King County House Sales

Module 1 Project

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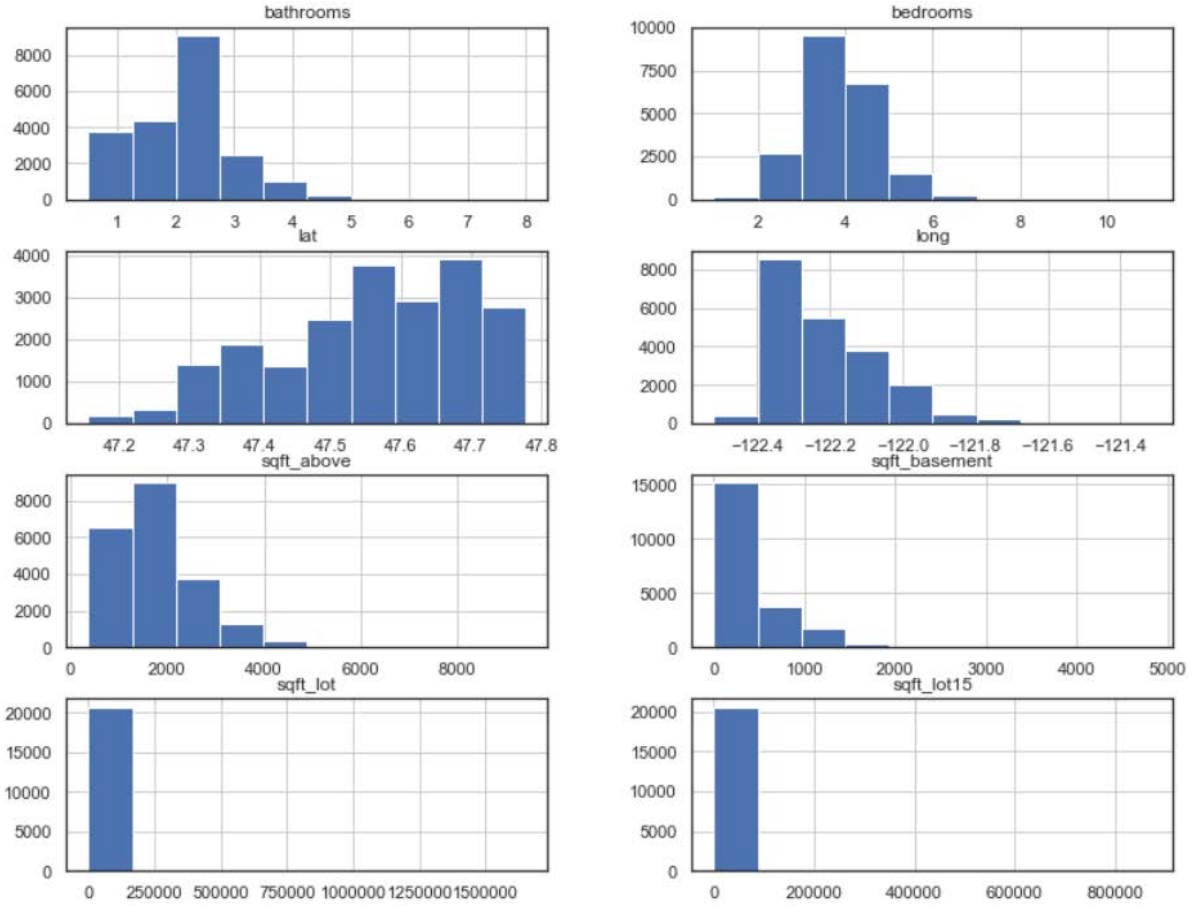
PT 041519

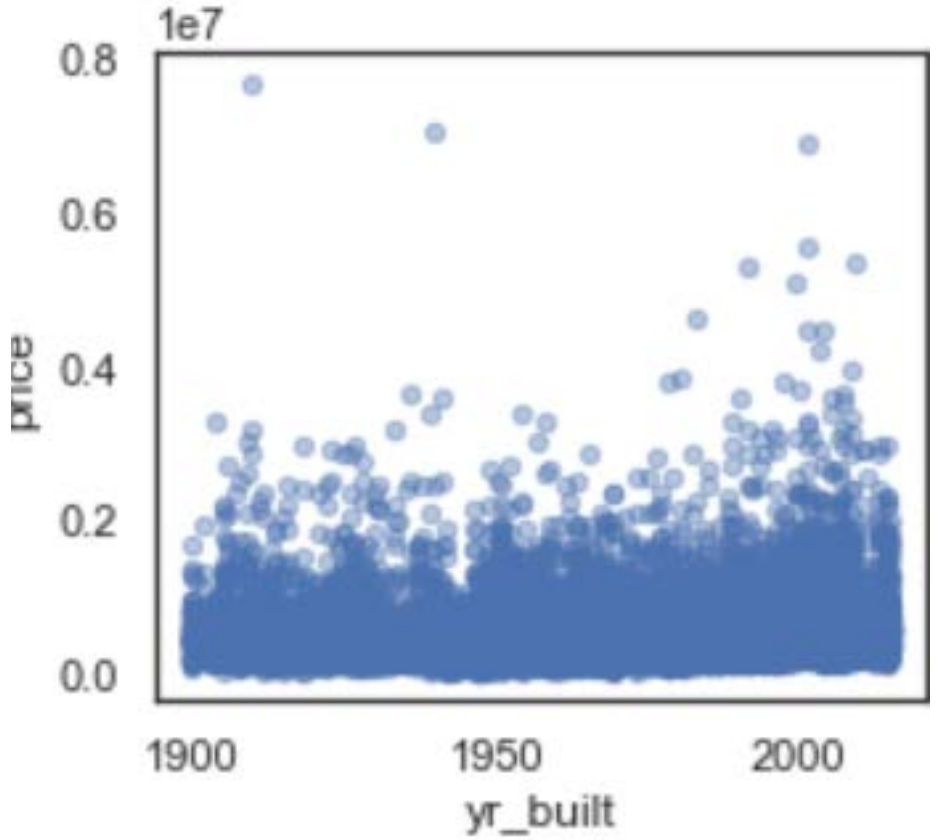
Background

- Data from King County House Sales dataset
- Around 21,000 rows of house sales data with date ranged from September 9, 2014 to October 1, 2015
- Use python code to clean, explore this dataset with a multivariate linear regression to predict the sales price of houses

What factors are affecting prices?



What factors are NOT affecting prices?



Multivariable Regression Model

Dep. Variable:	price	**R-squared:**	0.774
Model:	OLS	**Adj. R-squared:**	0.773
Method:	Least Squares	**F-statistic:**	3579.
Date:	Tue, 25 Jun 2019	**Prob (F-statistic):**	0.00
Time:	21:40:16	**Log-Likelihood:**	-739.25
No. Observations:	20967	**AIC:**	1520.
Df Residuals:	20946	**BIC:**	1687.
Df Model:	20		
Covariance Type:	nonrobust		

The model can predict house prices with 77% of accuracy.

Interpretation

Increase in the interior living space in the nearest neighborhood = +26% in price

Increase in the living space of the house (apart from basement) = +38% in price

Increase in the housing grade = +16% in price

Further Analysis

- Remove more variables and only leaving the ones that are highly relevant
- Better analyze the categorical data such as “Zipcode” and “Grade”
- Explore “Waterfront” and its effect on prices or how this may relate to “Zipcode”

Thank you!

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