

### INTRODUCTION

- This research exercise looks to inform investment decision makers about the real estate market in King's County
- Through price modeling we hope to show what are the key property features for price determination and how accurately it is possible to model property valuation.



What are the most important predictors of a property's value?

How do zip codes differ from each other in terms of best predictors?





What zip codes have the most predictable prices?

### DATA SETS USED

This dataset contains house sale prices for King County, which includes Seattle. It includes homes sold between May 2014 and May 2015.

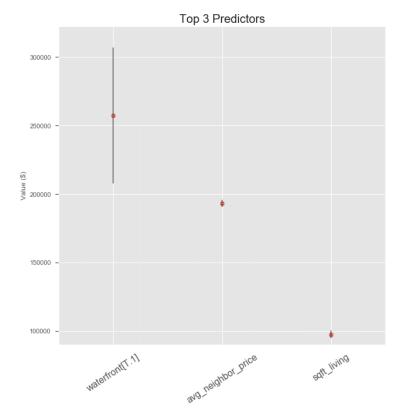


WHAT ARE THE MOST

IMPORTANT PREDICTORS

OF A PROPERTY'S VALUE?

The underlying assumption is that a few predictors will have most of the explanatory power.



#### **Conclusion**

The top 3 most important predictors are the features waterfront, (indicates if the property is in a waterfront area), the average price of its neighboring properties sold, and the living area.

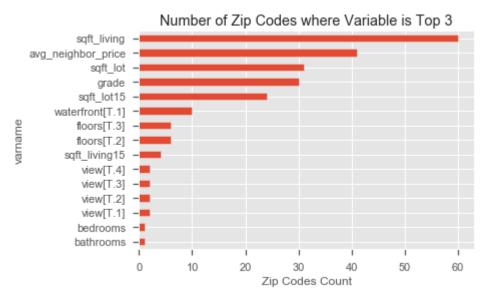
When sourcing new leads, it is advisable that properties are evaluated initially by these features

HOW DO ZIP CODES

DIFFER FROM EACH OTHER
IN TERMS OF BEST

PREDICTORS?

 The underlying assumption is that zip codes have specific market dynamics



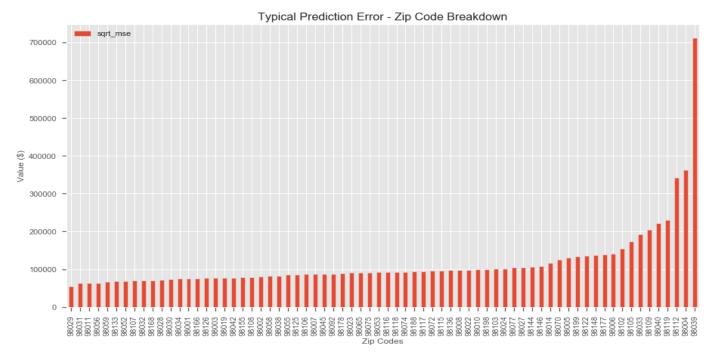
#### Conclusion

Conclusion: the top variables vary significantly across different zip codes. However, it is clear that the one that are ubiquitous are living area, average price of neighboring properties, lot area, grade, and lot area of neighboring properties.

It is recommended that when expanding coverage, the firm focuses on collecting and evaluating this types of data for the enrichment of its machine learning processes.

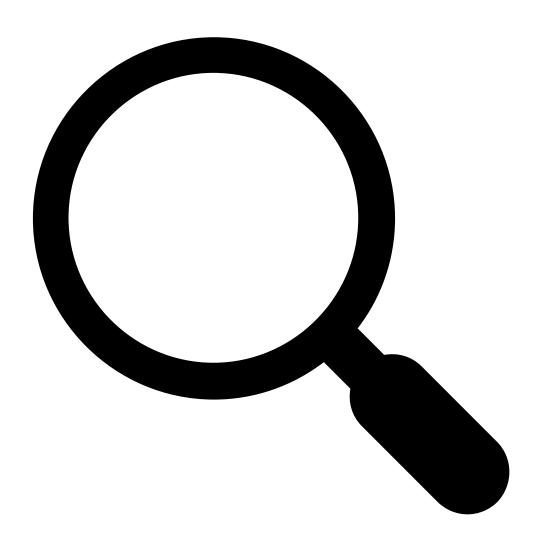
WHAT ZIP CODES HAVE THE MOST PREDICTABLE PRICES?

The underlying assumption is that prices will be more predictable in certain zip codes. Those should be easier regions for the company to start its operations, since the risk of pricing would be lower.



#### **Conclusion**

Most zip codes have similar typical errors, and therefore present comparable risks in this metric. However the ones with higher error margins should be more carefully accessed before operations are expanded



# FURTHER INVESTIGATION

CAN ZIP CODE SPECIFIC MODELING IMPROVE THE ACCURACY OF PRICE PREDICTION?



## THANK YOU