



# King County House Price Project



By TJ Whipple



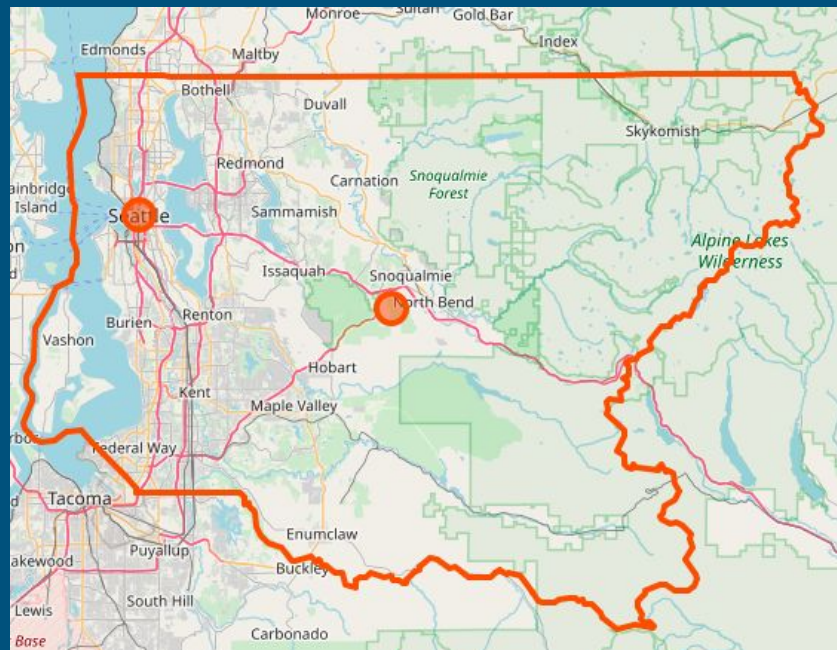
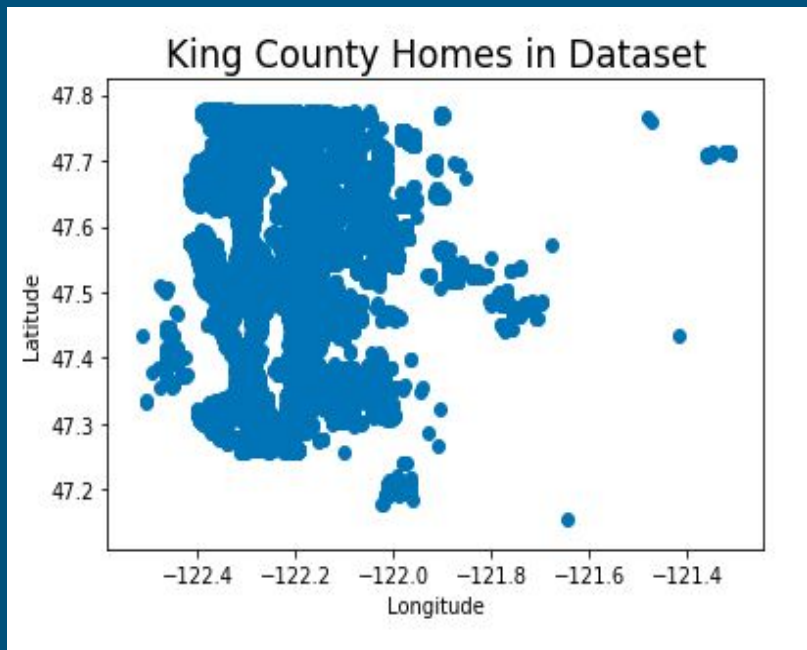
## Questions:

- How important is renovating your home before selling?
  - And is the condition of your home going to affect the sale price?
- 

## Target Audience:

- For the prospective home seller.
- As well as renovation contractors or DIYers.

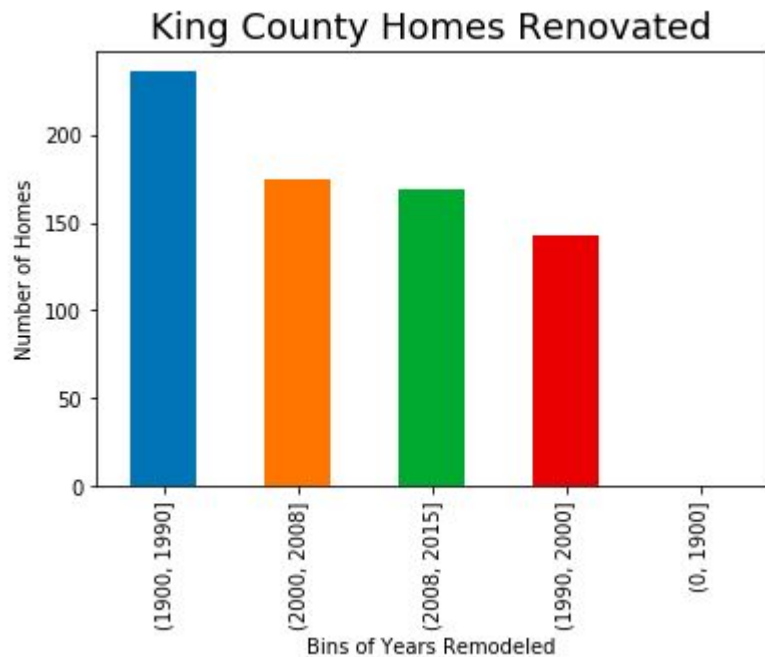
# King County, Washington Homes



Source: Panda Dataset, Python Matplotlib

Folium: Leaflet | Data by © OpenStreetMap

# Years That Homes Were Renovated



```
# Total Number of Homes, Median Homes Renovated, Most Recent Renovation
data.yr_renovated.describe()
```

```
count    21597.000000
mean      68.758207
std       364.037499
min        0.000000
25%        0.000000
50%        0.000000
75%        0.000000
max       2015.000000
Name: yr_renovated, dtype: float64
```

```
# Number of Homes Never Renovated, Years with most Renovations
data.yr_renovated.value_counts().head()
```

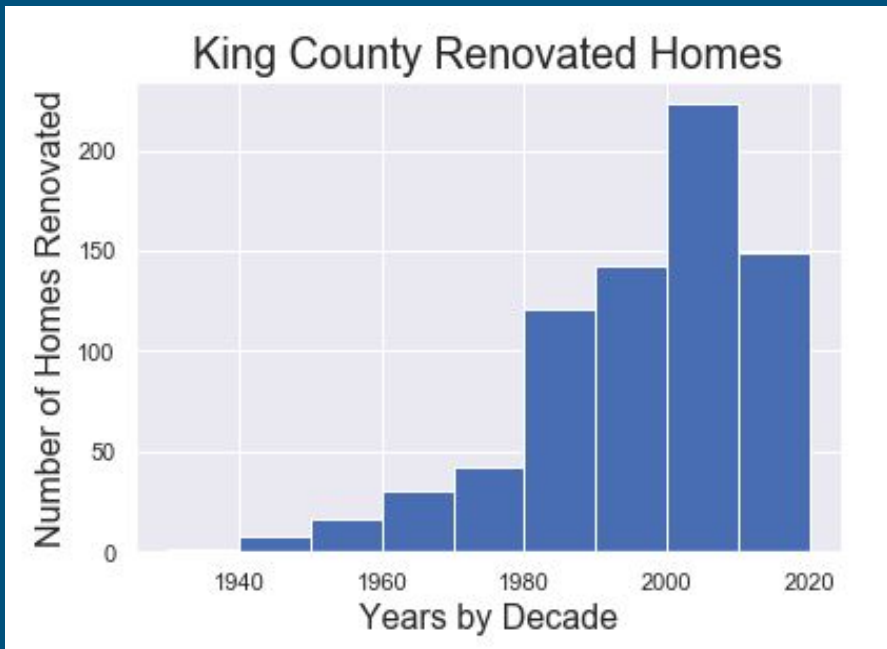
```
0.0         20853
2014.0         73
2003.0         31
2013.0         31
2007.0         30
Name: yr_renovated, dtype: int64
```

```
# Percent of Homes Not Renovated
len(data.loc[data["yr_renovated"] == 0])/len(data.yr_renovated)
```

```
0.9655507709404084
```

```
# Number of Homes Renovated
len(data.loc[data["yr_renovated"] > 0])
```

# Renovated Decades and Price



Histogram Plot



Regression Line Scatter Plot

# Renovated Home Coefficients (Two Models)

|                     |            |
|---------------------|------------|
| yr-ren_[0, 1900]    | -1.421e-07 |
| yr-ren_[1900, 2000] | 3.724e+04  |
| yr-ren_[2000, 2010] | 1.453e+05  |
| yr-ren_[2010, 2020] | 7.45e+04   |

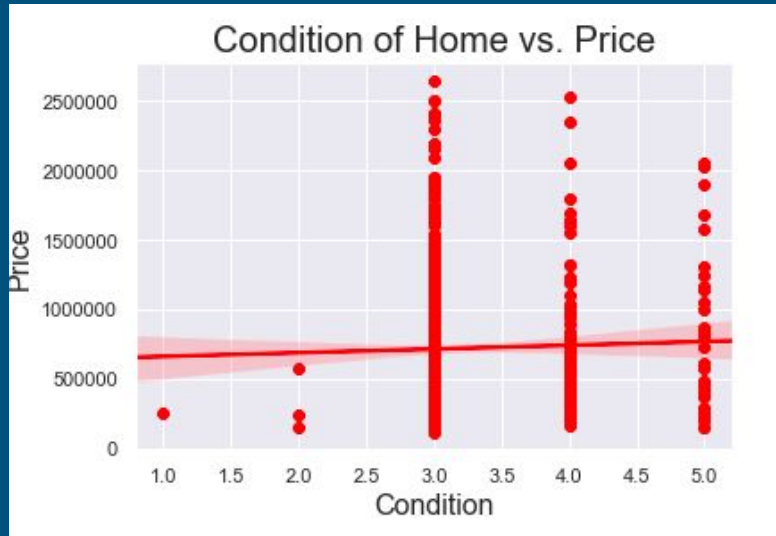
|                     |            |
|---------------------|------------|
| yr-ren_[0, 1900]    | 1.148e-10  |
| yr-ren_[1900, 1990] | -5.865e+04 |
| yr-ren_[1990, 2000] | 5.306e+04  |
| yr-ren_[2000, 2008] | 1.445e+05  |
| yr-ren_[2008, 2015] | 7.198e+04  |

In both models the largest coefficient was in (0, 1900] bin - or homes that had not been remodeled.

Outside of this, homes remodeled fairly recently (in the early 2000's) had the most impact on home price.

Additionally, homes remodeled in the 70's or 80's actually had a negative impact on the price.

# Condition of Homes



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# Conclusion

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Looking at the data there appears to be a slight correlation of the homes that were renovated and an increase in price. According to a least one model with a pretty high fit, homes that were not renovated at all lead to a lower price. This leads to the conclusion that while your return on investment remains less clear, remodeling in some matter should yield a higher price.

Condition, while it seems like an important feature, turns out to have very little impact on the price of the home. Perhaps this is because most home buyers plan on doing a significant amount of painting, decorating, and renovating themselves - making the home more personalized and relating to their own style.



# Future things to include in the dataset

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- Proximity to Industrial Centers - (distance from Homedepot, Lowes, Ace Hardware)
- Types of renovations done - (kitchens, bathrooms, landscaping, indoor/outdoor)
- Person/Company doing the rating - (condition, grade, etc.)

# Thank you for your time!

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Questions?  
Comments?

Sources:  
Python Pandas  
GitHub  
Flatiron School  
Matplotlib  
[www.kingcounty.gov](http://www.kingcounty.gov)  
Leaflet | Data by ©  
OpenStreetMap