King County Housing Data Analysis

Nicole Michaud
June, 2023

Business Problem

- A company that buys houses to “flip” them and resell for higher prices wants to know what pre-existing features of a house are related to higher sale price so that they can better decide which types of houses to buy and flip.

Project Goals

- What pre-existing features of houses are are predictive of higher sale prices so that house flippers can buy houses to remodel that will have the best chances of returning higher profits?
    - What features can be combined to be a better predictor of sale price than individual features?

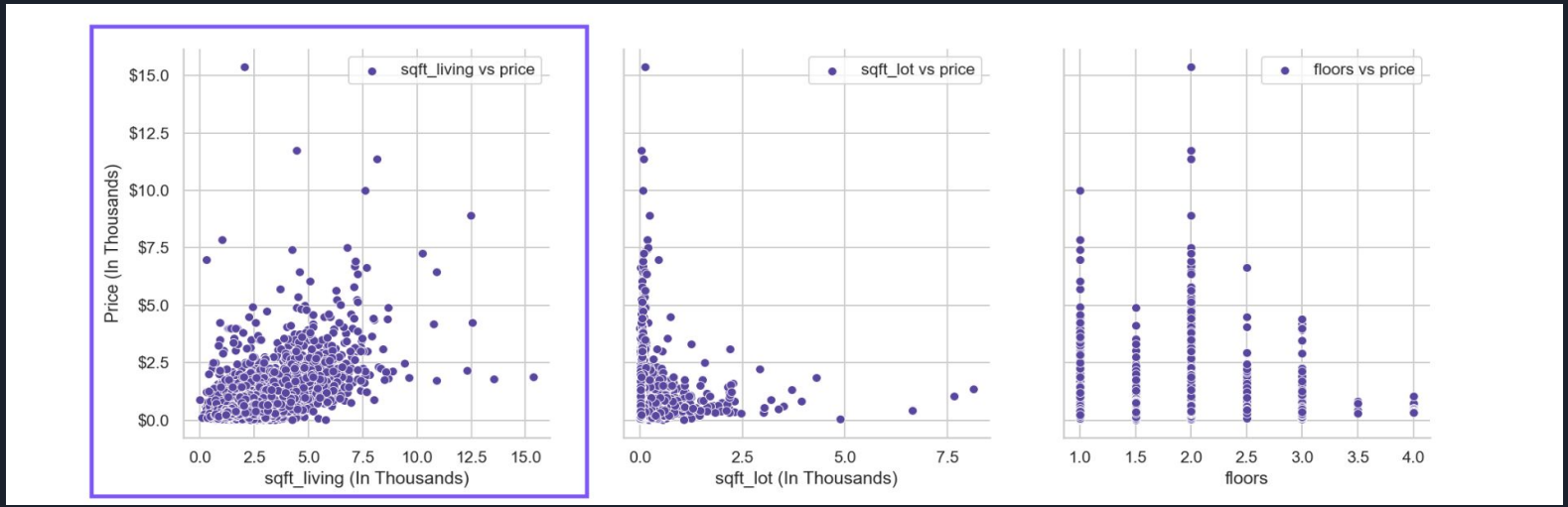
Data Understanding

The features from the Kings County housing dataset that I took into consideration include:

- Number of bedrooms
- Number of bathrooms
- Square footage of the living area
- Square footage of the lot
- Number of floors
- If house is on a waterfront
- If house is adjacent to a green belt
- If house has traffic noise or other nuisances
- The quality of the view of the house

Methods & Data Analysis

- By looking at which variables within the data were most highly correlated with price, I determined that the variable that had the strongest relationship with price was ‘sqft_living’, or the square feet of living space in the home



Methods & Data Analysis

- I created models for each of the four relevant categorical variables– waterfront, greenway, nuisance, and view– and of those found that view was the best predictor of price.

Results

- Of this data, the best predictor of price was found to be a combination of the house's square feet of living space and the quality of the view the house has.
- The model with these two variables tells us:
  - For each increase by 1 square foot of living space, we expect to see an increase in price of about 521 dollars.
  - Compared to a house with an average view, for a house with an excellent view we see an associated increase in price of about of about 1,196,00 dollars.
  - For a house with no view, we see an associated decrease in price of about 182,400 dollars.
- This model is estimated to be off by about $388,647 on a given prediction.

Conclusion

- If only going off of this data, the two factors that they should look for when deciding which houses to buy in order to flip and make the highest possible profits are square feet of living space and quality of view.
- However, this model is unreliable for houses that are not within the price range of $684,205.75 to $2,901,227.43.
- Additionally, this dataset does not include information on certain housing features that would likely be even more related to sale price, such as the subdivision that the house is in.

Next Steps

- In order to get a better idea of the true best predictors of housing sale prices, further analysis should be conducted on more datasets that include more features that are likely to be related to sale price, such as housing subdivision.

Thank You!

- Any Questions?
- Contact Info:
  - Nicole Michaud
  - LinkedIn: www.linkedin.com/in/nicole-michaud2