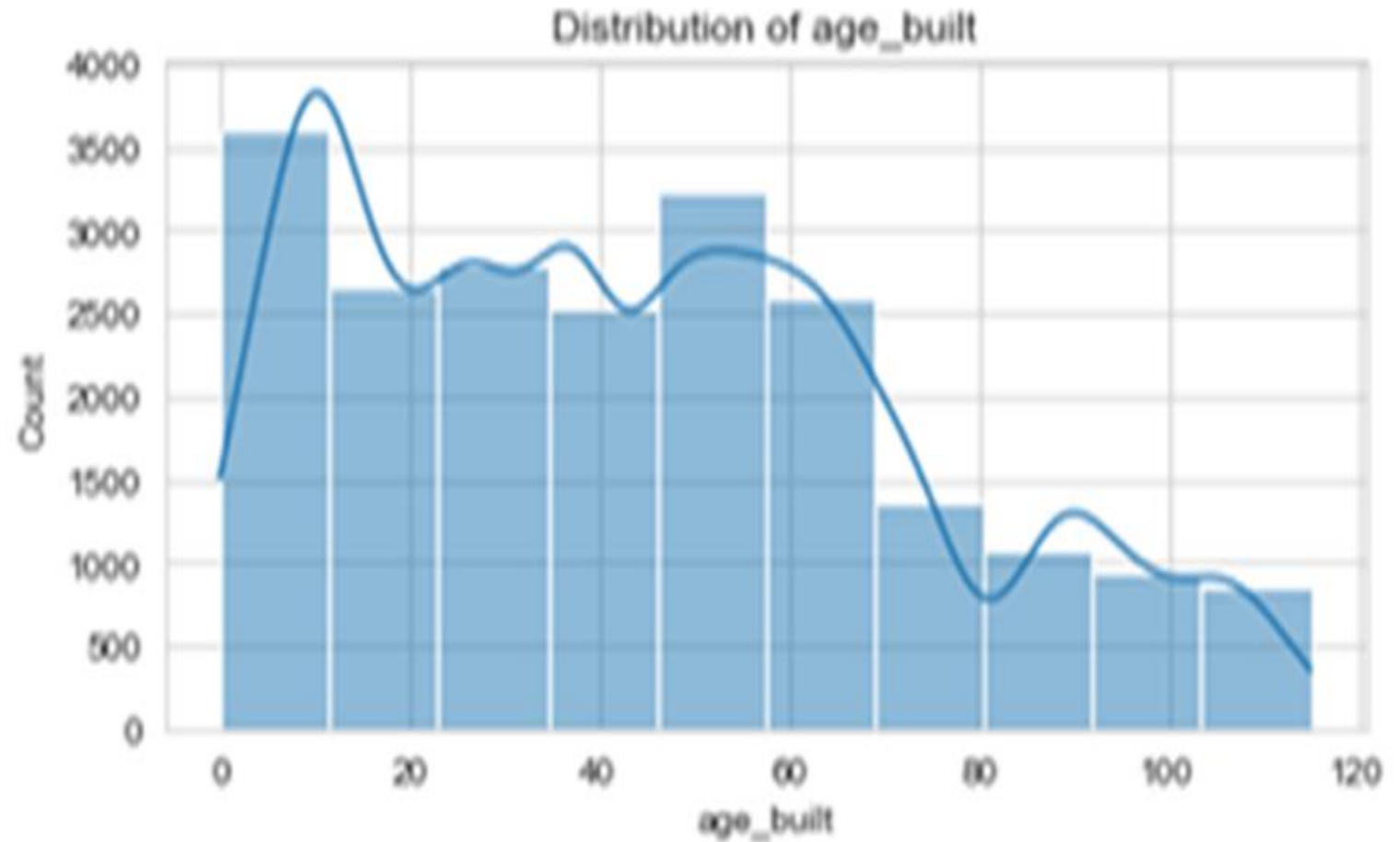
MODELLING

Square footage of the living areas is a stronger predictor of house prices.

CONCLUSION

King County Real Estate Market Analysis

• Pricing data was found to be significantly biased, with outliers distorting the overall picture.

• Correlations were found between pricing and other numerical independent variables, such as number of bedrooms, baths, living area square footage, waterfront access, and view quality.

• Homes with better condition ratings, waterfront access, outstanding vistas, and more bedrooms tend to fetch higher prices.

• The study provides valuable insights for real estate agency and prospective purchasers.

RECOMMENDATIONS

Constant Monitoring: Buyers should inquire about the age of key components such as the roof, system, and appliances. Sellers should consider investing in renovations to increase the value of their property.

Focus on Key Features: Buyers and sellers should pay attention to key features such as waterfront views, property condition, and grade when assessing house prices. These features have significant impacts on the value of the property.

Consider number of floors: By analyzing the relationship between the number of floors and sale prices comprehensively, we can see an upwards trend from the 2.5 mark.

Seasonal Trends and Optimal: Consider purchasing a house during winter. With the lowest average house price compared to other seasons, winter presents an opportunity to potentially find a more affordable home. While spring and summer may be popular seasons for selling.

NEXT STEPS

Further Exploration of Outliers: A deeper assessment of these outliers may reveal any specific market dynamics or extraordinary features of the property that ought to be taken into account.

Feature Engineering: To better deal with the subtleties of the housing market, square footage may be a more reliable and consistent hint we can use along with other factors like lot size or facility accessibility when determining home prices.

Market Segmentation: In order to make marketing campaigns and product offerings match with a specific customer group.

Predictive Modelling: Utilize machine learning techniques and build prediction models to estimate house values based on various indicators.

QUESTIONS AND CLARIFICATIONS

THANK YOU