

# King County Housing Data Analysis



Prepared for Ramtuck Realty Group by Andres Ramirez

# Data Science Processes

## Data Understanding and Cleaning

We will be focusing on price as our target variable since it is dependent on various features present on our dataset.

## Deployment

Once our model received appropriate levels of validity and predictability, it was able to be generalized to King County Home Prices

## Business Understanding

Ramtuck Realty group will use the results obtained from this project to help their clients who have made specific requests about the home they are looking for within King County.

## Modeling and Evaluation

In order to complete this task we will use the following methods:

Simple Linear Regression graphs of the most promising x variables vs 'Price', our target variable.

R squared values in order to test how close the data is to the fitted regression line



# Methods



## Goal

The goal was to use the dataset to predict the price of homes given previous data



## Features

The most impactful features affecting home price were determined to be:

- Grade
- View
- Sqft. Living Area



## Dataset

2014-2015 King County, Washington Homes sales data, which provided 21 unique variables.



## Tools

The tools used to inform our model were:

- Numpy
- Pandas
- Statsmodels
- Sci-kit learn
- Matplotlib
- Seaborn

# Biggest Features Impacting Price

## Grade:

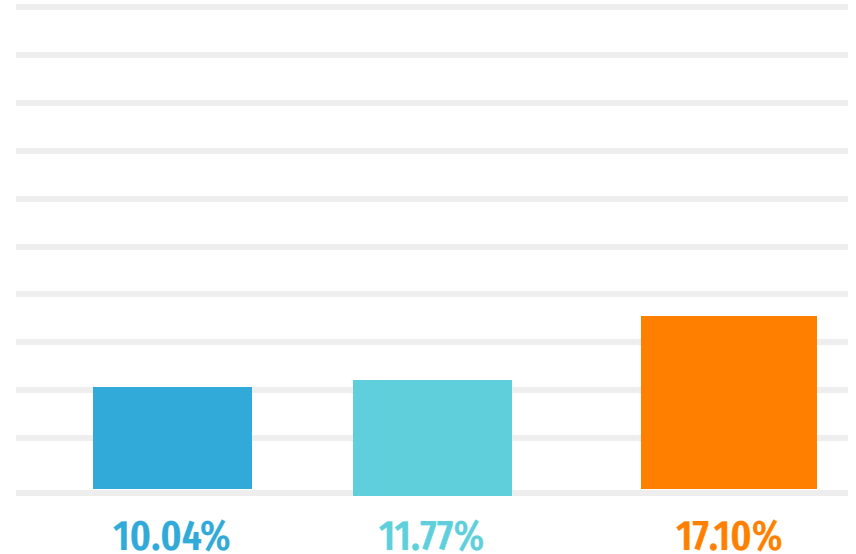
Overall grade given to the housing unit, based on King County grading system

## Sqft Above:

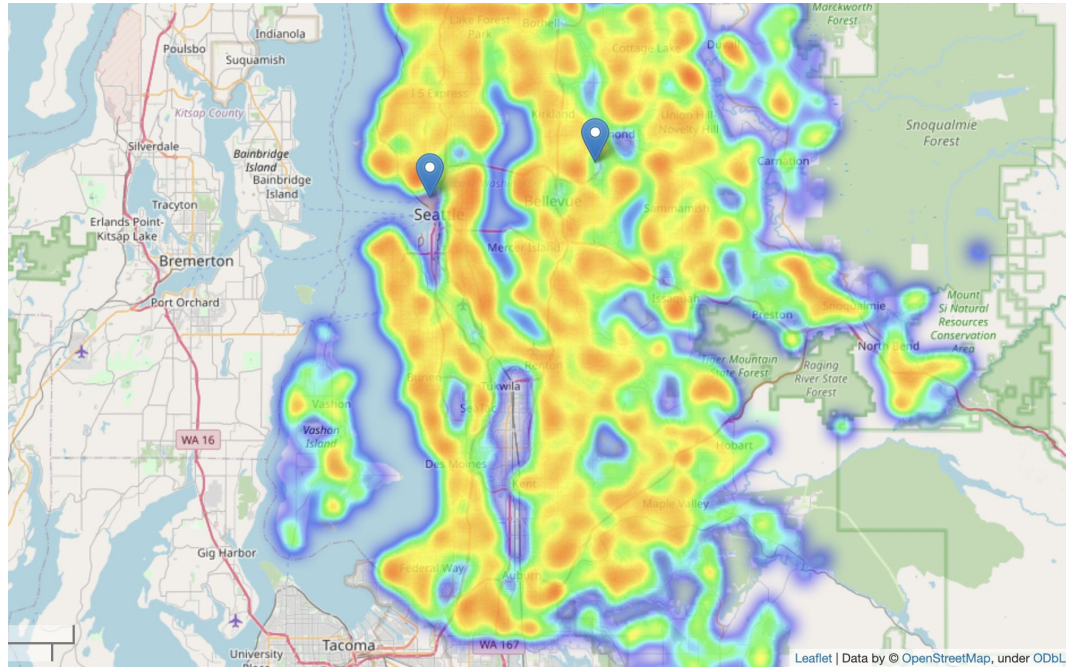
Square footage of house apart from basement

## Sqft living15:

The square footage of interior housing living space for the nearest 15 neighbors

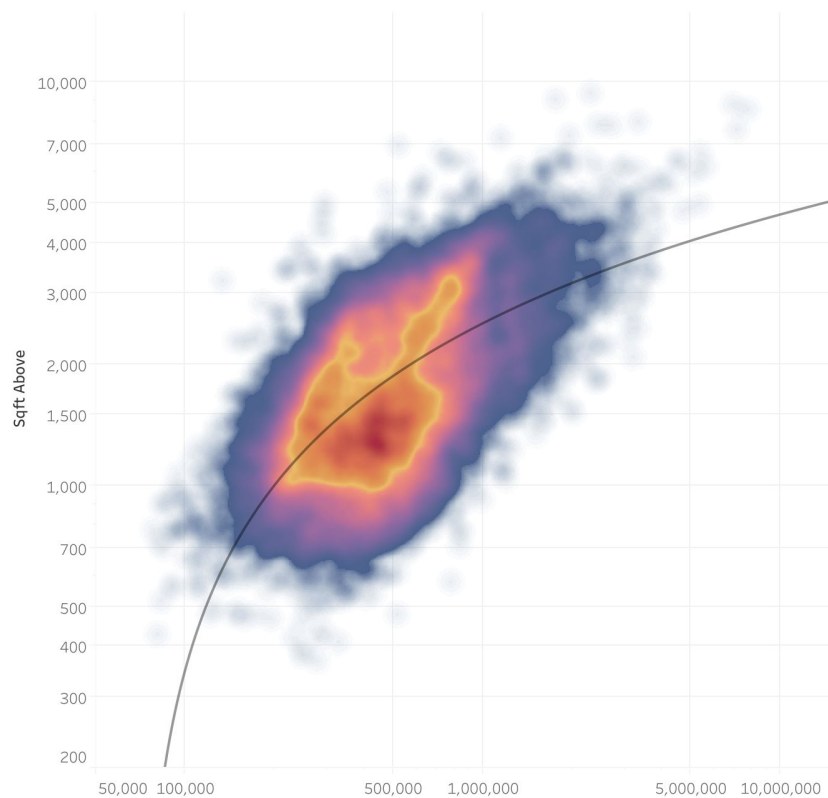


# Home Price around King County



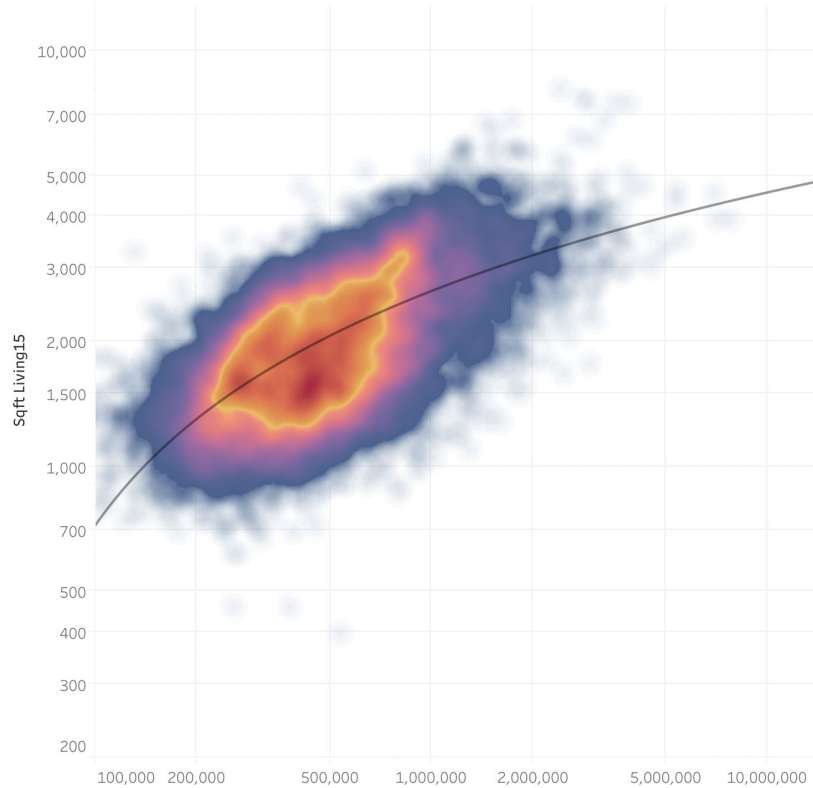
As our visualization becomes darker orange and red, home prices increase, these can be attributed to proximity to major cities, waterfront and new developments.

Square Feet Above vs. Price



- Home prices increase as square footage increases
- While we have some outliers the trend follows consistently

Square Feet Living of Closest 15 Neighbors vs. Price



- Square feet of the closest fifteen neighbors trends closely with price as we increase in size
- Data at this center proves the reliability of our model.
- Outlier can be attributed to other factors such as grade, and home location relative to city centers and zipcode.

# Thank You!

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- Github: <https://github.com/6cats1dog>
- Project Repository: <https://github.com/6cats1dog/KingCountyHomes>

