

# KING COUNTY WA. REAL ESTATE MARKET ANALYSIS

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**August 24, 2021**

# OUTLINE

- Business Problem/Understanding
- Data
- Results
  - Top Level
  - Zone Prices
    - Renovation
    - Square Feet
- Conclusions

# BUSINESS SUMMARY

- **Business Problem:**
  - There is not a tool to understand real estate market trends that is accessible to anyone.
- **Solution:**
  - Build an open source real estate market analysis tool.
- **Business Understanding:**
  - I need to provide Google engineers with market trends in King County WA
  - What should prospective home buyers be aware of in Kings County WA?
  - Is the relationship between home features and home price dependent of geographical location within the County?
  - What features have the strongest influence on home price?

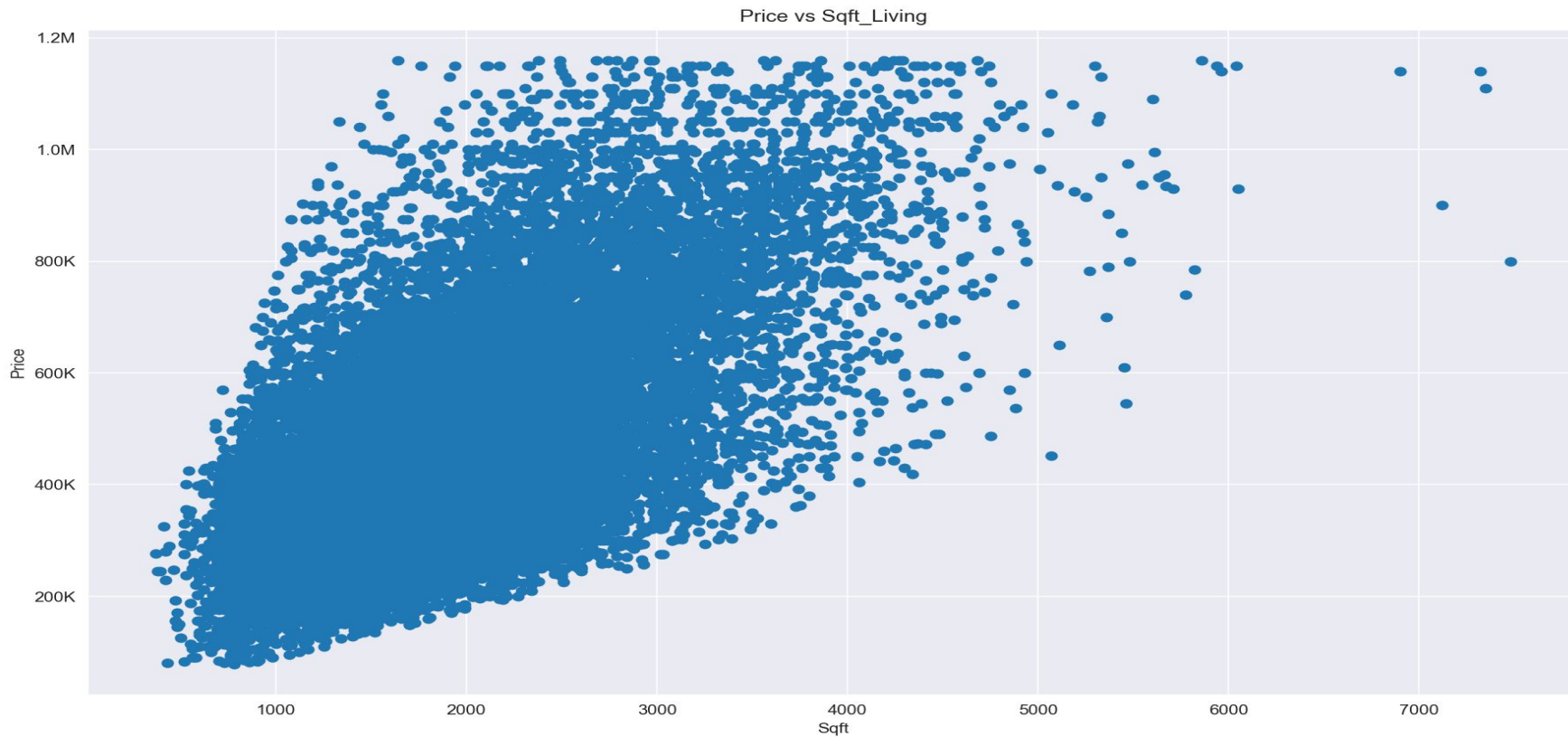
# DATA

- 20,000 homes in Kings County
  - Sale Price
    - $\leq \$1,600,000$
  - Square Feet
  - # of floors
  - Latitude/Longitude
  - Age
  - Has had a renovation
  - Beds/Baths
  - Has a waterfront
  - # of views

# KINGS COUNTY ANALYSIS: TOP LEVEL

- The most valuable house attributes, in order, are sqft\_living, age, and floors.
- Each standard deviation away from the mean of:
  - sqft\_living(784 feet) increases house price by \$74,350
  - Age (29 years) increases house price by \$33,120
  - Floors (1/2 floor) increases house price by \$25,590

# KINGS COUNTY ANALYSIS: TOP LEVEL VISUALIZATION



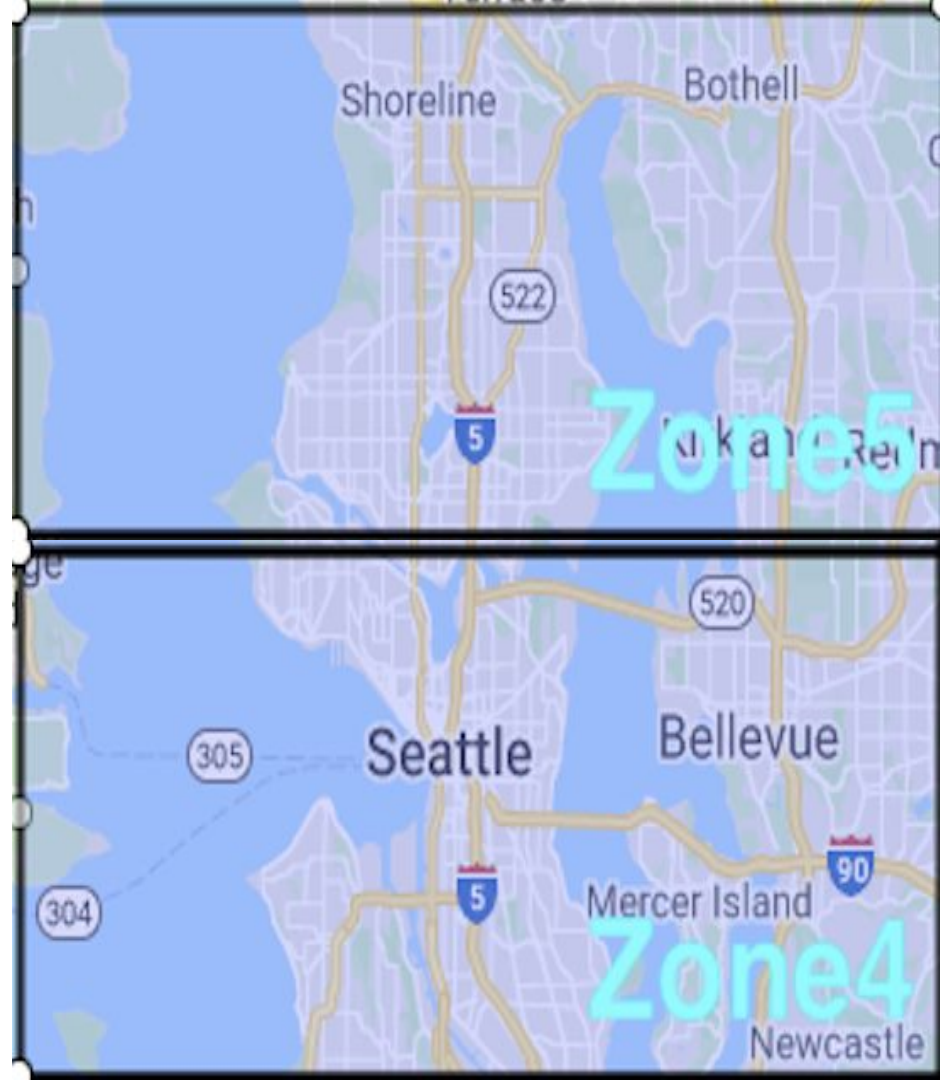
# KINGS COUNTY ZONES 2-3

- Zone 2
  - 3857 homes
  - Zone 2 mean price \$310,005
  - Zone 2 lower mean range \$306,380
  - Zone 2 upper mean range \$313,631
- Zone 3
  - 3787 homes
  - Zone 3 mean price \$366,047
  - Zone 3 lower mean range \$360,832
  - Zone 3 upper mean range \$371,263



# KINGS COUNTY ZONES 4-5

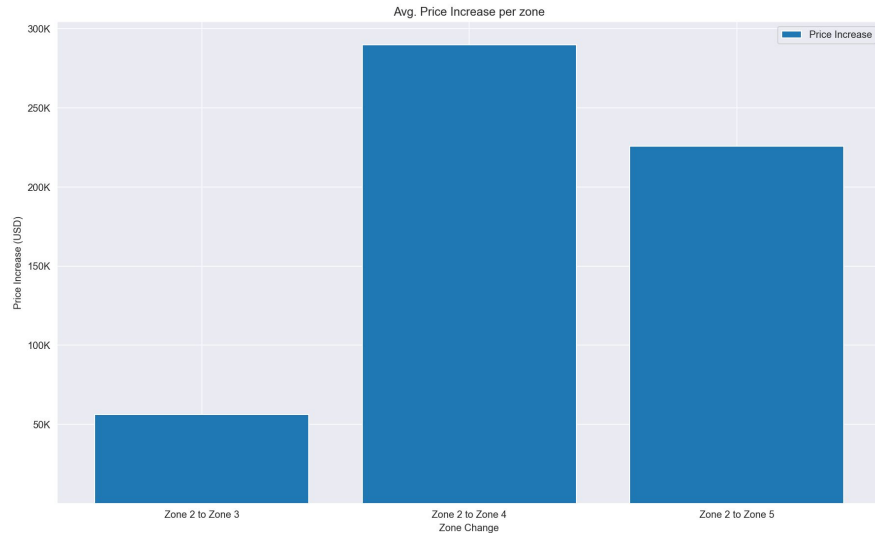
- Zone 4
  - 6070 homes
  - Zone 4 mean price \$599,959
  - Zone 4 lower range \$594,615
  - Zone 4 upper range \$605,302
- Zone 5
  - 6600 homes
  - Zone 5 mean price \$535,793
  - Zone 5 lower range \$531,372
  - Zone 5 upper range \$540,214





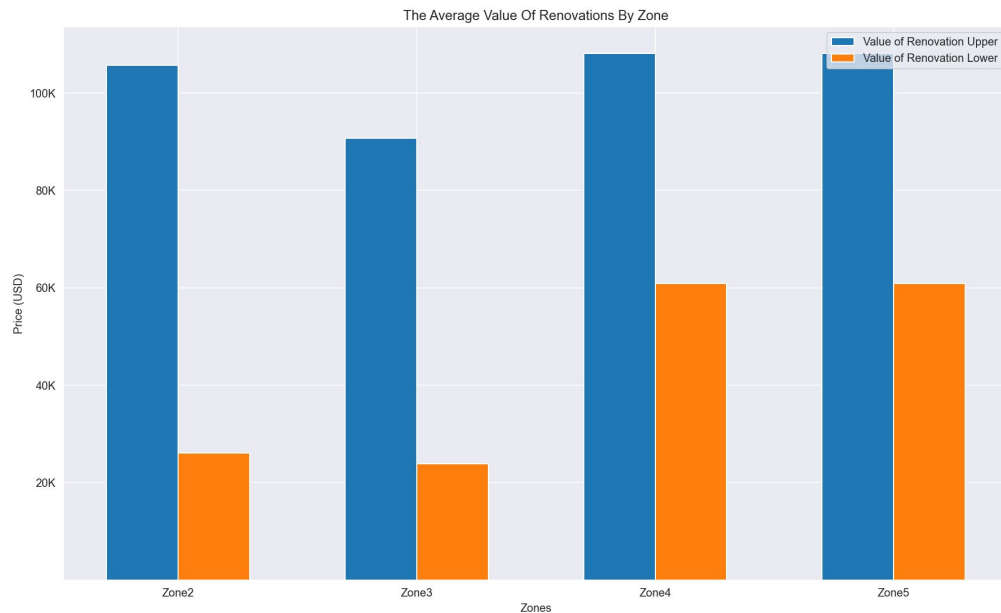
# AVERAGE HOME FROM ZONE 2 TO ZONES 3,4,5

- Houses in Zone 3, on average, are \$54,452 to \$57,632 greater than houses in zone 2
- Houses in Zone 4, on average, are \$288,235 to \$291,671 greater than houses in zone 2
- Houses in Zone 5, on average, are \$224,993 to \$226,583 greater than houses in zone 2



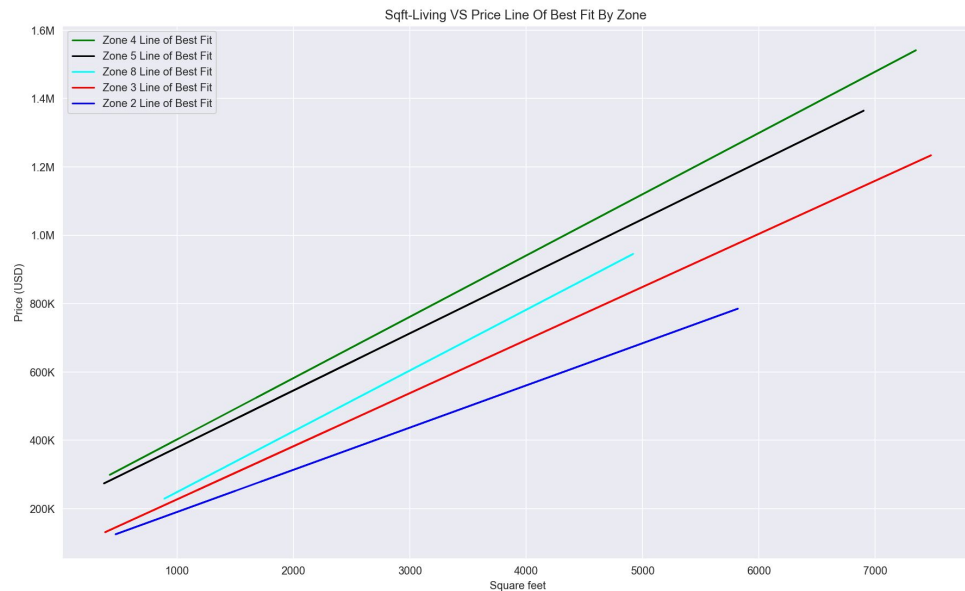
# RENOVATION BY ZONE

- Adding a renovation to your home will increase the price:
  - Zone 2 : \$26,086 to \$105,645
  - Zone 3 : \$23,914 to \$90,769
  - Zone 4 : \$60,838 to \$108,156
  - Zone 5 : \$68,860 to \$119,518



# SQUARE FEET BY ZONE

- Per unit increase in sqft\_living house prices will increase:
  - Zone two : \$123
  - Zone three: \$155
  - Zone four: \$179
  - Zone five: \$167
  - Zone eight: \$177



# CONCLUSIONS

- Zone 4 is the most valuable zone
- Add renovations that increase the sqft\_living
- Invest in older homes
- Add floors

# FURTHER WORK

- Scalable Analysis:

- Make Lat\_Long zones at smaller and bigger scales
- This will allow users to understand how geographical boundaries influence the relationship between house attributes and house price.
- Insights from smaller scales include neighborhoods, streets, local history, etc.
- Insights from scales include political districts, population, regional laws, etc.

- Price prediction feature:

- Develop a product that will predict a users “dream house” price based on provided parameters and geographical location.

# THANK YOU



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