

# House Price Prediction

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Jin-hoon Chung  
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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

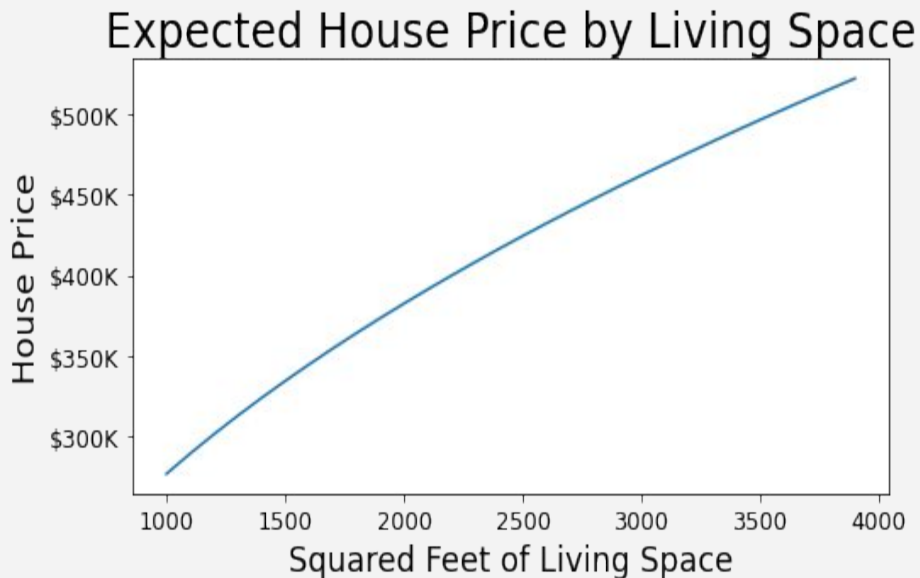
Maintenance: Average

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

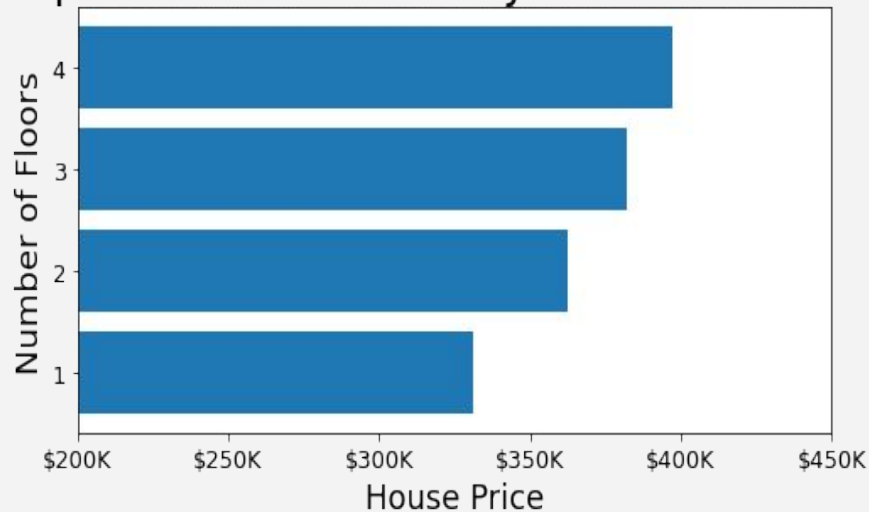




# Results

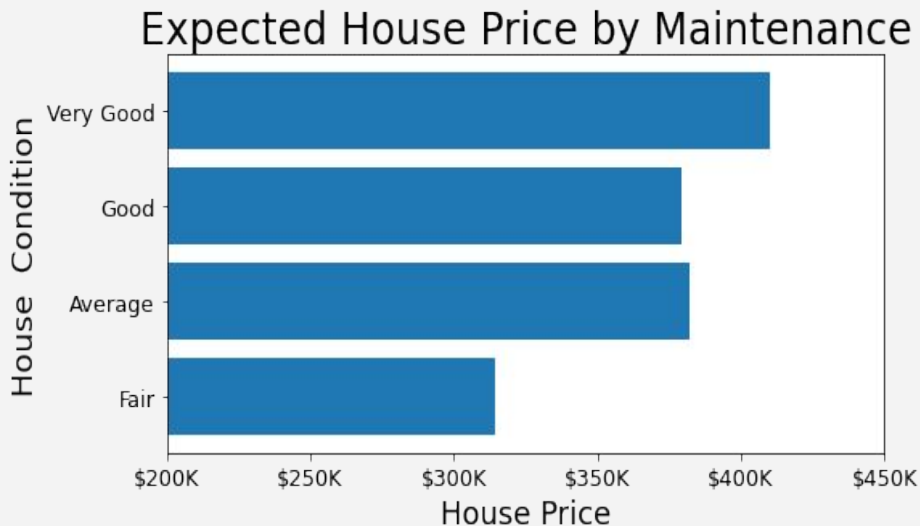
- The house price is expected to increase with a higher number of floors.

Expected House Price by Number of Floors



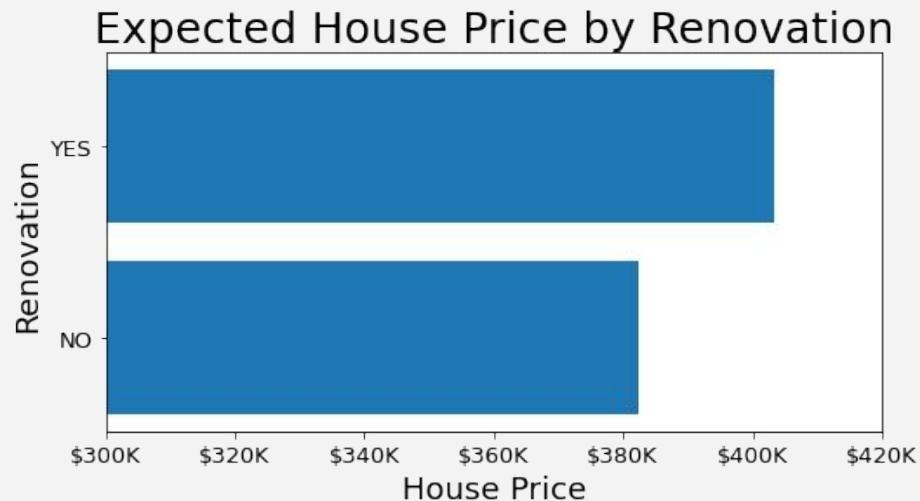
# Results

- 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
- Use information from a different county.

# Thank You!

**Email:** ddjh204[@gmail.com](mailto:ddjh204@gmail.com)

**GitHub:** @ddjh20482

**LinkedIn:** [linkedin.com/in/jin-hoon-chung/](https://www.linkedin.com/in/jin-hoon-chung/)