DON’T ROAM
BUY A HOME

Business Problem

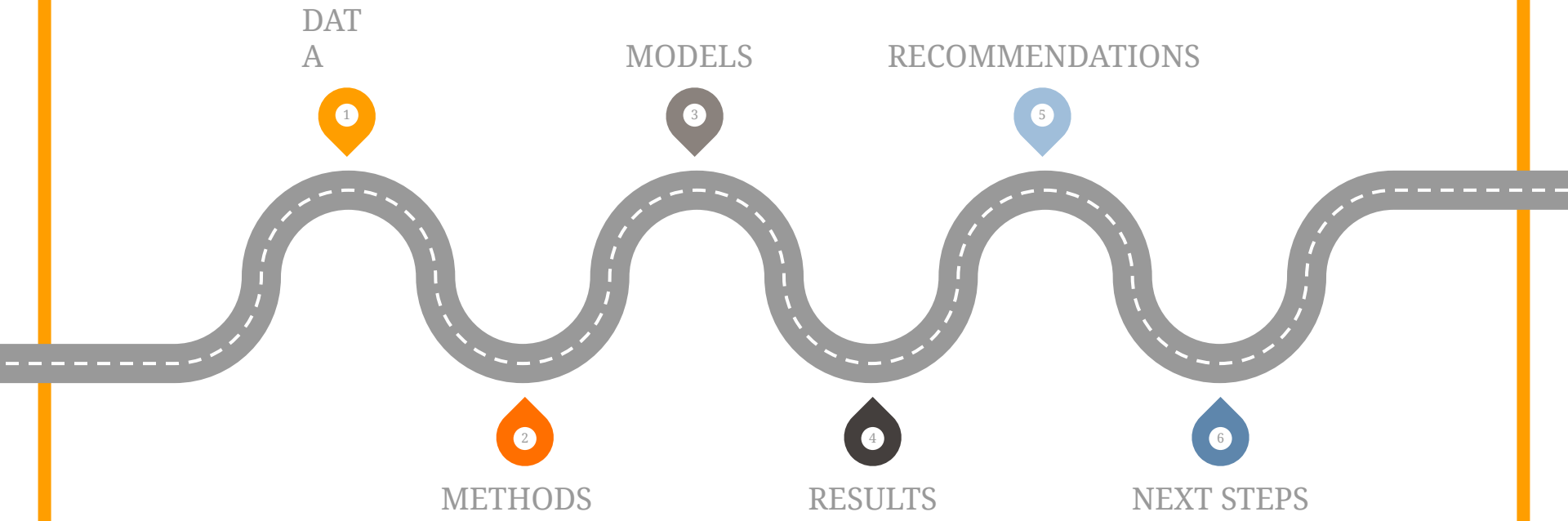
We are trying to help users buy a home by making an educated choice that is the best financial investment they can with their budget

?

Questions we are going to help answer:

- What is the best neighborhood to look into given my budget?
- What are the most important factors to focus on?
- Would it be better to buy a new property or a fixer-upper and use the extra money to renovate?
- When would be the best moment to buy?

HOW ARE WE GOING TO GET THERE?



The Data:

King County Data set with information about house sales

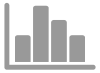
Methods

- Data cleaning
- Data transforming
- Linear Models
- Feature Engineering
- Polynomial Fits

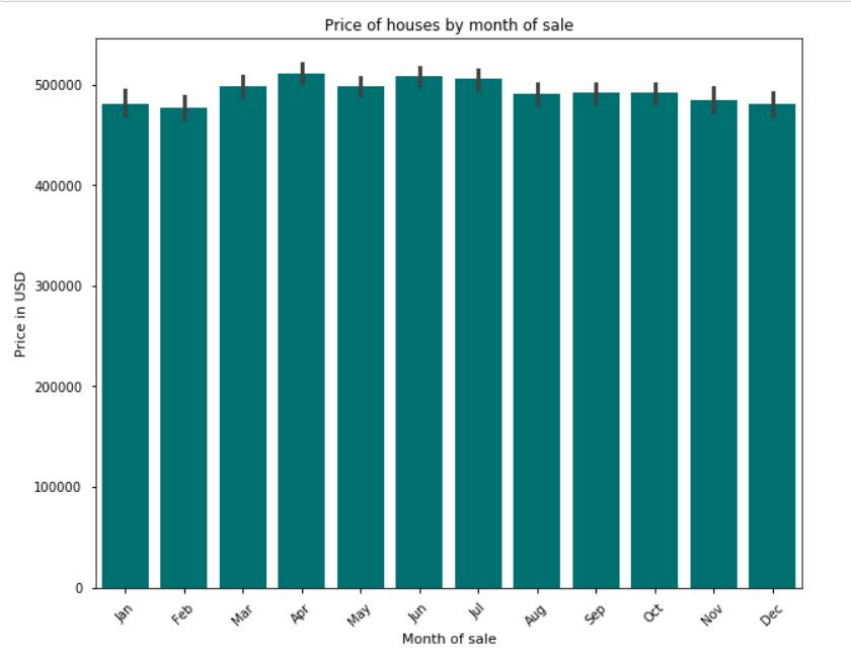
Linear Regression Models

Models which try to estimate the strength and direction of the relationship between two or more variables.

When evaluating the goodness of these models we can look at R squared and MSRE.



Results



MONTHS of the SALE

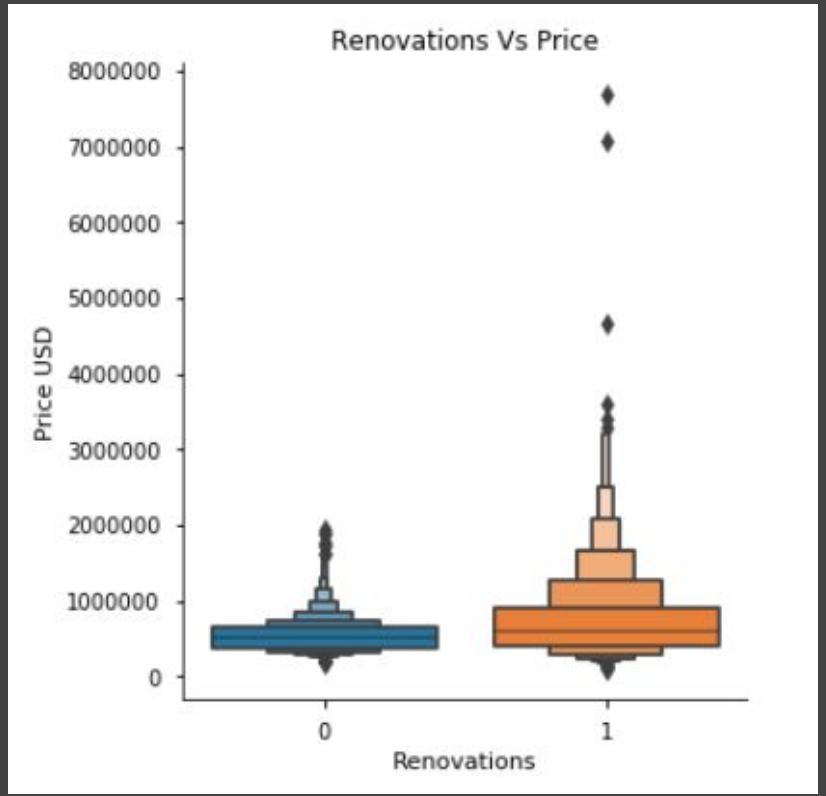
We saw that there is a difference in the average price of the sales of houses based on the season in which the house got sold.

Winter and Fall are the seasons with lower prices.
Spring and Summer are the seasons with higher prices.

RENOVATIONS

We found that there is a substantial difference in average price of houses that had renovations done compared to houses that didn’t.

We made sure to compare two groups of houses that had similar number of bedrooms bathrooms and square footage.



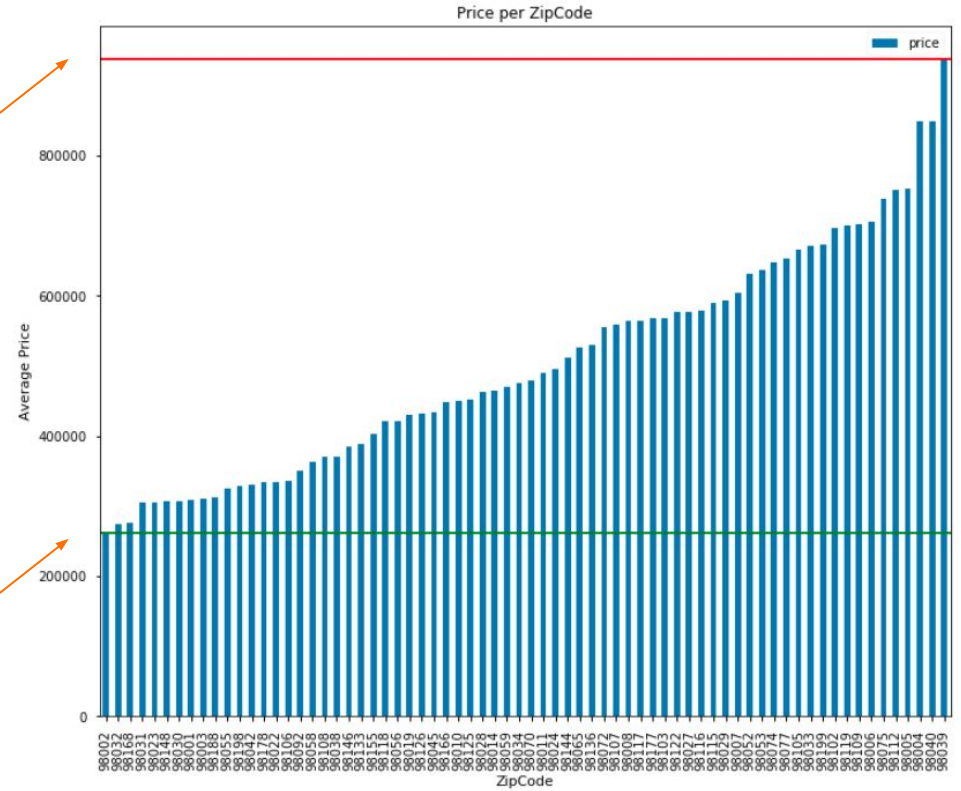
ZIP CODE

We found very different average prices of houses based on the area where they are located.

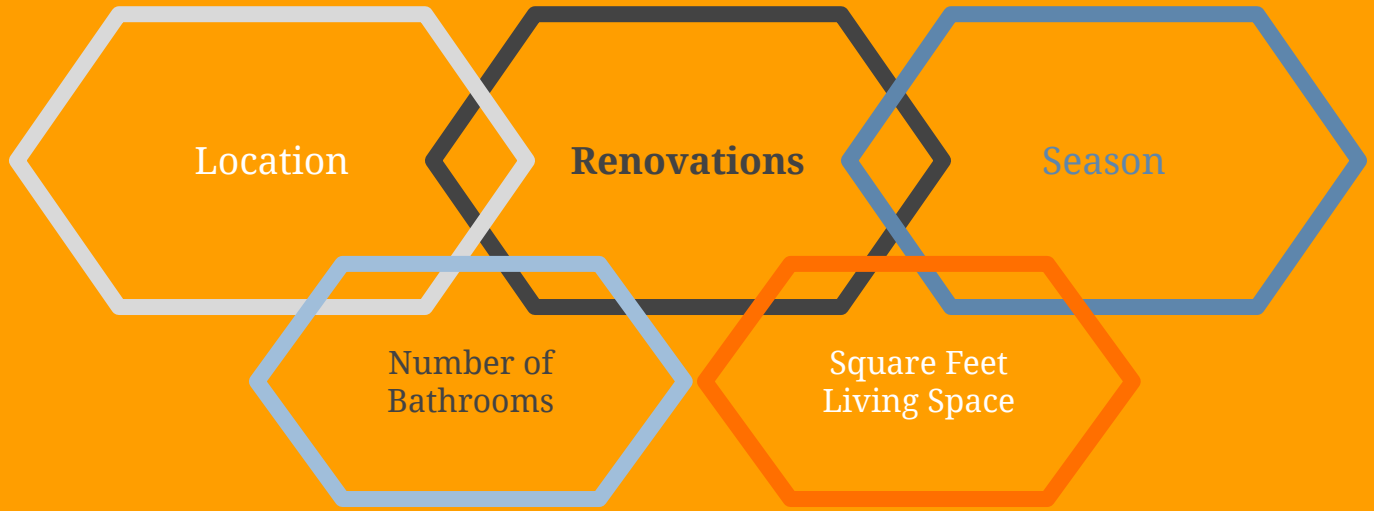
Latitude, longitude, and zipcode turned out to be some of the most influential factors in our analysis.

~940 K

~260 K



Most Relevant Factors



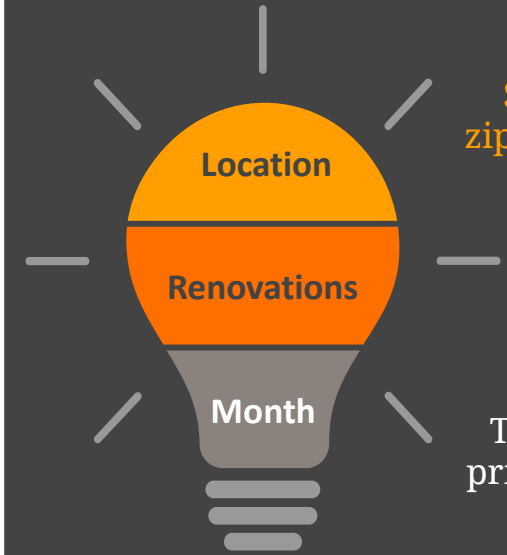
A few numbers to keep in mind

	Renovations	Zip-code	Months
Max	**769**	**938**	**511**
Min	**538**	**262**	**477**

Results expressed in thousands of $

We obtained these results with a model that has an R squared value of 0.80 and a Root Mean Squared Error of about 90,000

Recommendations

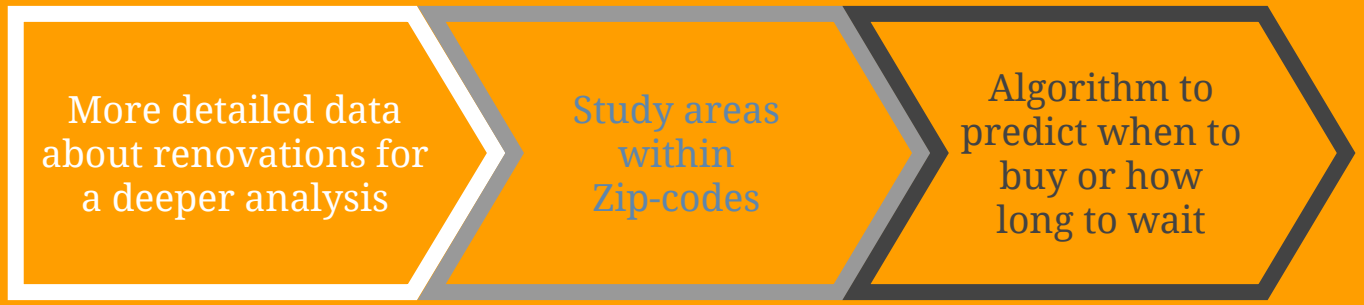


Scout areas that have houses in your price range: depending on the zipcode you can find two very similar houses with very different prices.

Save some of your budget for renovations: buying a house in worse condition but with more square footage and then improving it will render the best value for your money!

Try to buy during low season: winter months have the lowest average price sales, while houses tend to sell for more in the spring and summer.

Next steps:


More detailed data about renovations for a deeper analysis
Study areas within Zip-codes
Algorithm to predict when to buy or how long to wait

THANKS!

Any questions?

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