House Prices in King County - Recommendations
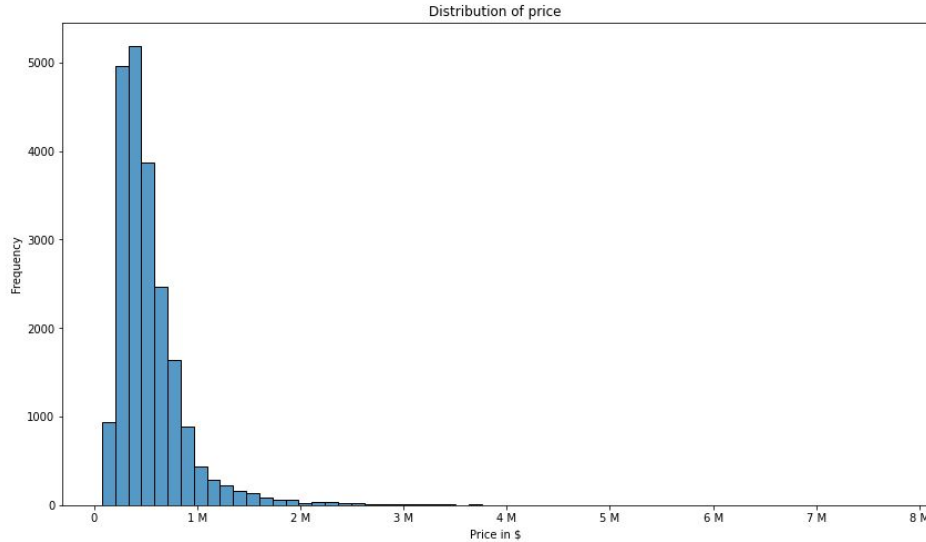
A guide by Christine Merkel

What is my Stakeholder looking for?

- investment in poor neighborhood
- buying and selling: costs back and little profit
- social responsability

About the Data:

- **Houses sold in King County: Washington in May 2014 - May 2015**
- **21597 observations**

Distribution of price

- **Average price a house was sold: 540,296$**
- **Lowest price a house was sold: 78K$**
- **Highest price a house was sold: 7,7M$**

Task:

- **Dataset has 20 features:**
  grade, waterfront, views, bathrooms, condition , location, ….
- **Find the best features to predict the price**
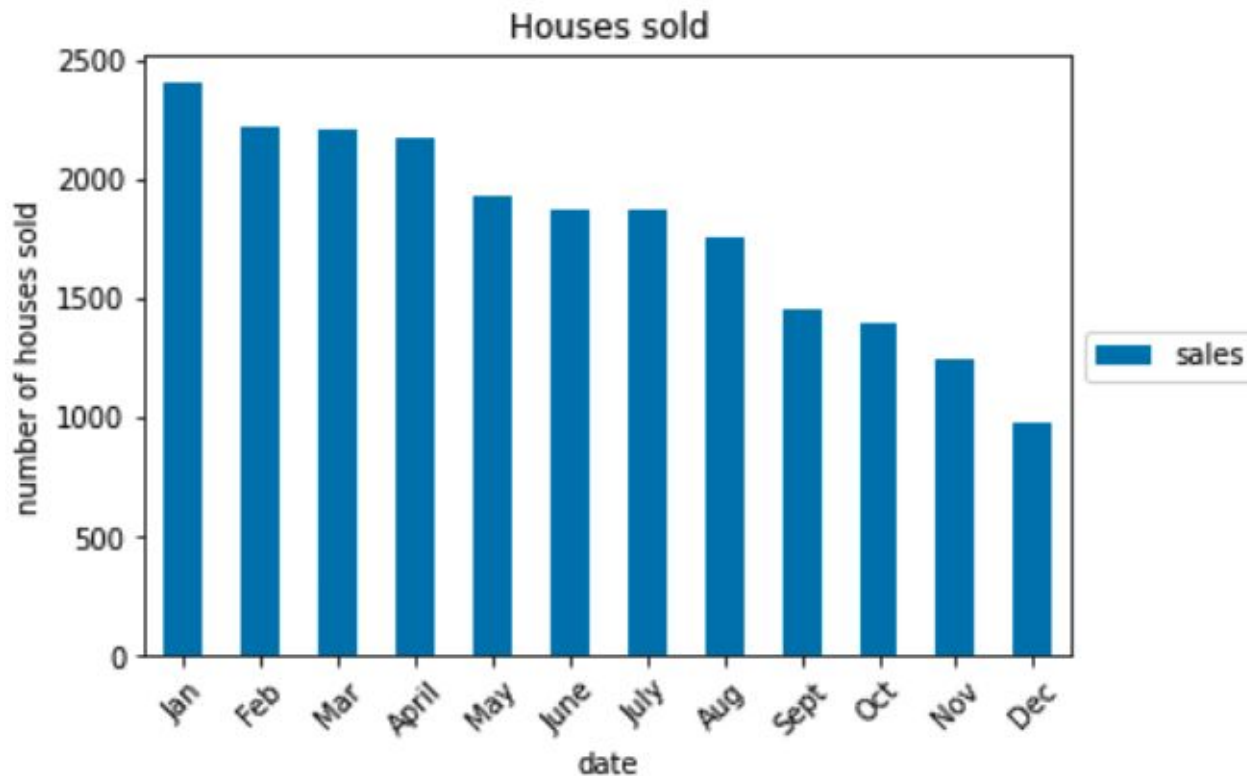- **Predict the best time and location to buy A house that suits the interest of my stakeholder**

Hypothesis 1:

Price depends on seasons - Summer best time to buy

Average prices and sqft prices get lower towards the end of year
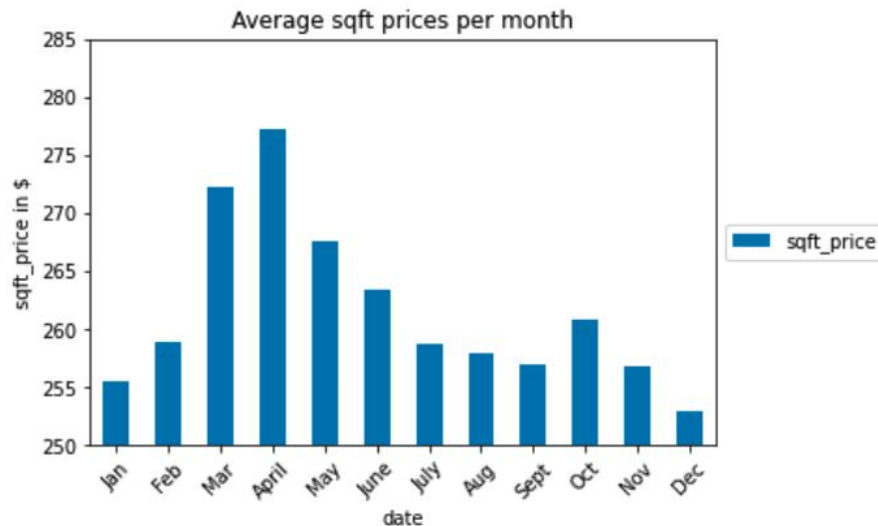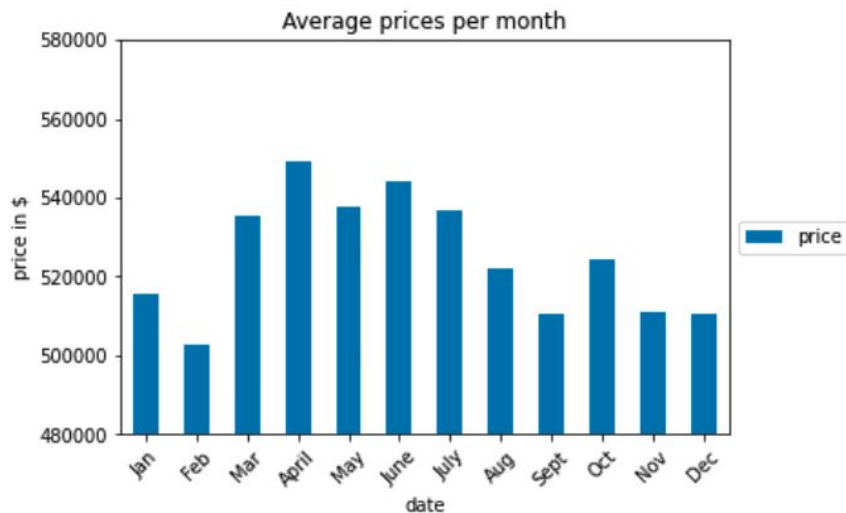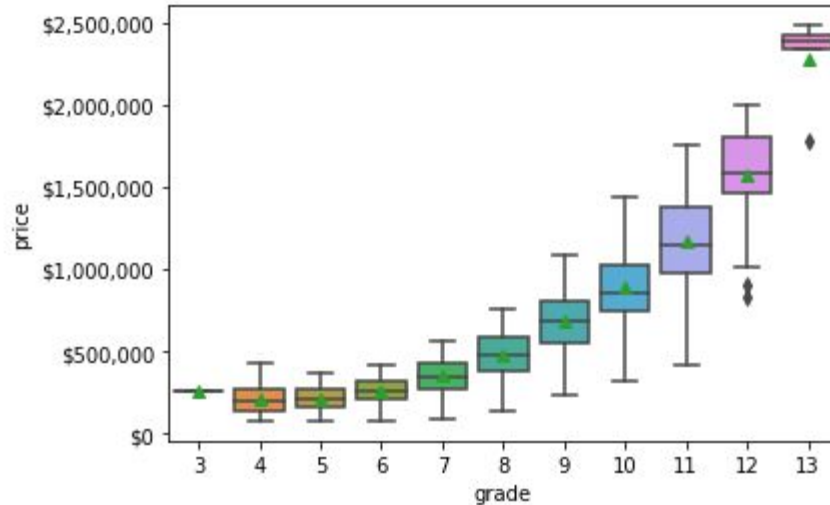
In december fewest house sales

Hypothesis 2:

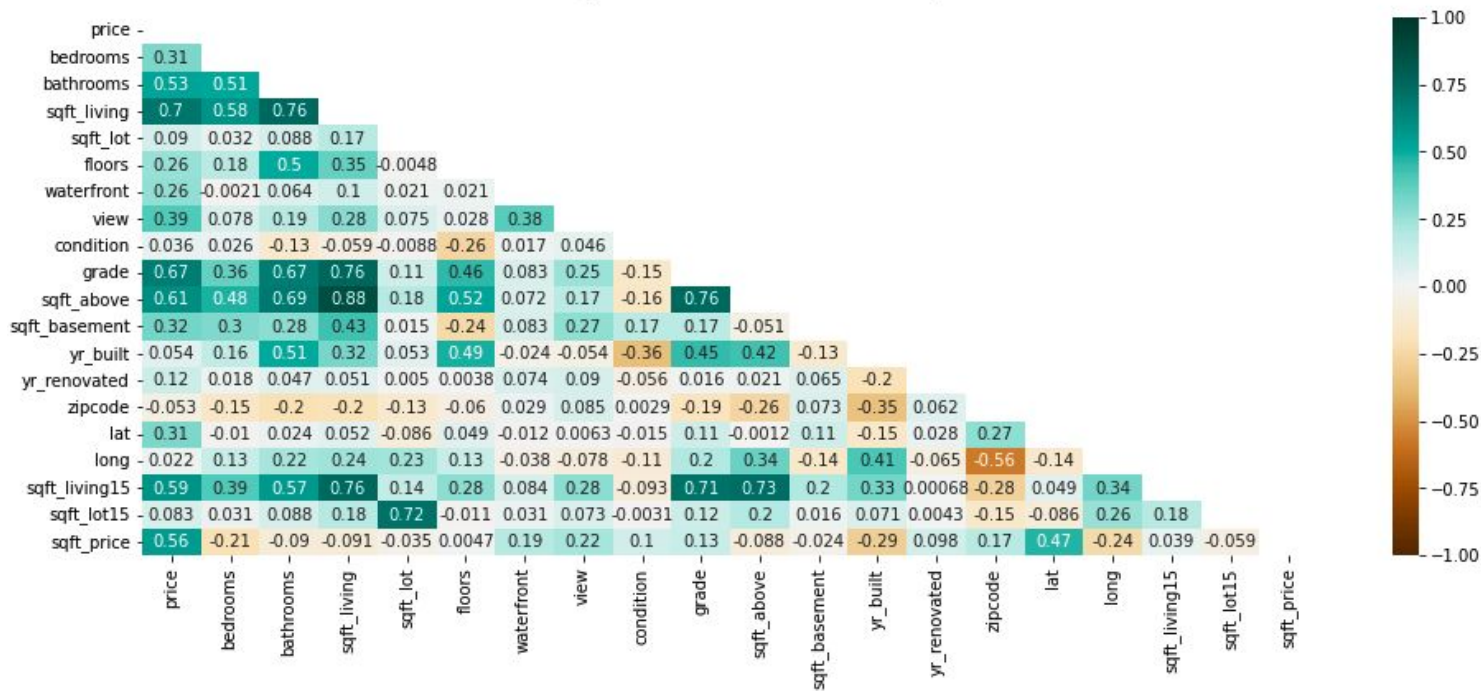**High grade houses are sold at higher price**

Linear relationship between grade and price

- **grade explains ~62 % of price**
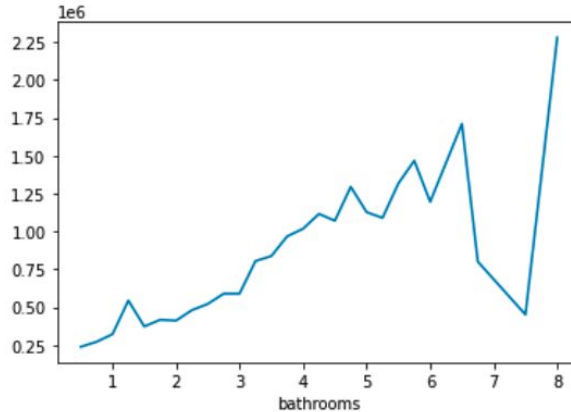- **Every extra point in grade costs 170 K$**

Price depends on more features:

Triangle Correlation Heatmap

Strongest Correlation:
-bathrooms,
-sqft_living15,
-Sqft_living,
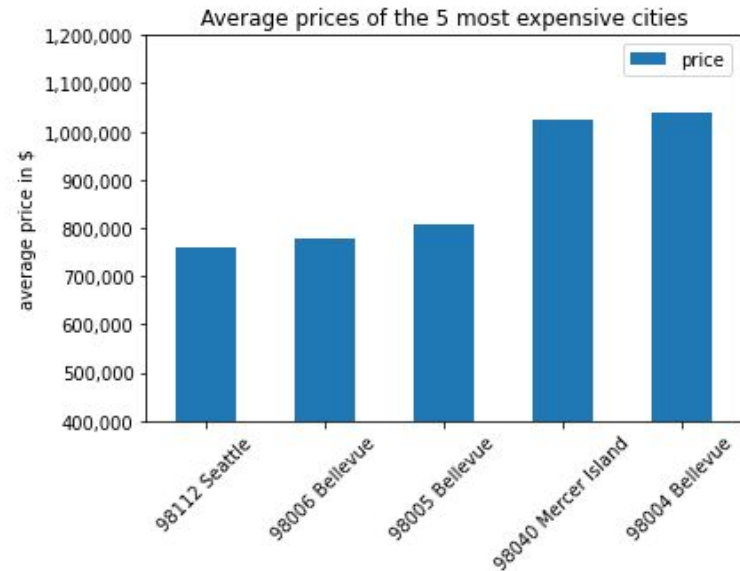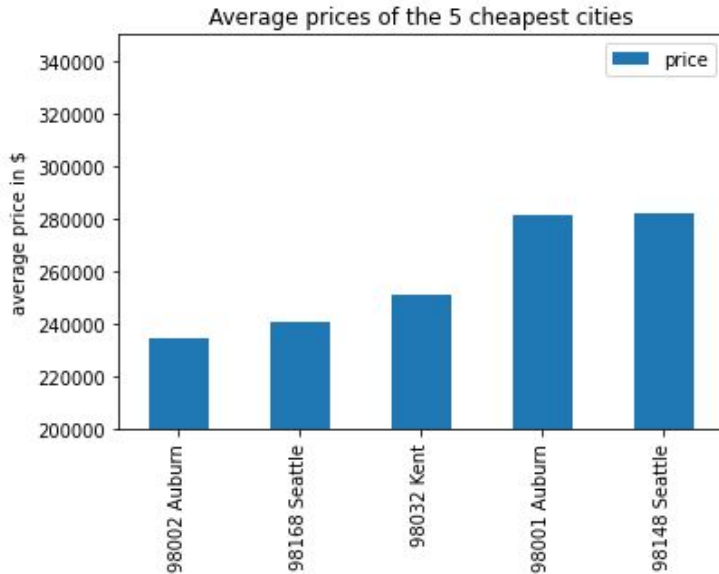-grade

Houses with fewer bathrooms are cheaper in average

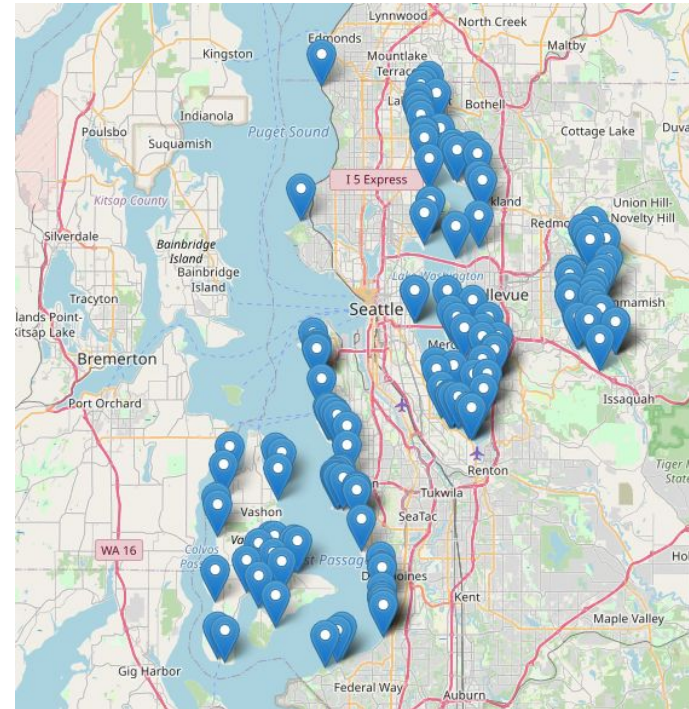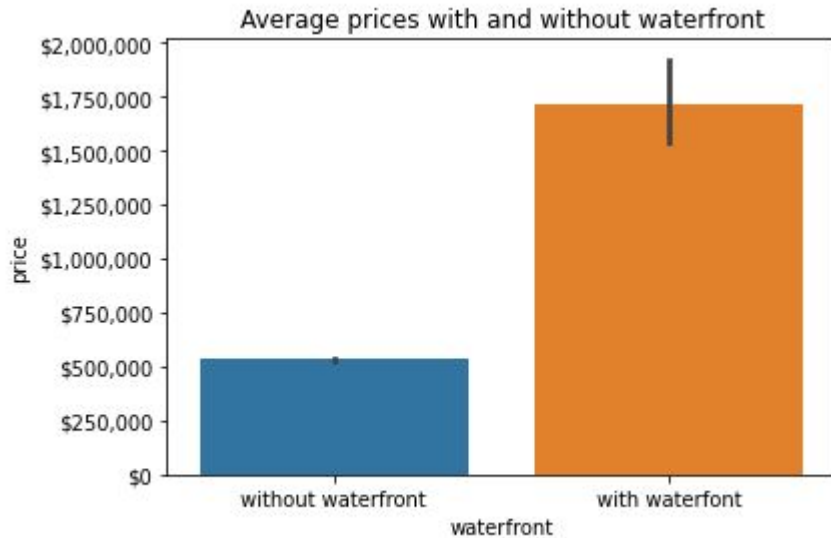**Bathroom, sqft_living, sqft_living15 and grade explain ~66% of price**

Hypothesis 3:

Prices rely on area, i.e. zipcode

Zipcode explains ~42% of price

Average prices of the 5 cheapest cities

Average prices of the 5 most expensive cities

Houses with waterfront a more expensive in average

Conclusions & Recommendations:

1. Buy lower graded houses, with fewer bathrooms, lower sqft prices
2. December seems the best month to buy
3. Look here: Auburn, Seattle and Kent
4. Avoid: Medina, Shoreline, and houses with waterfront (Shoreline)