

Understanding the Housing Market

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HB Consulting

- Consulting company located in King County, WA
- **Goal:** Expand into the housing market and find data-backed recommendations on home improvements for the average house-flipper



Data & Methodology

- Data is provided by King County, WA and lists features and sales prices of homes within that area
- Features include:
 - Floors
 - Bathrooms
 - Location
 - Etc.
- OSEM data science process & multiple linear regression
- Final Model - 68.3% of variation in price can be explained by the model



Home Improvement Options

- Bathrooms
- Grade/Condition
- Views



Bathrooms

Model Prediction:

- Each additional bathroom added correlates to a \$36,170 increase in price

Benefits of upgrading bathrooms:

- Increments of 0.25, easily measurable
- No need to clear/add new rooms

Bathroom Increments:

- 1/4 bathroom: 1 sink, shower, toilet, or bathtub
- 1/2 bathroom: 1 toilet and 1 sink (no shower or bath)
- 3/4 bathroom: 1 sink, 1 toilet, and 1 shower or bath
- Full bathroom: 1 of each: sink, toilet, shower, and bath



Ideal improvement increments (from, to)

- 1 to 1.25
- 3 to 3.25
- 3.5 to 3.75
- 4 to 4.25



Home Improvement Options

- Bathrooms
- **Grade/Condition**
- Views



Grade/Condition

Condition:

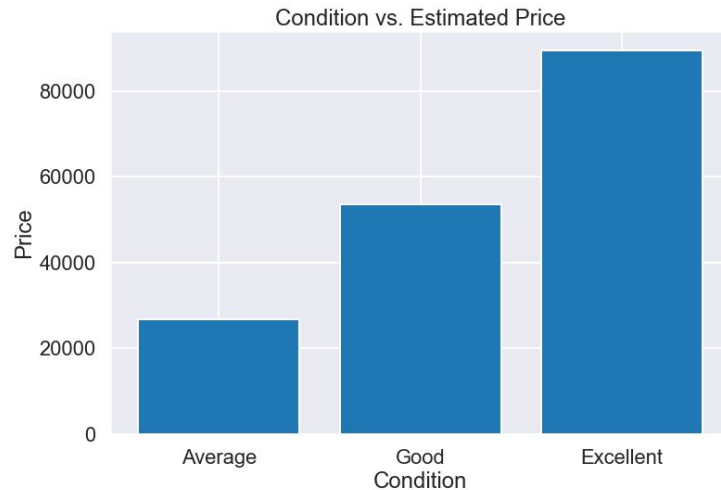
- 1-5 scale, regrouped (Average :3, Good :4, Excellent :5)
- Consistent price increase \$26,840 -> \$53,600 -> \$89,470

Grade:

- 1-13 scale provided by King County, regrouped
- (Min :6, Average :7, Above Average :8-9, High Qual. :10-13)
- Price increase

Recommendation:

- Try to avoid upgrades into High Quality or Excellent condition - more resources, house re-sizing
- Lower-tier upgrades still net profit while requiring less work (paint jobs, retiling, etc.)





Home Improvement Options

- Bathrooms
- Grade/Condition
- **Views**



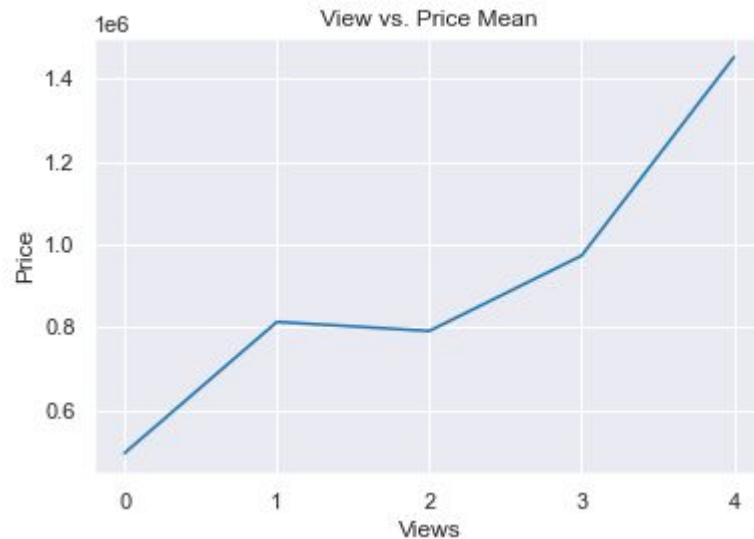
Views

Model Prediction:

- Each additional view correlated to a \$38,020 increase

Benefits of focusing on views:

- No repair costs
- Easy to do: more open houses





Final Recommendations

- Bathrooms
 - Aim to upgrade existing bathrooms instead of creating new ones
- Grade/Condition
 - Improvements in both areas will increase sale value
 - Aim for lower-end houses to increase to mid-end
- Views
 - More open houses/exposure is recommended



Future Work

- Location-based analysis (cities, neighborhoods, etc.)
- Purchase date and effect on price
- Further optimizing model

**Thank you and
good luck!**

