



King County Housing Analysis Project

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Date: Dec 4 2019

Facts and Figures

King County is a great place to invest!

- Population: 2,233,163 (United States Census, 2018).
- Average household income: **\$73,035** per year
- One of the highest economic growth in the country in recent years

(source: <https://www.bestplaces.net/economy/county/washington/king>, 2019)

Total Area: **5,975 km²**

Total housing units: **902, 107**

200 public parks

72 schools

More than 20 shopping malls

(source: <http://www.seattlebusinessmag.com/>)



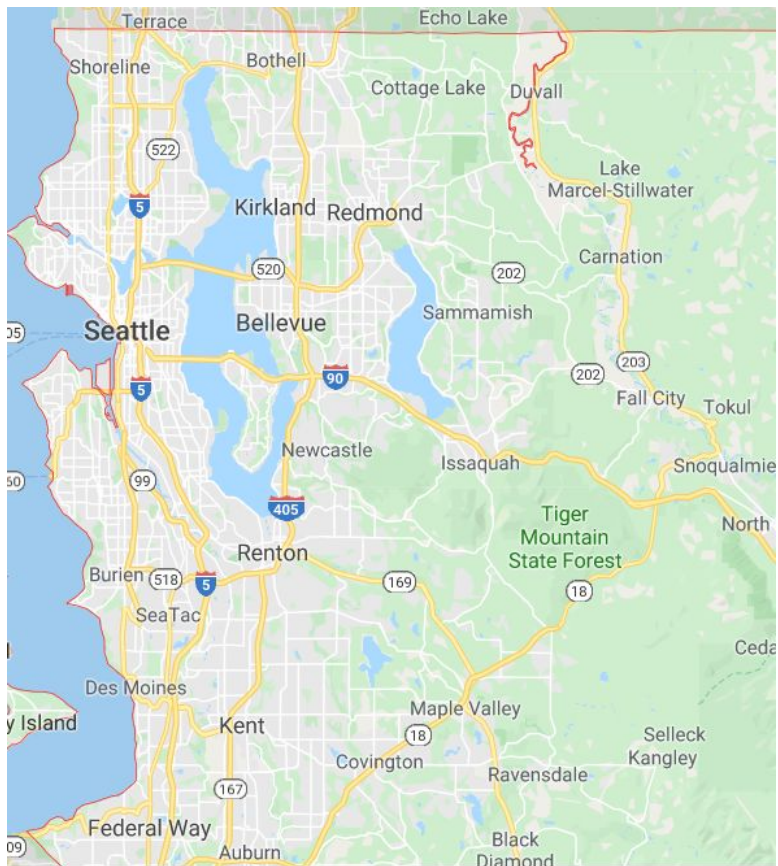
Lake Washington, King County - Seattle

Geographical Features Affecting Price

Heat map showing the distribution of square footage of living area according to their price.



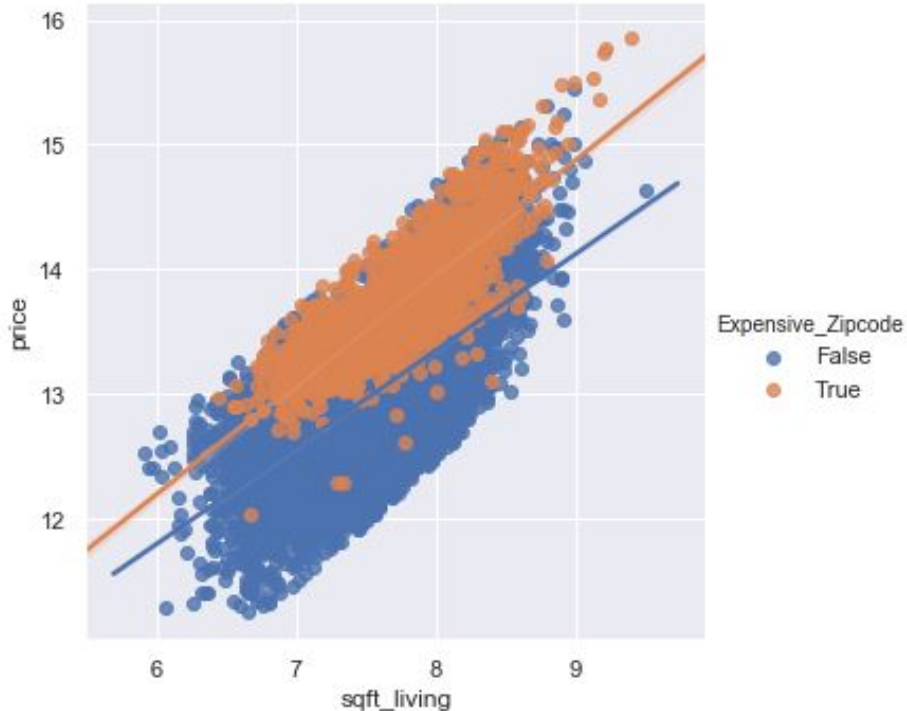
Location, Location, Location!



Premium Regions:

- **Kirkland**
- **Newcastle**
- **Sammamish area**
- **Mercer Island**

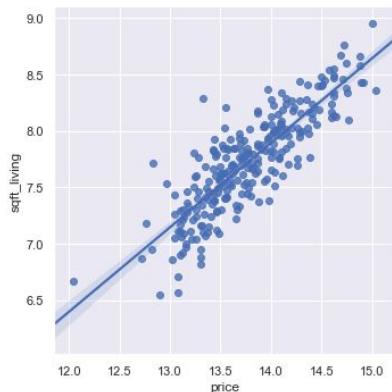
Are internal factors more important in the higher priced Zipcodes?



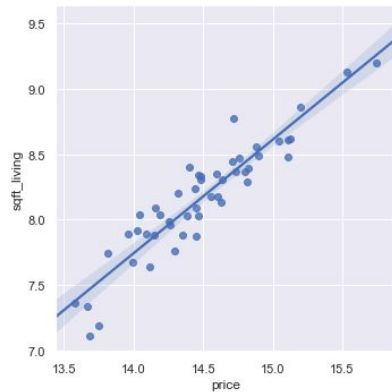
- Average house price for Zipcode and Sqft_living showed the closest relationship with Price
- Sqft_living's relationship with price increased when just looking at the high priced zipcodes
- The graph shows that the high priced zipcode houses are much less dispersed than the rest of that data

Are internal factors more important in the higher priced Zipcodes?

Zipcode: 98112

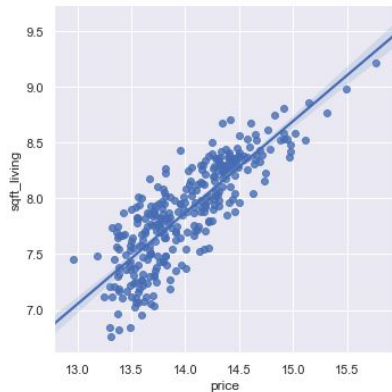


Zipcode: 98039

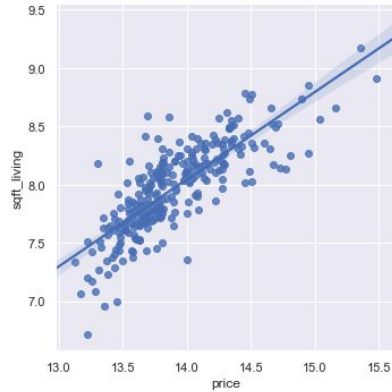


- These are 5 of the high priced zipcodes
- There is a positive correlation with price and sqft_living
- This suggests that as you increase the size of your house the value increases proportionally more than other priced houses

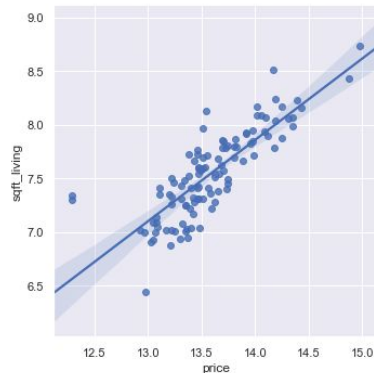
Zipcode: 98004



Zipcode: 98040

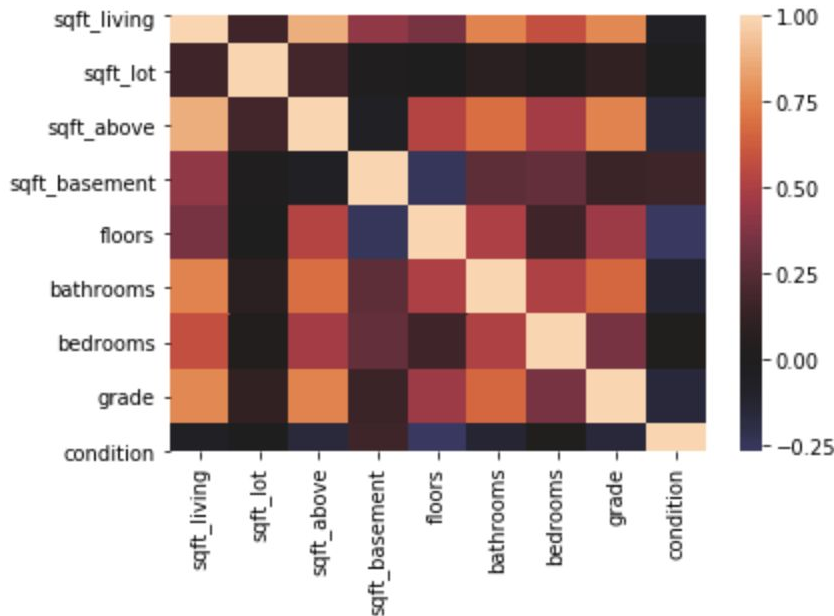


Zipcode: 98109

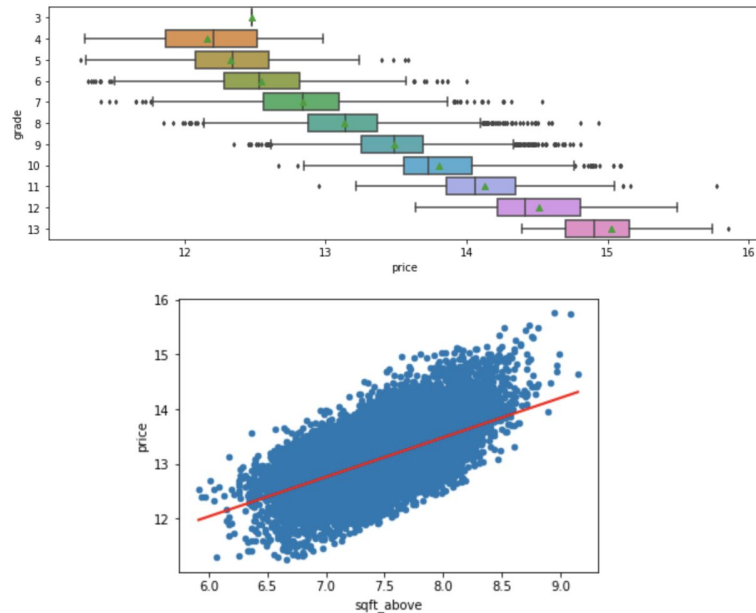


How do property internal features affect housing price?

Correlation between each internal features



Relationship between price and grade/sqft_above



- sqft_living has high correlation with other features
- sqft_above and grade features have stronger impact

How do property internal features affect housing price?

Internal features that have strong impact on price:

sqft_lot, sqft_above, sqft_basement, floors, bedrooms, grade, condition.

OLS Regression Results

Dep. Variable:	price	R-squared:	0.600
Model:	OLS	Adj. R-squared:	0.599
Method:	Least Squares	F-statistic:	538.0
Date:	Wed, 04 Dec 2019	Prob (F-statistic):	0.00
Time:	10:24:53	Log-Likelihood:	-6888.1
No. Observations:	21595	AIC:	1.390e+04
Df Residuals:	21534	BIC:	1.438e+04
Df Model:	60		
Covariance Type:	nonrobust		

Suggestion:

- property agency just focus on few features
- ignore square foot per living, bathroom as the information has indirectly shown in other features)

Thank you