

KEY DRIVERS IN HOME VALUES: KING COUNTY, WASHINGTON

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AGENDA

- Objectives
- Overview of Analysis
- Findings
- Future potential directions
- Wrap-up / Q&A

OBJECTIVES

- Analyze home sales data for King County, Washington over a one-year period
- Identify which home features had the greatest influence on homes sales prices
- Summarize results to technical and non-technical audiences
- Discuss possible directions for future analysis

OVERVIEW OF DATA AND ANALYSIS

- Data set from King County, Washington (includes Seattle)
 - One year of home sales data
 - Over 20,000 homes across ~ 70 zip codes
- Data included on the following features:
 - Physical features of home—number of bedrooms, number of bathrooms, number of floors, square footage of living areas and square footage of lot
 - Location elements—ZIP Code; latitude/longitude; living space and lot square footage of 15 nearest neighbors; whether home is waterfront or not
 - Condition of home (5-point scale defined by King County)
 - Grade (13-point scale defined by King County)
 - Year built (and year renovated, if applicable)
 - Date sold
- Technique used: multilinear regression



QUESTIONS CONSIDERED



- Effect of **basic home structural factors**, such as number of bedrooms, bathrooms, presence of basement, square footage of living areas and lot on price
- Impact of **condition and grade** on price
- Whether **waterfront** location affects price
- Effect of **ZIP code** on price
- Effect of **renovation** on price

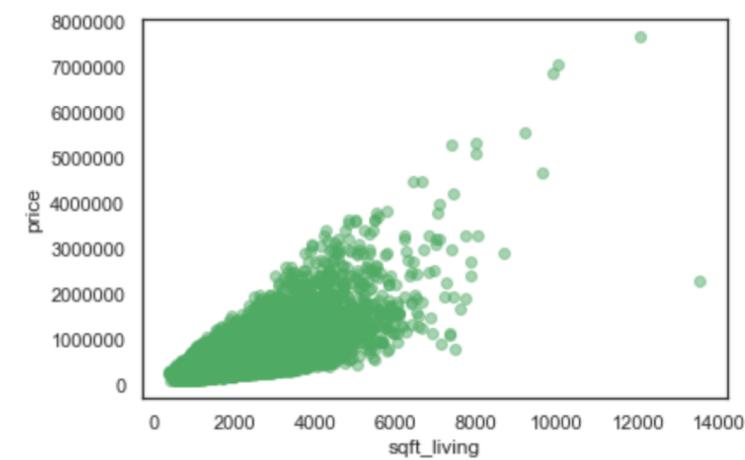
ANALYSIS RESULTS

- Primary factors that affect home prices:
 - Square footage of living space (link to bedrooms/bathrooms)
 - Number of bathrooms
 - Number of bedrooms
 - Condition and Grade of home
 - Whether or not the home has been renovated
- Factors less important than one might think:
 - Lot size
 - Waterfront location
 - Year built
 - ZIP Code

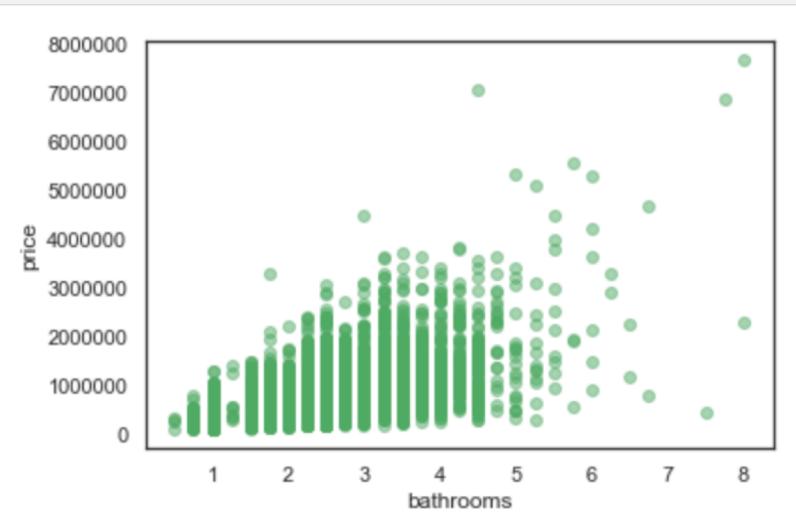
ANALYSIS RESULTS (SLIDE 1 OF 3)

- Key factors that affect house prices:
 - **Square footage of living space ***
 - Number of **bathrooms** *
 - Number of **bedrooms** * (to a lesser extent than bathrooms)
 - Condition and Grade of home
 - Renovation
- * *Square footage of living space is closely linked with number of bathrooms and number of bedrooms*

PRICE BY LIVING SPACE SQ. FOOTAGE



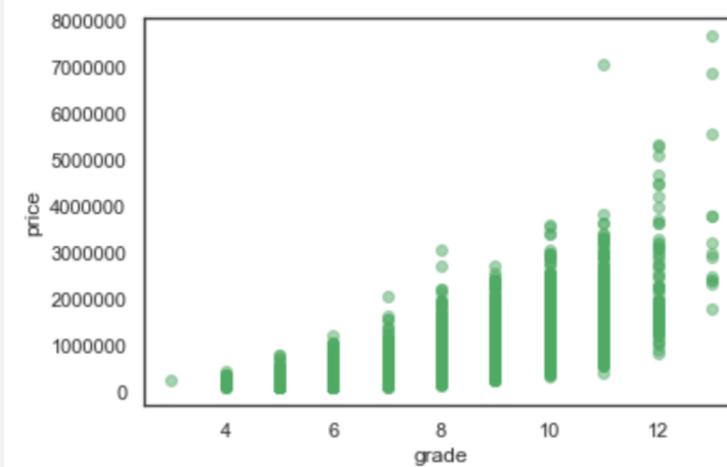
PRICE BY NUMBER OF BATHROOMS



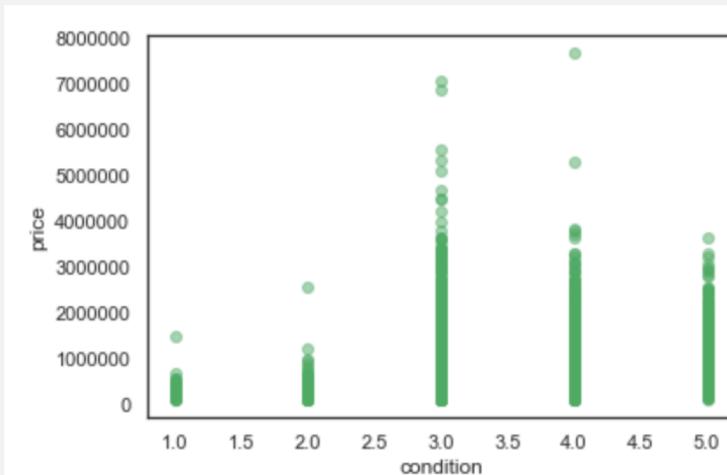
ANALYSIS RESULTS (SLIDE 2 OF 3)

- Key factors affecting house prices:
 - Square footage of living space (link to bedrooms/bathrooms)
 - Number of bedrooms
 - Number of bathrooms
 - **Condition** and **Grade** of home
 - **Condition** is a key stand-alone factor in home value
 - For all but the most expensive homes, the value of **Grade** is captured in living space square footage
 - **Renovation**
 - Homes that have been **renovated** have higher average prices, all other things being equal

PRICE BY GRADE

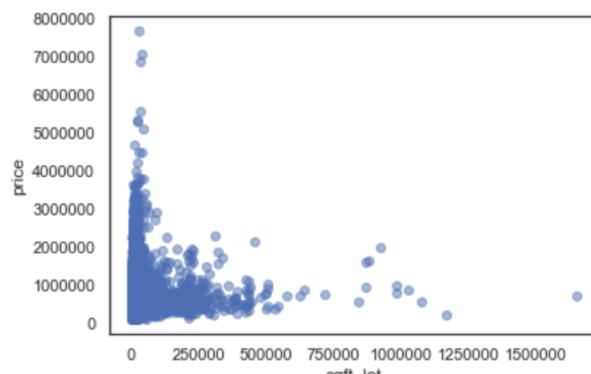


PRICE BY CONDITION

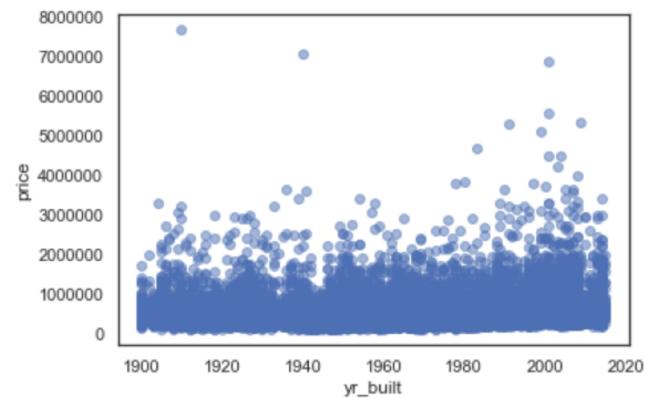


ANALYSIS RESULTS (3 OF 3): LESS IMPORTANT THAN ONE MIGHT THINK

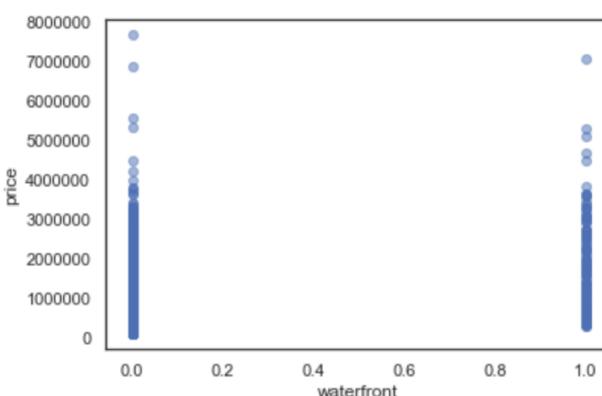
Lot size



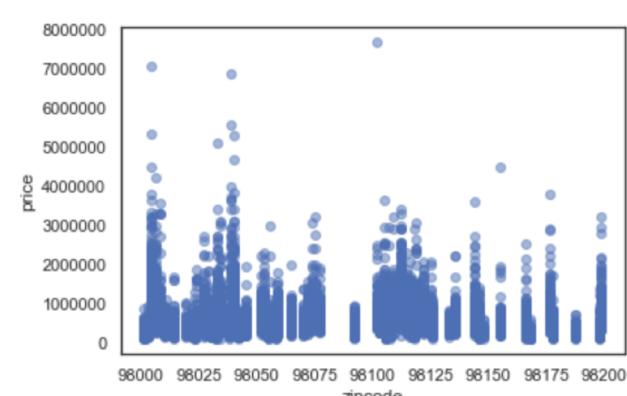
Year Built



Waterfront Location



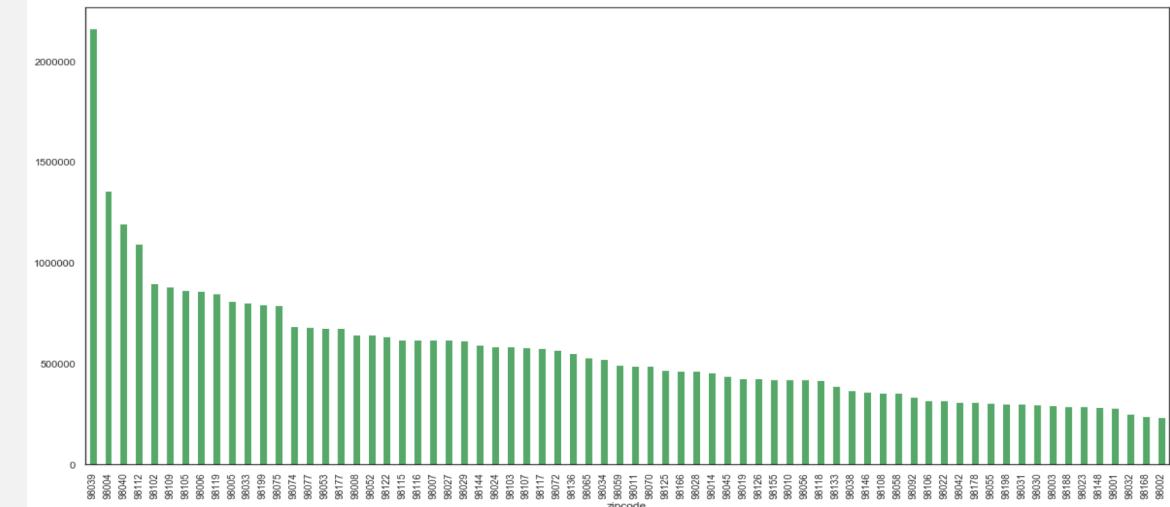
ZIP Code



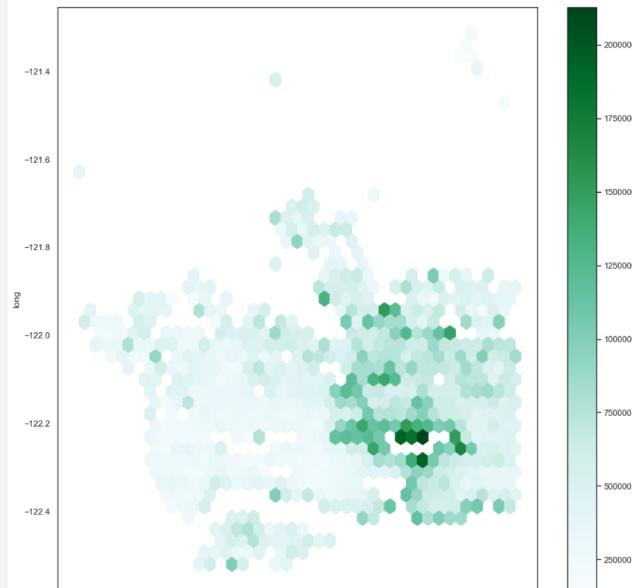
FUTURE EXPLORATION

- Cluster analysis by ZIP Code of features (e.g., lot size) to price
 - Most expensive ZIP Code
 - Next 3 most expensive ZIP Codes
 - Next 9 most expensive ZIP Codes
 - ZIP Codes in the middle
 - Lowest quartile (?) of ZIP Codes
- Ratio of living space square footage by lot square footage, by geographic area (by ZIP Code or ZIP Code clusters)
- Presence of basement (aside from increases in living space square footage)
- Effect of neighbors' living space and lot square footage significant affect prices
- Relationship of year built, renovated

Average Home Price by ZIP Code



Median Home Price by Latitude and Longitude



RECOMMENDATION AND Q&A

- Want to improve your home's value? Consider renovation, with an eye towards:
 - Increasing the square footage of living space—add bedroom, bathroom, or other space
 - Improve “condition” score of home

Thank you for your time!