King County
House Pricing Model

By
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Objectives

Problem Statement

- What is a good ask price for my home?
- How much should I offer for a home?
- How to maximize the return on my real estate investment?

Business Value

- In order to make better economic decisions regarding real estate, it is important to understand how the home's particular characteristics influence its price.

Methodology

01
Gathering Data
King County housing features and prices data set.

02
Cleaning and Exploring
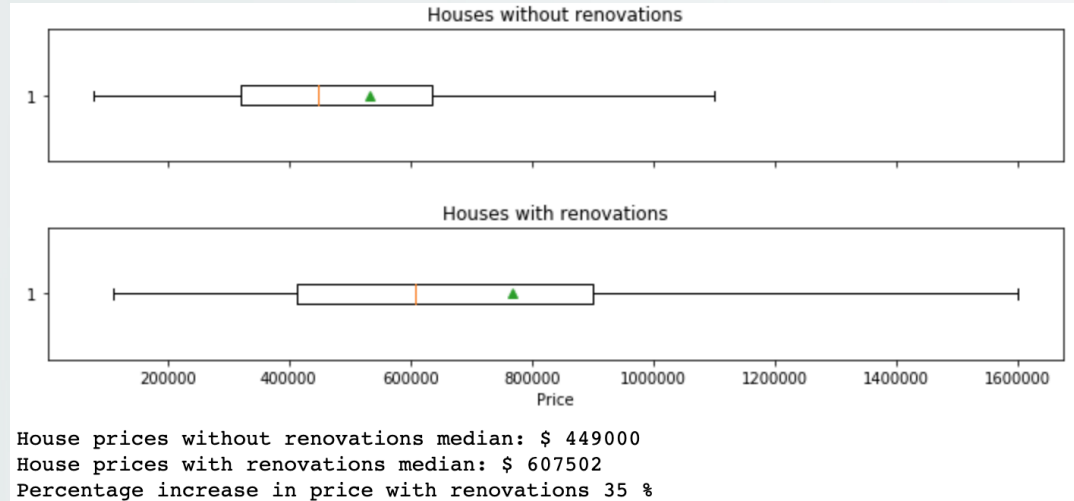Start answering relevant questions with the data.

03
Develop the Model
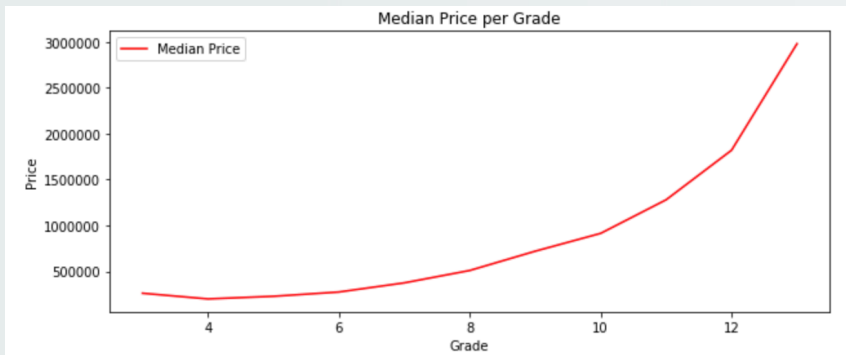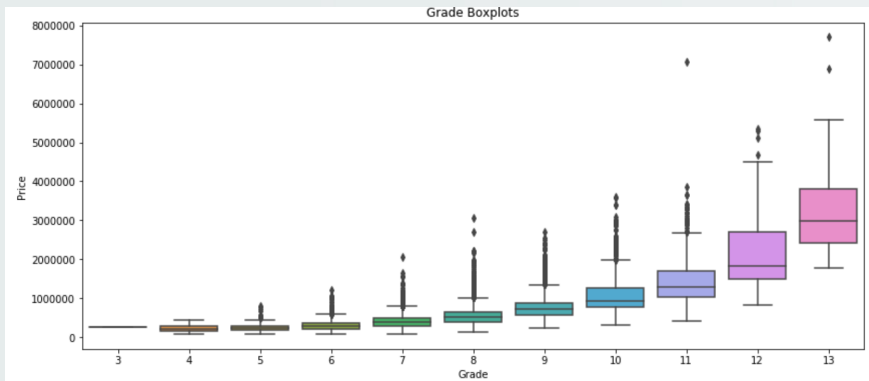Create a model that reliably predicts housing prices.

	id	date	price	bedrooms	bathrooms	sqft_living	sqft_lot	floors	waterfront	view
0	7129300520	10/13/2014	221900.0	3	1.00	1180	5650	1.0	NaN	0.0
1	6414100192	12/9/2014	538000.0	3	2.25	2570	7242	2.0	0.0	0.0
2	5631500400	2/25/2015	180000.0	2	1.00	770	10000	1.0	0.0	0.0
3	2487200875	12/9/2014	604000.0	4	3.00	1960	5000	1.0	0.0	0.0
4	1954400510	2/18/2015	510000.0	3	2.00	1680	8080	1.0	0.0	0.0

condition	grade	sqft_above	sqft_basement	yr_built	yr_renovated	zipcode	lat	long	sqft_living15	sqft_lot15
3	7	1180	0.0	1955	0.0	98178	47.5112	-122.257	1340	5650
3	7	2170	400.0	1951	1991.0	98125	47.7210	-122.319	1690	7639
3	6	770	0.0	1933	NaN	98028	47.7379	-122.233	2720	8062
5	7	1050	910.0	1965	0.0	98136	47.5208	-122.393	1360	5000
3	8	1680	0.0	1987	0.0	98074	47.6168	-122.045	1800	7503

Home Renovations and ROI

Houses without renovations

Houses with renovations

House prices without renovations median: $ 449000
House prices with renovations median: $ 607502
Percentage increase in price with renovations 35 %

Renovated homes sell for a median price 35% higher than non-renovated homes.

Home Grade

King County Grading System
Increases objectivity by providing a public grading rubric to categorize houses.

The higher the grade the higher the price.

"Location, Location, Location"

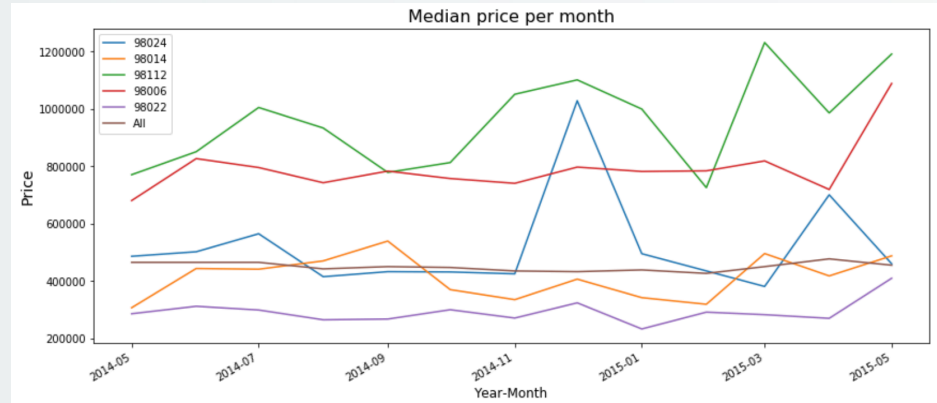**What zipcodes have experienced greater price fluctuation?**

Zipcodes with high average month-to-month percentage increase in price.
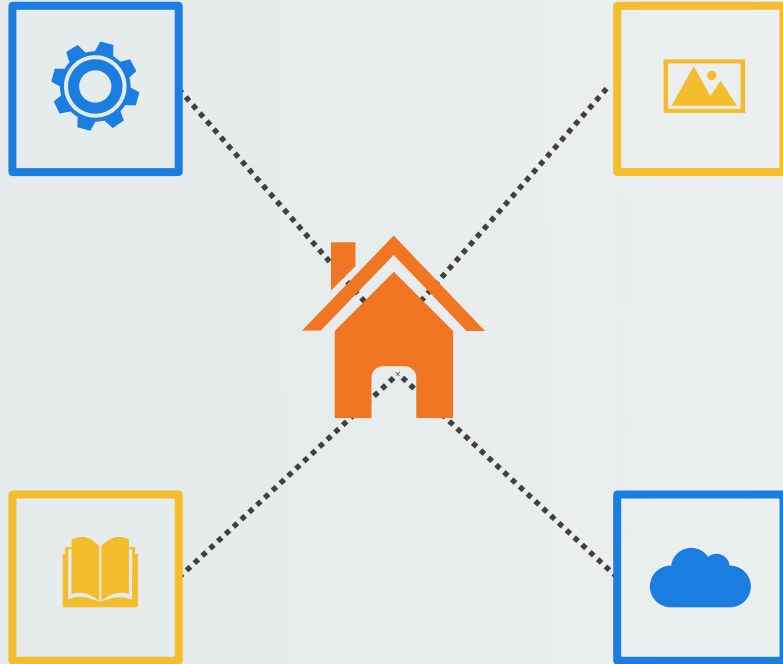The top 5 zipcodes are: 98024, 98014, 98112, 98006, 98022

Possible explanations:

- Gentrification
- New developments and constructions

Median price per month

Final Pricing Predictive Model

Significant Features

- Livable square footage
- Latitude
- Zipcode
- Grade

The model explains approximately 83% of variability in home prices.

**Predicting House Prices
In King County**

Thank you

For the technical notebook please access the following link:

https://github.com/feraguilari/dsc-1-final-project-online-ds-pt-021119/blob/master/student.ipynb

Questions?