

Insights into Housing in King County, Washington

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introduction

Study Outline:

Using residential property sales data from 2014 May to 2015 May, we attempt to draw insights on the housing stock to identify

- popular trends throughout time
- where the affluent areas are
- If older houses are more expensive than new houses

And ultimately try to predict the house price.

End customer in mind

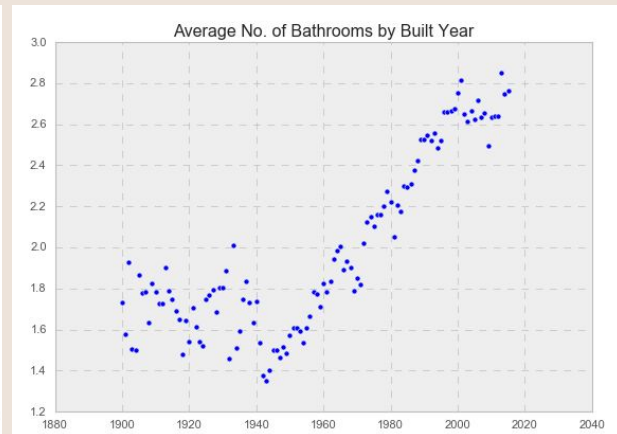
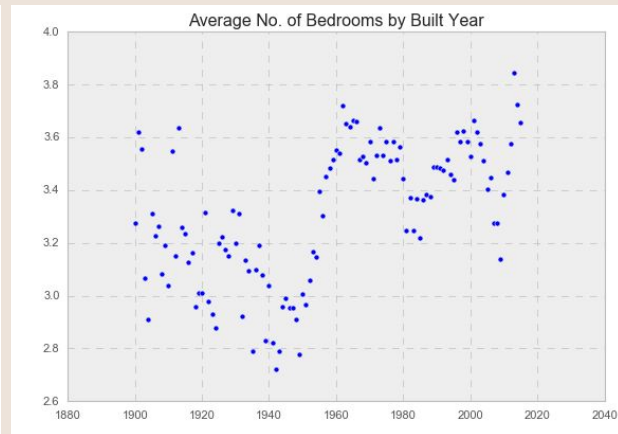
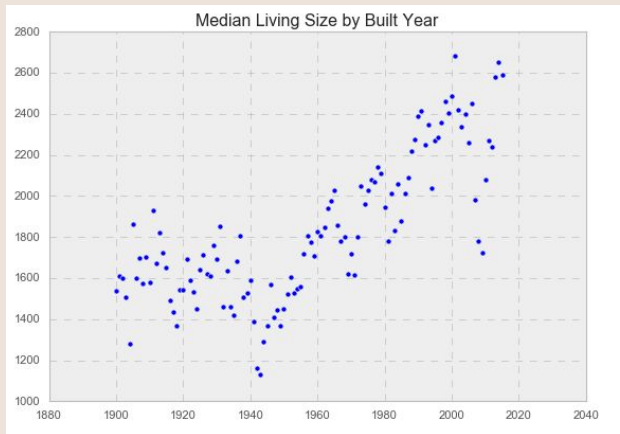
When exploring the data for insights, we may have different end customer in mind, they could be

- Real estate agents when trying to value a property
- Real estate agents when advising buyers on areas of affordability
- Individual property investors when looking to resale for gain

Are houses getting bigger over time?

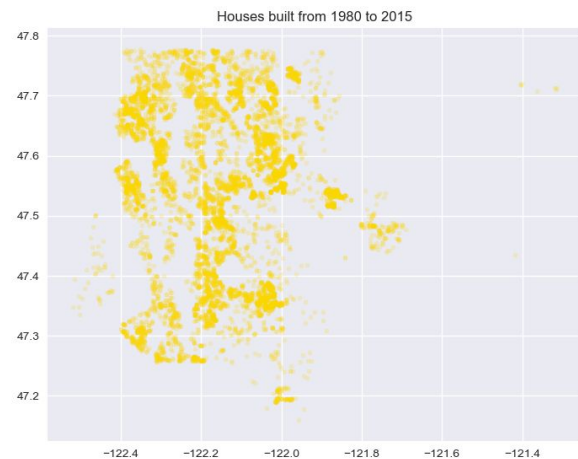
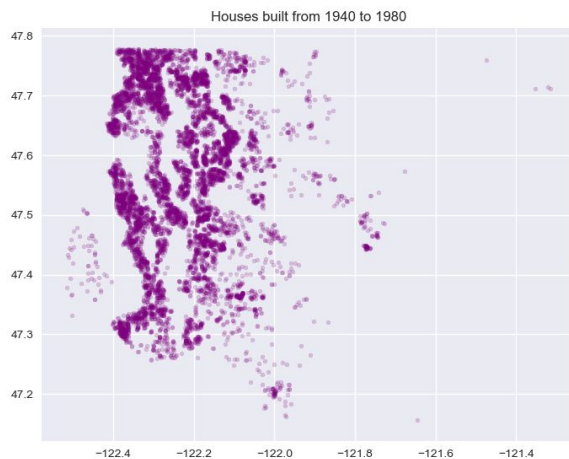
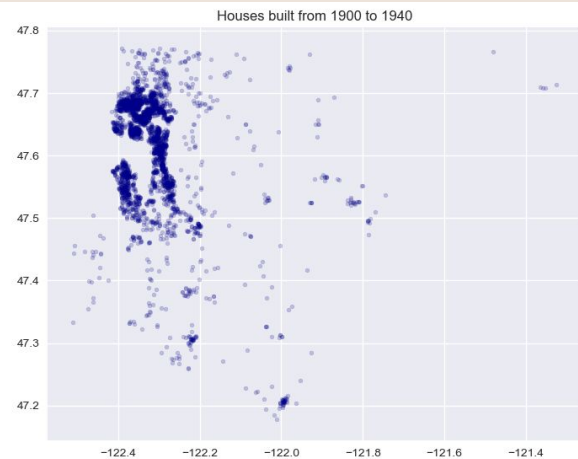
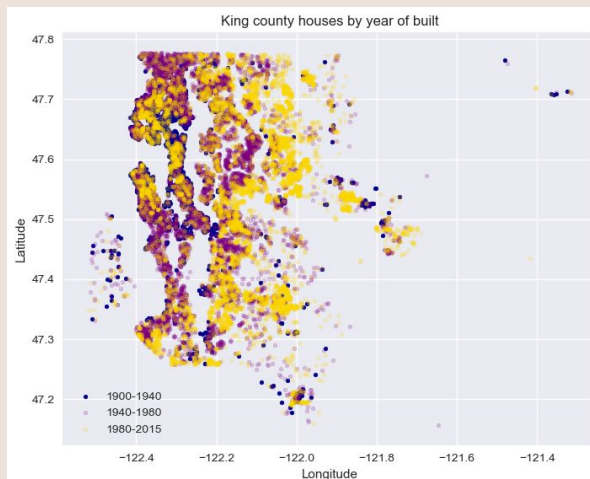
Yes, although the living size of houses decreased during the great depression in the 30s, post-war they have been on an increasing trend until the recent financial crisis.

- Average number of bedrooms increased post-war as baby boomers arrived and families require more bedrooms
- Average number of bathrooms continue to rise, signalling more of a lifestyle change that consumer want more bedrooms



Where to find a nice historic property?

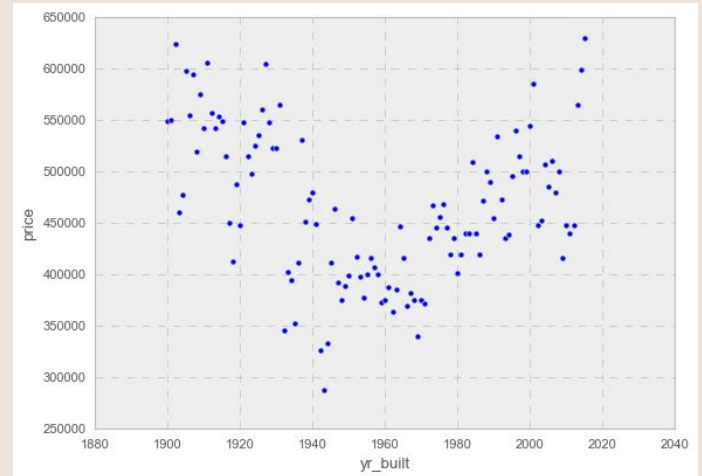
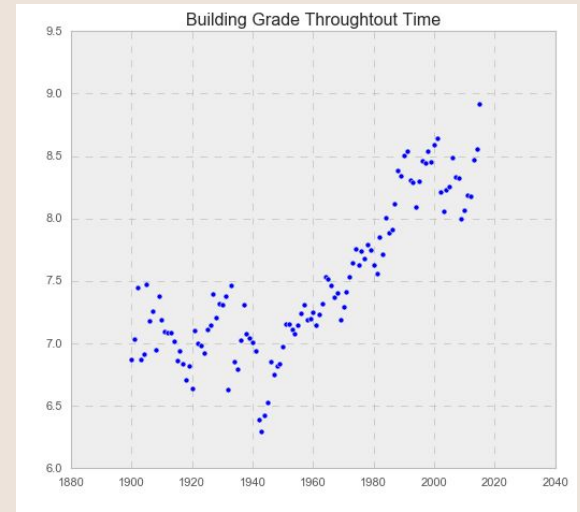
Most are in the city of Seattle



Are new houses more expensive than old houses?

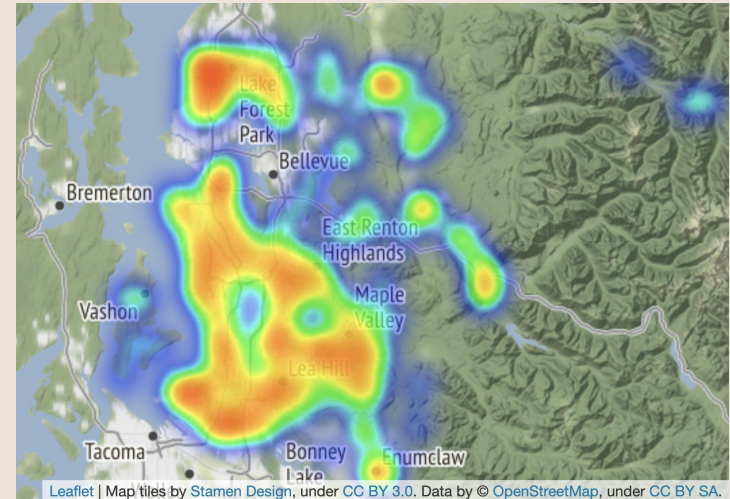
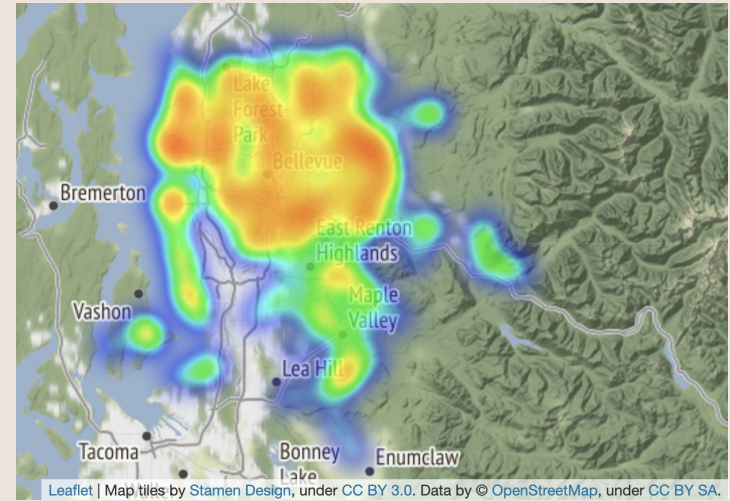
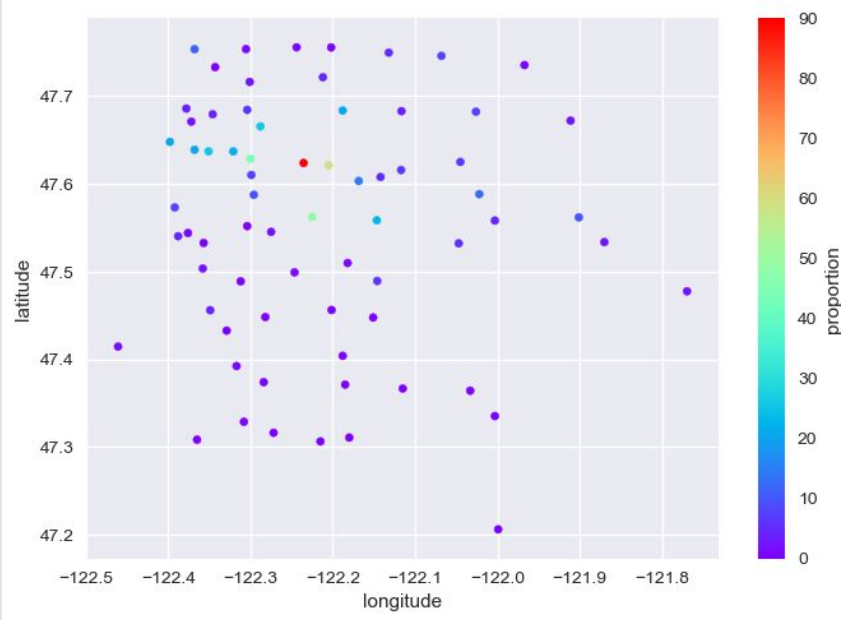
Not really, although there is a clear trend that newer houses are much better in terms of construction quality

Pre-war historic properties cost the **same** as the modern properties



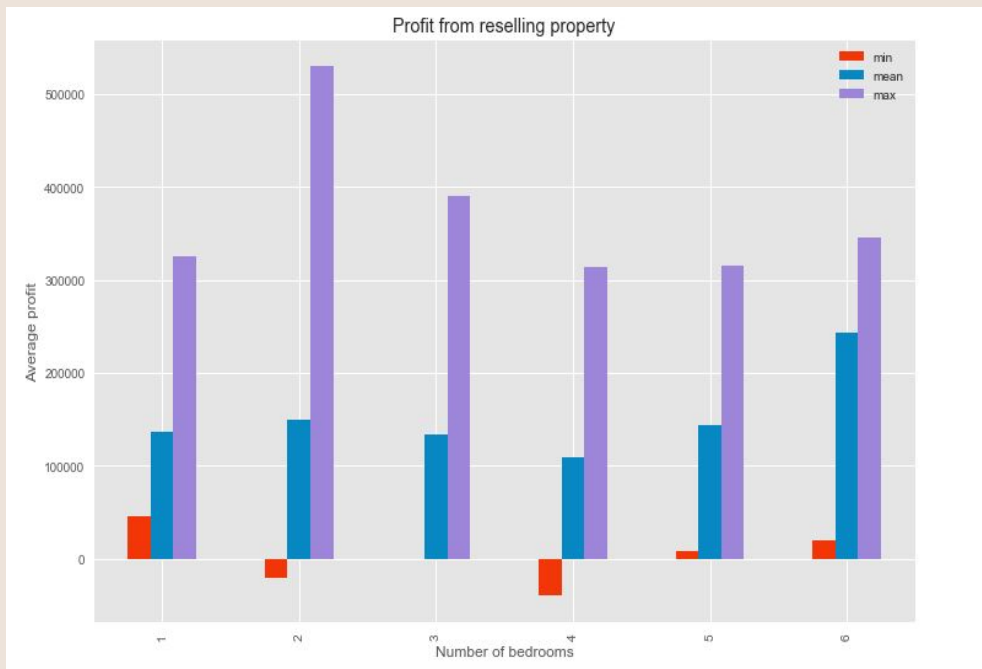
Where are the expensive houses?

If you want to live next to your millionaires friends, move to **Medina, WA 98039**



How to make the most profit?

In the dataset, we noticed that there were multiple houses that had been bought and resold within the year. With this data, we wanted to explore the profit earned on a property by reselling



Out of the 21000+ house sales, we only had a total of 176 houses that were resold.

We can see that the average profit does not vary much. **However the maximum and minimums indicate the risk and reward involved in re-selling a property. The greatest profit earned was on a 2 bedroom property.** However this could be influenced by the location of the property. We did not have enough data to explore how the area affects the potential profit.

The million \$\$\$ question...

what drives house price

Our predictive model

Shows that

- Size of living space in square foot
- Being on the waterfront
- Being located more north relative to county area

All drive up the house price.

For example,

- A property of 1,000 sq. ft in size, located in the middle of the King County is predicted to be worth \$190k
- If it were built on a waterfront, it could be worth up to \$380k.
- If it were built to be 1,100 sq. ft in size, its valuation would increase by \$15k

Note: we have imagined our user for this model is house builders in working out an estimate of sale price.

Q & A