



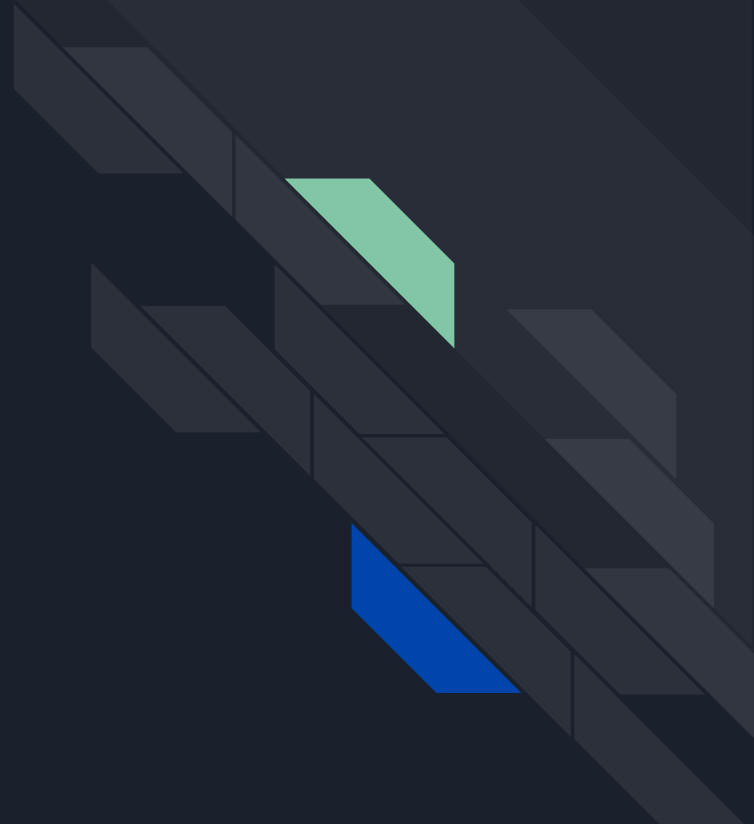
# Home Pricing Project

Home pricing models for the city of Seattle  
By Zander Bailey and Anna Zubova

# Team Z

Zander

Anna





# Sales Data for King County Homes

- Based on sales during 2014-2015
- Includes many features
- Basis for prediction model
  - Average buyer

date	price	bedrooms	bathrooms	sqft_living
10/13/2014	221900.0	3	1.00	1180
12/9/2014	538000.0	3	2.25	2570
2/25/2015	180000.0	2	1.00	770
12/9/2014	604000.0	4	3.00	1960
2/18/2015	510000.0	3	2.00	1680



# Process

Baseline Error - Average price

Feature optimization

Budget - 1.2 million



# Model

- Included distance from commercial centers
  - Bellevue
  - Downtown
  - South Lake Union
- Model explains about 73% of the variation of data

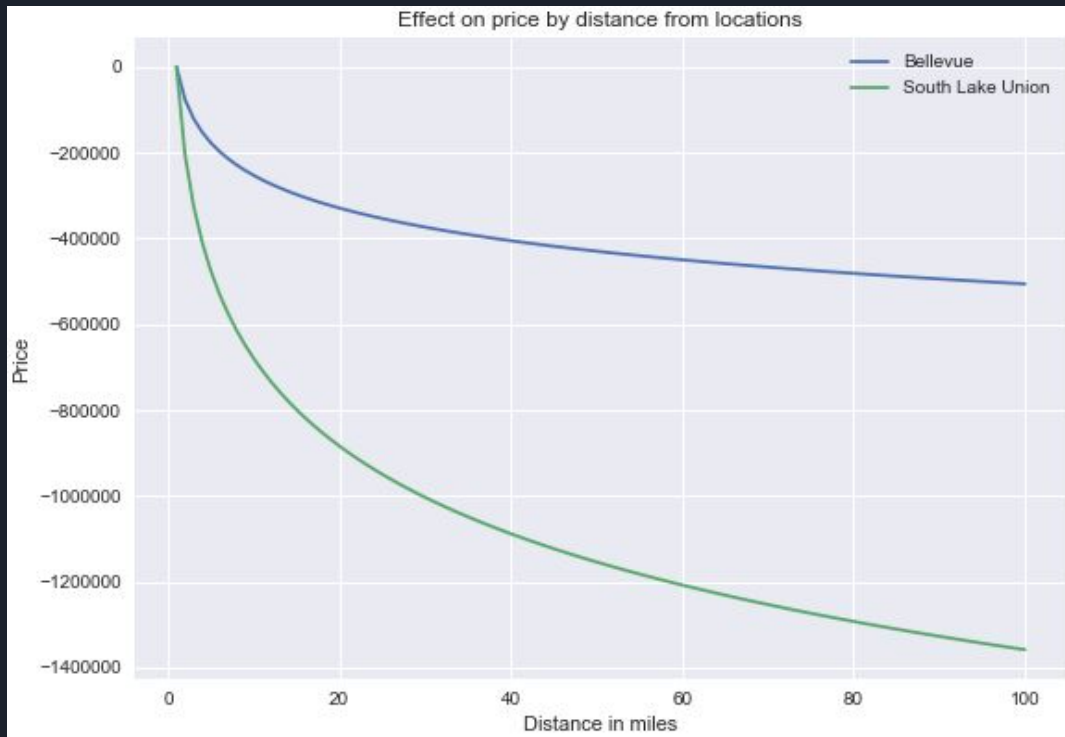
OLS Regression Results			
Dep. Variable:	price	R-squared:	0.727
Model:	OLS	Adj. R-squared:	0.727
Method:	Least Squares	F-statistic:	3890.
Date:	Wed, 17 Apr 2019	Prob (F-statistic):	0.00
Time:	17:25:29	Log-Likelihood:	-2.6599e+05
No. Observations:	20439	AIC:	5.320e+05
Df Residuals:	20424	BIC:	5.321e+05
Df Model:	14		
Covariance Type:	nonrobust		



# Strongest predictors: what to look for

- Proximity to South Lake Union
  - For every **500 ft** increase in distance from South Lake Union, the price will decrease approximately by **\$28,000**
- Waterfront location
  - Increases the price by approximately **\$280,000**
- 3 - 5 bathrooms
  - Increases the price by approximately **\$121,000**

# Prices in Proximity to Areas





# Other Factors

- Square ft :

price up by **\$161.11** for every additional square foot

- Square ft of the nearest 15 houses:

price up by **\$ 72.38** for every additional square foot





# Evaluation

- Model reduced errors by **70%** from baseline metric
- Location, Location, Location
- Mean absolute error : **\$83,589**

Questions

