

House Price Prediction

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Summary

House price estimation is made to help homeowners to sell houses.

- An example of a house price estimation
- House price trend by house features
- House features: living space, floors, condition, and renovation

Outline

- Business Problem
- Data Steps
- Methods
- Results
- Conclusions

Business Problem

- House price estimation for house owners
- Feature information
- House price vs. features

Data

- King County House Sales
- Information of 21,600 houses
- Price and 12 features

Methods

- Best fit analysis
- Numerical information
 - Living space in squared feet and floors
- Categorical information
 - Maintenance condition and renovation

Methods

Features with Example Values

Living space: 2000 sqft

Lot space: 5000 sqft

Floors: 3

Renovation: No

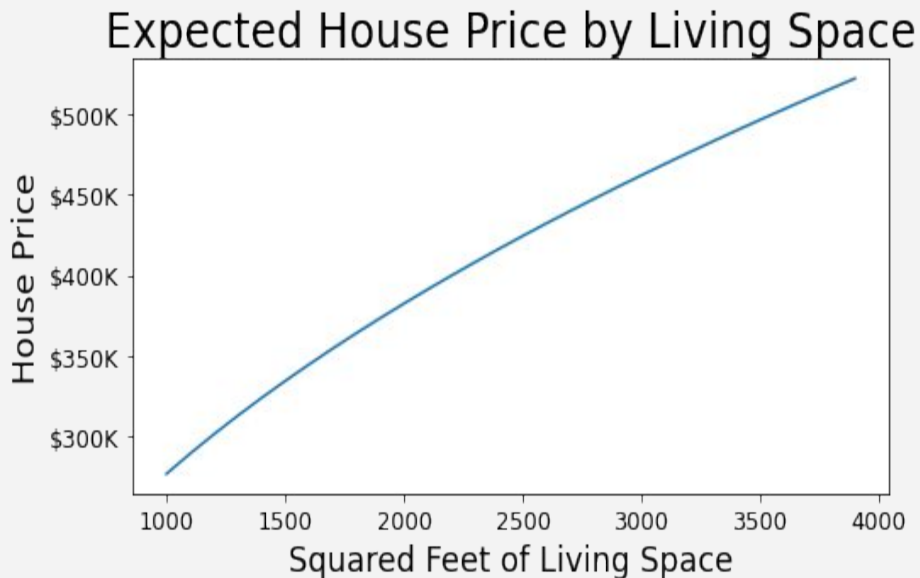
Maintenance: Average

House grade: Average

Estimation: \$382,000

Results

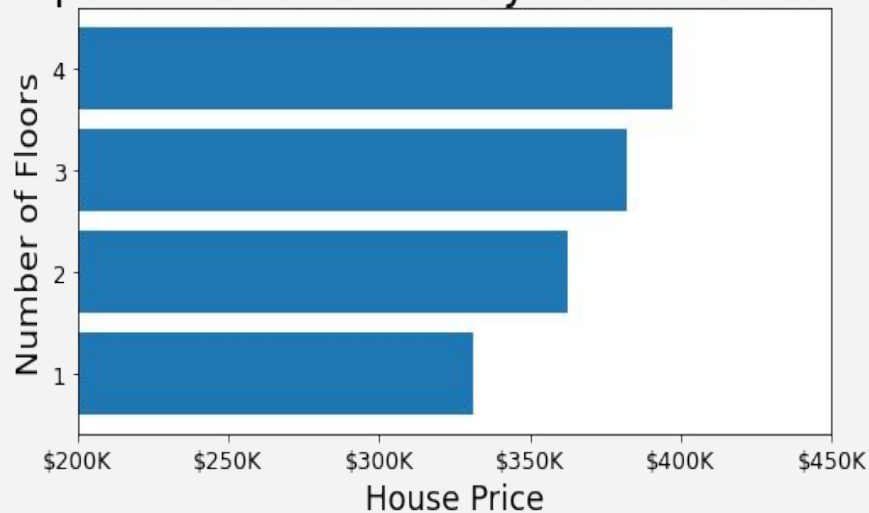
- The house price is expected to increase as the living area increases.
- 2000 sqft - \$ 382k
- 3000 sqft - \$ 462k
- 4000 sqft - \$ 528k



Results

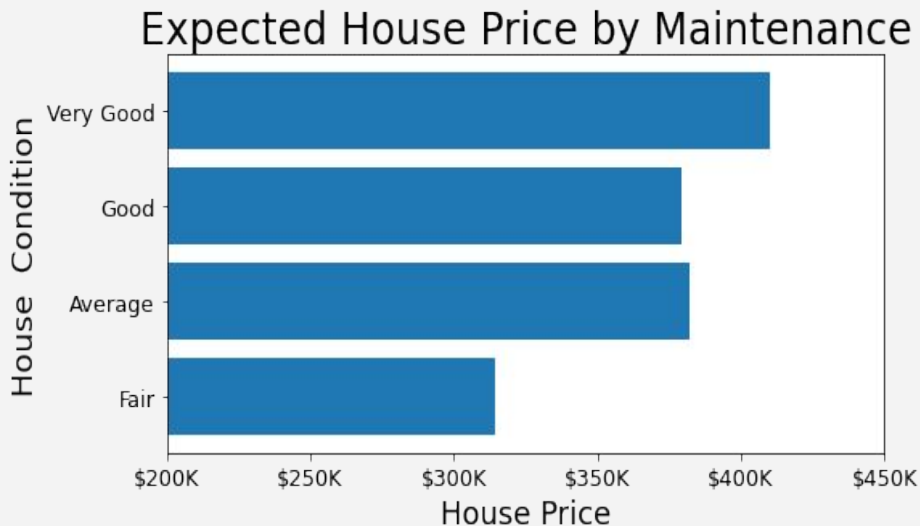
- The house price is expected to increase with a higher number of floors.

Expected House Price by Number of Floors



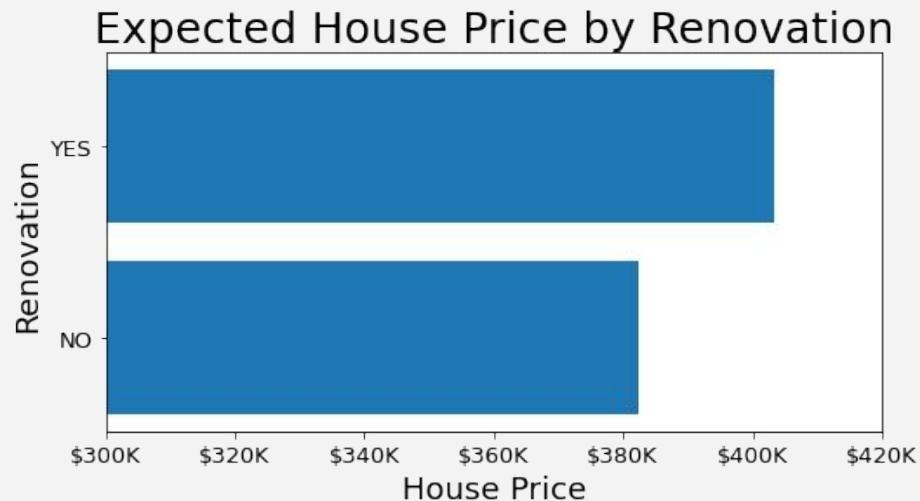
Results

- The house price is expected to increase with better maintenance.



Results

- The renovated houses tend to have a higher price.
- 5.5% increase



Conclusions

- The house price tends to increase as living space and the number of floors increase.
- The higher price is observed for better conditions.
- The renovated houses have a higher price.
- *The higher price is observed for higher grades.
- *There is a minor negative impact on the price as the lot size increases.

Next steps:

- Update example values assigned to the house features
- Run the analysis again using bedroom and bathroom counts without living space.
- Use information from a different county.

Thank You!

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