

PHASE II PROJECT: HOUSE SALES IN KING COUNTY, WASHINGTON

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OBJECTIVES

- **Goal:** King County, Washington has commissioned analysis of its house sales to assist home buyers and sellers to make informed decision-making in the single-family residential real estate market. Homeowners and prospective buyers and sellers can use this analysis to assess feature improvements and their impact on home prices. This analysis serves as a baseline for deeper dives on the county's residential real estate market.
- **Background:** King County, Washington, which has been one of the fastest growing counties in the US since the 1970s and is more recently experiencing outward migration, has an active residential real estate market.

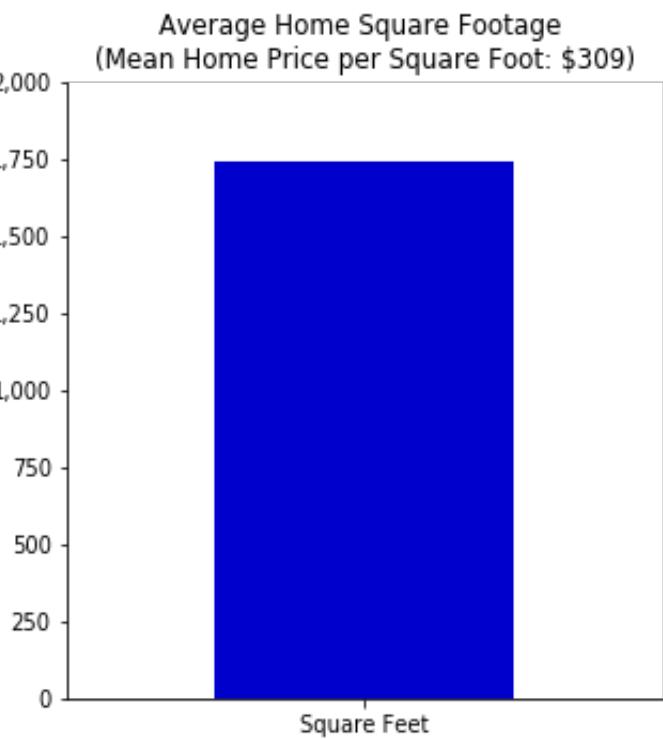
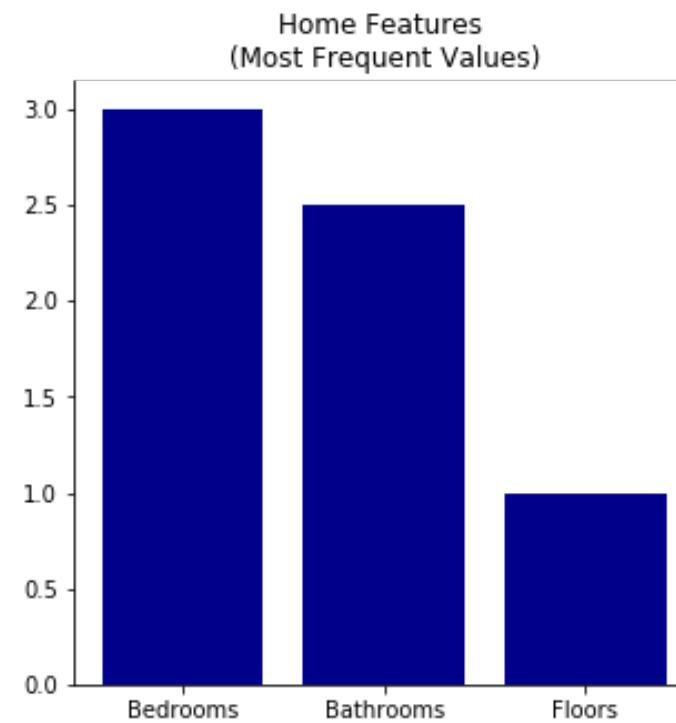
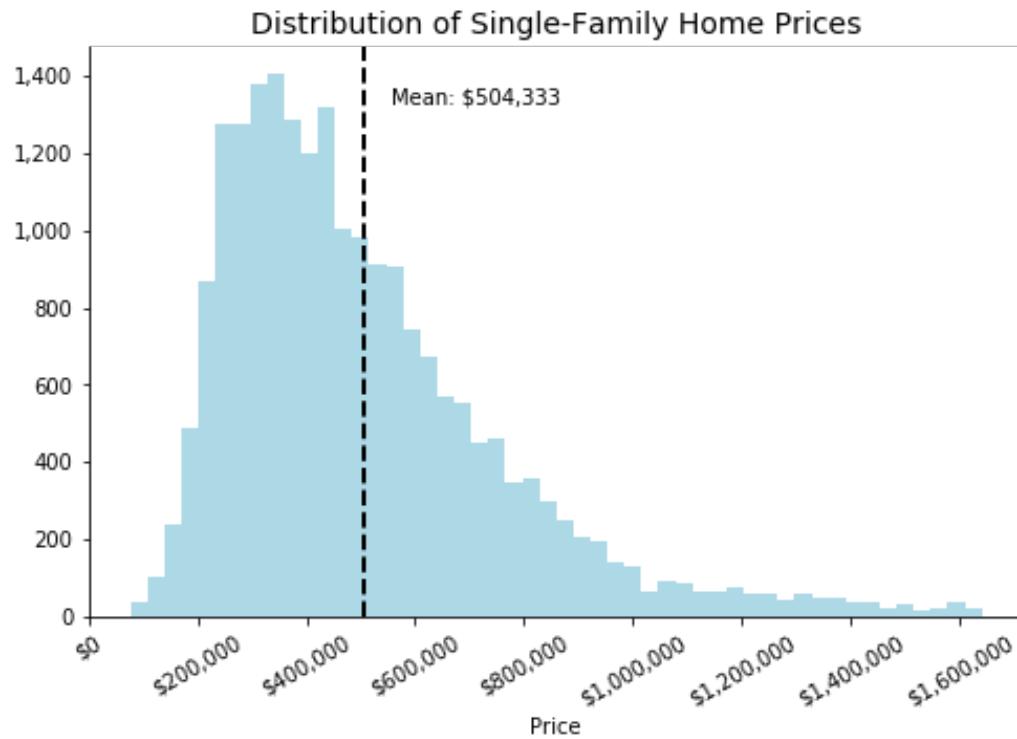
Project overview			
Data	Methods	Model	Transparency
<ul style="list-style-type: none">• King County House Sales dataset• More than 21,000 records	<ul style="list-style-type: none">• Descriptive data analysis and statistics• Linear regression analysis	<ul style="list-style-type: none">• Focus on single-family homes• Interpretative linear regression model explains 71% of the variation in single-family house prices• Includes use of continuous data variables and categorical variables	<ul style="list-style-type: none">• Data and analysis to be made publicly available on King County's website

KEY TAKEAWAYS

- Single-family home prices in King County have notable variability, with wide distribution of prices
- Location matters for home prices—some locations in the county are more desirable than others
- Important features that also explain home prices are related to the home's structure, quality, and updates
- Surprisingly, some standard features do not explain home prices well

PROFILE OF AVERAGE SINGLE-FAMILY HOUSE PRICES AND FEATURES

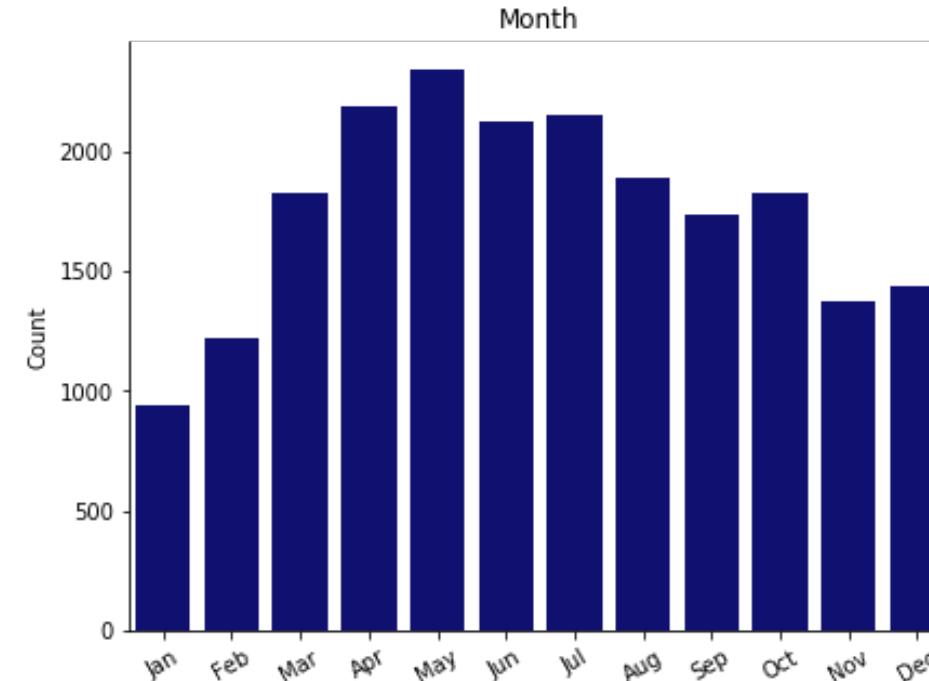
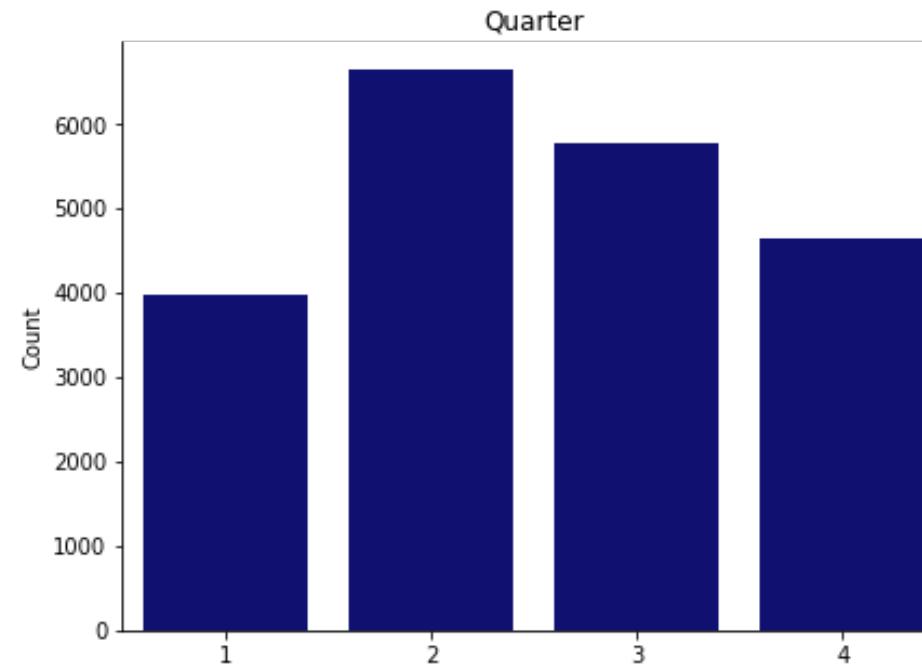
- Single-family home prices in King County have a broad distribution, with very large outliers for higher-priced homes
- Mean single-family home price is \$504k and mean price-per-square foot is \$309



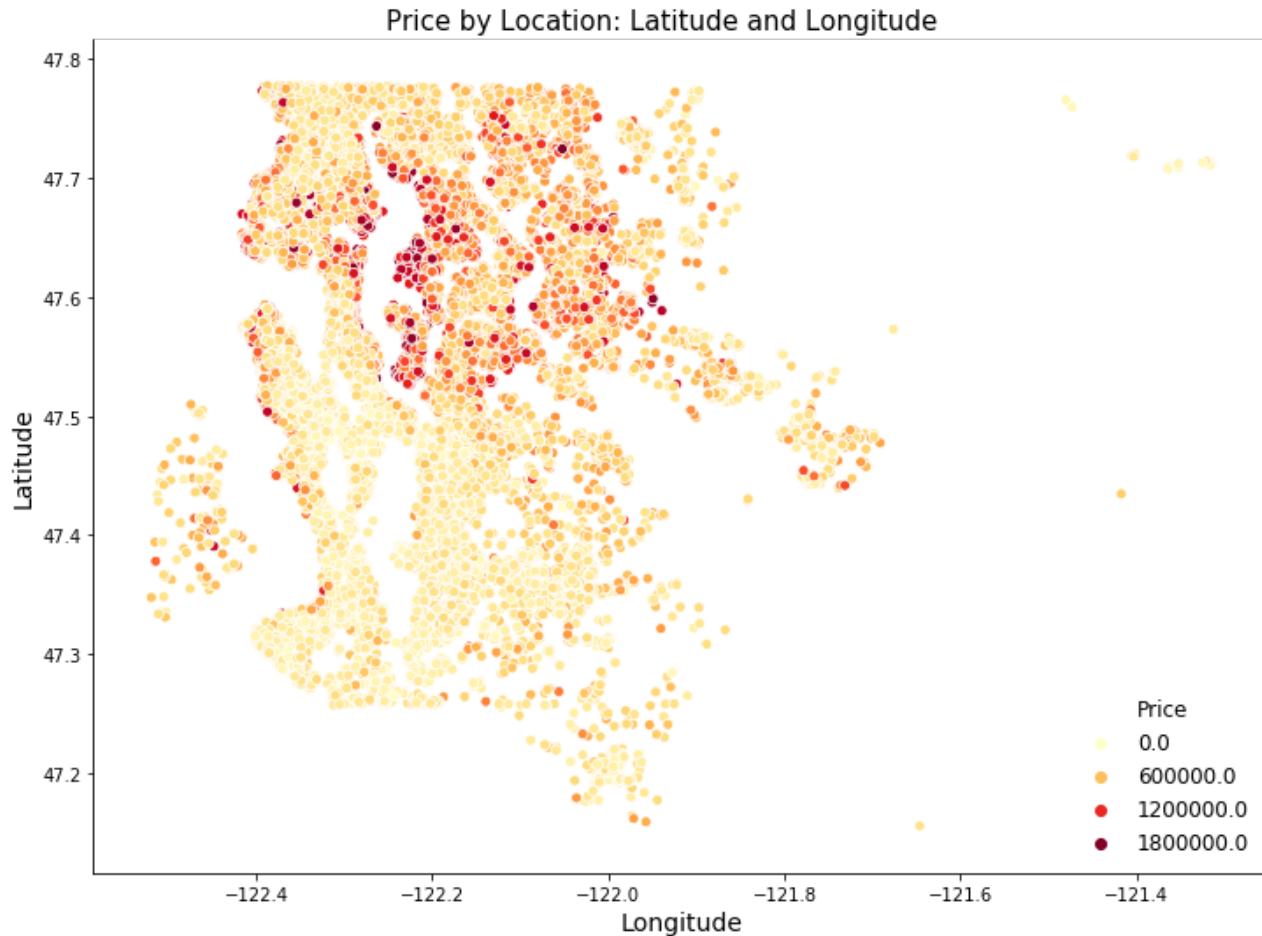
SALES ACTIVITY EXHIBITS SEASONALITY

- More homes are sold in Q2 and Q3, and in the spring and summer months of April, May, June, July in particular
- Q1 is a slower period for home sales. By month, January and February sales are lower
- By day of week, homes are typically sold Mondays-Fridays, reflecting the traditional schedule of banks. More sales are closed on Tuesdays and Wednesdays

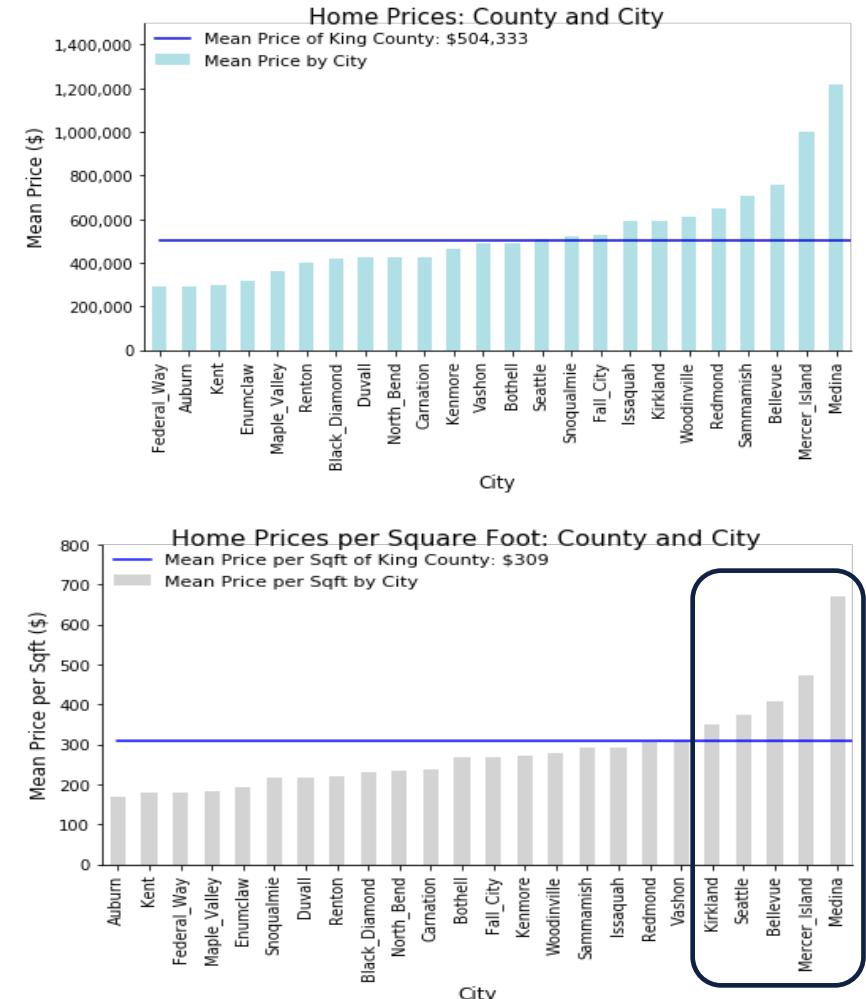
Home Sales by Time of Year



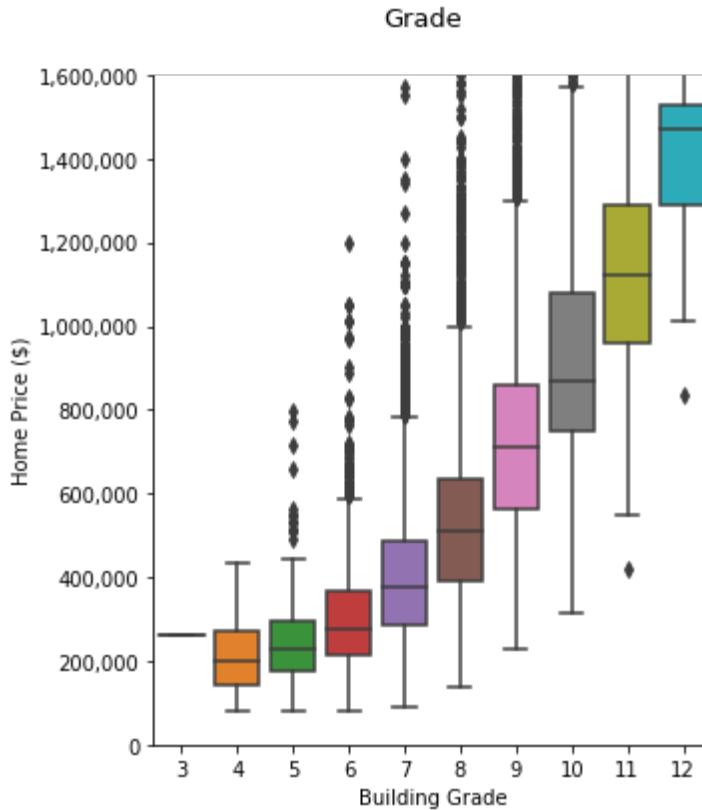
LOCATION MATTERS



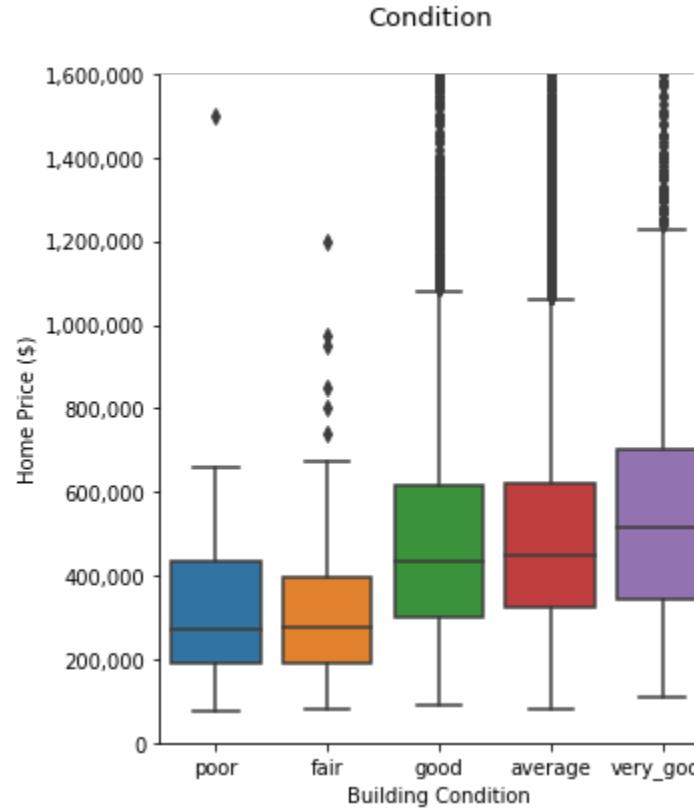
- Prices are higher for homes located in the northern part of King County, and lower for those located in the south
- Waterfront homes are worth \$331k more than homes that are not
- Ten cities have home prices above the county mean. And, five have price/sqft above the county mean



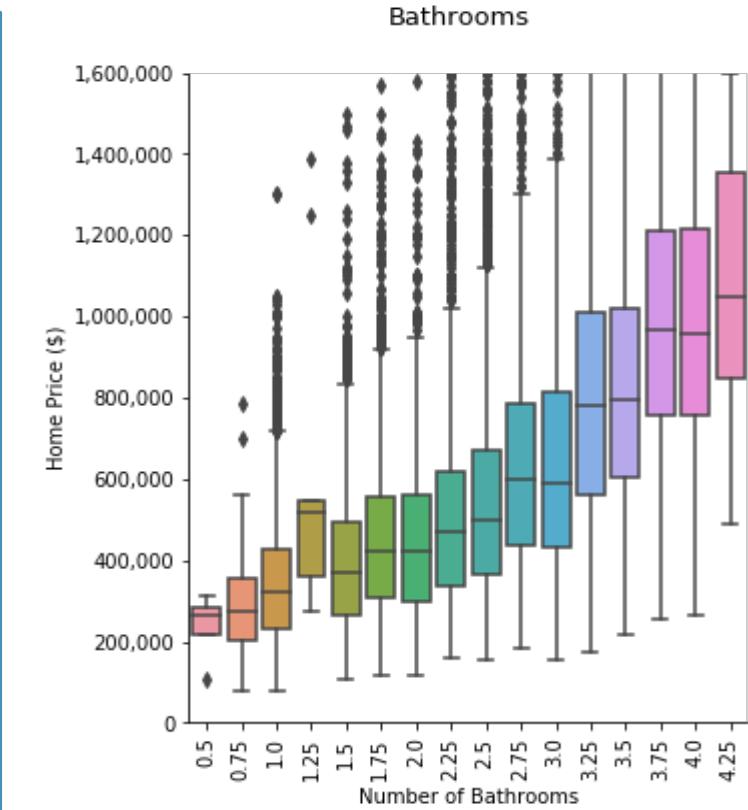
IMPORTANT FEATURES



- Homes with custom design, excellent builders, and of the highest quality (grade 12) are worth \$540k more than average and below-average grade homes. Even homes that have just above average construction (grade 8) are worth \$85k more than the same comparison group.
- Average price of grade 8 homes is USD 538k, higher than county mean home price. Average price of grade 12 homes is \$1.39M.
- Average grade is 7.6, and median is 7.



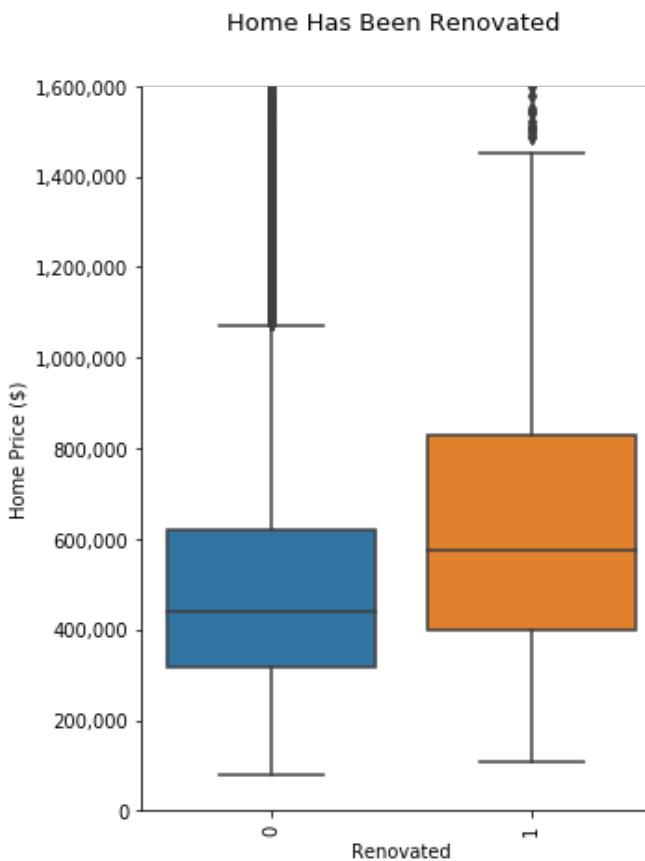
- Homes in very good condition are worth \$103k more than homes in poor, fair, and average conditions. Homes in good condition are worth \$47k more.
 - Average price of homes in very good condition is \$559k, higher than county mean home price. Average price of homes in good condition is \$490k.
 - Average condition is 3.4, and median is 3.



- Homes with more bathrooms are associated with higher prices. Two-bathroom homes are worth \$14k more than homes with up to 1.25 bathrooms, and homes with three baths are worth \$25k more.
 - Average price of homes with two bathrooms is \$455k, below county mean home price. Average price of homes with 3 bathrooms is \$542k, above county mean.
 - Average number of bathrooms is 2 and median is 2.25.

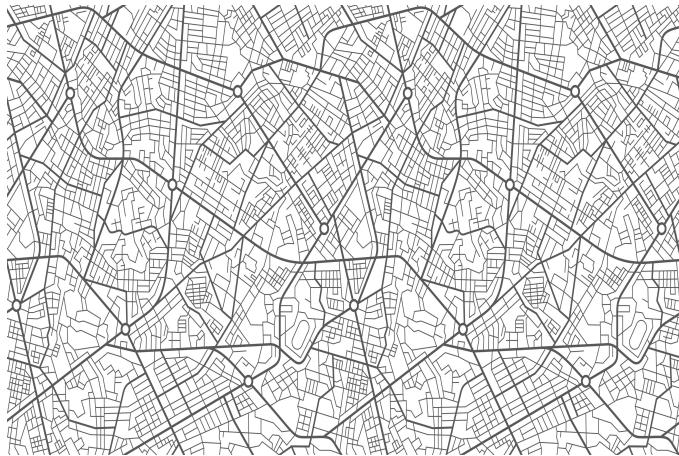
ADDITIONAL INSIGHTS

- Renovations add \$92k to the sale price of a home compared to homes that are not renovated.
 - *Most homes are not renovated.*
- Levels: Homes with two levels above ground are associated with a \$15k higher price and three-plus story homes are associated with \$28k higher price compared to single-story homes.
 - *The median number of floors in King County homes is one, and the median is just shy of 1.5 floors.*



- Bedrooms do not have statistically significant relationship with home price
 - Holding all other variables constant, more bedrooms are not associated with higher home prices. This could be because homeowners may find it unappealing to have more rooms if square footage does not increase and rooms are small, if there are not more bathrooms, and if the house is not situated in their preferred location.
- Neither does lot size of neighbors

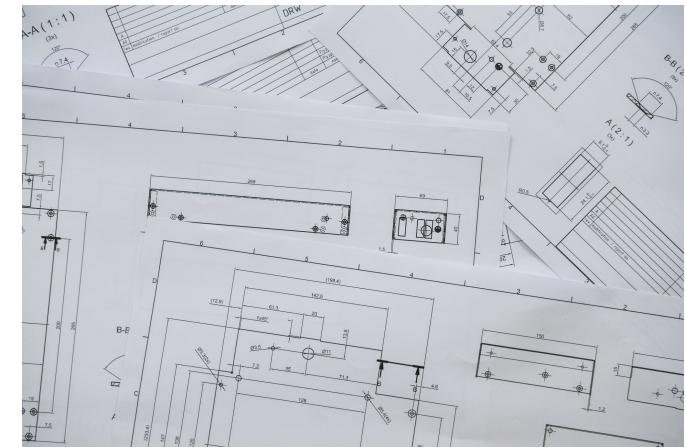
FORTHCOMING EXTENDED ANALYSIS



Geolocation map



Age of home



Number of bedrooms-to-bathrooms