CHOOSING THE BEST PRICED HOMES USING LINEAR REGRESSION MODELING TO MAKE A PROFIT

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OUTLINE

- Business Problem
- The Data
- Methods/ Modeling
- Regression Results
- Conclusion

BUSINESS PROBLEM

- It is sometimes difficult for first time homeowners and beginner investors to choose the right home to flip for a profit
- It can be overwhelming to find the right house among so many, all at different ranges of price
- Deciding what characteristic of a home can be appealing to homeowners is also hard without further research
- Investing into a home is costly and a big risk

DATA

- Data analyzed in this modeling came from the King County Sales dataset
- Variables considered in this analysis include: price, # of bedrooms, #of bathrooms, sqft living space, sqft lot, # of floors, waterfront option, view rating condition of home, grade of home, year built, and year renovated
- The dataset consisted of 21,597 rows of housing data
- Factors not needed for this analysis were date, ID, latitude, and longitude to name a few

DATA (CONT.)

- Home with grade of low average vs. one with grade "very good"
  - A home of grade "low average" would be ~$495,000 cheaper than one that's "very good"
- Home with a grade of fair vs. one with grade "very good"
  - A home of grade "fair" is ~$546,800 cheaper than one that is of grade "very good"
- Home with a grade of poor vs. one with grade "very good"
  - A home of grade "poor" is ~$567200 cheaper than one of grade "very good"
- Home with no view vs. one with an average view
  - A home with no view would save ~$57,200 compared to one that has an average view

METHODS & MODELING

- Only variables that seemed to directly effect a home's price were chosen
- After scrubbing and cleaning data, a baseline model was created to see if the model could be improved through manipulations
- Some manipulations of baseline include: removal of variables that seemed too similar to one another and removing extreme outliers that the average homebuyer would not normally purchase to flip a home
  - Ex. People would not normally try to flip luxury homes or mansions

RESULTS

- After performing 4 different manipulations of the baseline dataset, it turns out the baseline data had the best results
- The factors chosen from this dataset that would yield the best price for an investor are homes with a grade: low average, grade: fair, grade: poor, and with no view
- Buying a home with these characteristics would save the buyer on average $416,550

IMPROVEMENTS

- To be able to increase a home's value, it is suggested to improve the grade of the home to preferably Better, very good, excellent, or luxury if the funds are available
- Homes with some type of renovation done to them increase their value by ~$42,300 as opposed to those that do not have any done
- Getting a home to a condition of Good or Very Good would increase to home's value as well

CONCLUSION

- The recommendations based on the model created in this project would be to chose a home that has these qualities:
  - A home grade: low average, grade: fair, grade: poor, and and one's with no view
- Homes with other grades would not be able to save as much money (when compared to a very good grade)
  - Higher quality homes (like excellent, luxury, mansion) would naturally make a home more expensive
- Adding a view to a home or waterfront increases the price of the home
  - Homes without these qualities end up being cheaper
- A home that fits the criteria to flip for a profit would be one that is of poor/fair quality and/or has no view

THANK YOU!

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