

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

Home-Flipper's Guide to Maximize Sale Price.

Colm Yeh



Agenda

1. Problem
2. Business and Data Understanding
3. Modeling
4. Results
5. Recommendations



Problem

How can home-flippers and developers most effectively add value to their projects?

To answer this question, our modeling identifies which variables have the *largest positive impact on sale price*.



Business and Data Understanding

The Data:

- King County Housing data
- Includes 20 housing variables ranging from construction grade to zip code
- Omitted irrelevant variables.

Final variables include:

- Bedrooms, bathrooms, sqft_living, sqft_lot, yr_built, condition, construction grade, waterfront, and number of floors



Modeling

Regression modeling achieves two goals to address our business case:

1. Examines the relationship between price and the variables we selected, and identifies significant variables.
2. Provides a factor by which price changes in response to changes in our variables (known as model coefficients).

Model Results

OLS Regression Results

| | | | |
|--------------------------|------------------|----------------------------|-----------|
| Dep. Variable: | price | R-squared: | 0.598 |
| Model: | OLS | Adj. R-squared: | 0.597 |
| Method: | Least Squares | F-statistic: | 1367. |
| Date: | Fri, 07 Jan 2022 | Prob (F-statistic): | 0.00 |
| Time: | 10:38:43 | Log-Likelihood: | -5047.2 |
| No. Observations: | 21191 | AIC: | 1.014e+04 |
| Df Residuals: | 21167 | BIC: | 1.033e+04 |
| Df Model: | 23 | | |
| Covariance Type: | nonrobust | | |

Statistically significant variables with largest coefficients:

1. Bathrooms (0.0796)
2. Construction Grade (0.052-0.1176)
3. Floors (0.046 - 0.2716)



Recommendation #1

Add Bathrooms:

- According to the model, an increase in one bathroom results in **7.96% increase** in sale price.
- Adding a bathroom is a practical, less capital-intensive strategy that produces a significant increase in sale price.



Recommendation #2

Increase construction grade to Excellent or Luxury. Do not decrease construction grade or risk losing significant value.

- From a baseline of 10 'Very Good', achieving a construction grade of 11 'Excellent' ***increases sale price by 5.72%***
- Achieving a construction grade of 12 'Luxury' ***increases sale price by 11.76%***.
- In contrast decreasing construction grade consistently decreases sale price. In fact, a lowering of construction grade to 6 'Below Average' results in a ***88.52% decrease in sale price.***



Recommendation #3

Add Floors:

- From a baseline of 1 floor, adding 0.5 floors (1.5 floors total) results in a **4.64% increase in sale price.**
- Adding 1 floor (2.0 floors total) results in a **4.46% increase in sale price.**
- Adding 1.5 floors (2.5 floors total) results in a **8.64% increase in sale price.**
- Adding 2 floors (3 floors total) results in a **24.83% increase in sale price**
- Finally, adding 2.5 floors (3.5 floors total) results in **27.16% increase in sale price.**

Thank You

