King County House Sales Analysis

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Outline

01. Business Problem

02. Data & Methods

03. Results

04.Recommendations

Business Problem

Star Real Estate Agency (imaginary real estate company in Seattle) is seeking advice to close deals with higher housing sales prices. In this project, we are providing analysis on which features can bring more monetary value as well as strategy. We are also creating a model to estimate the price of a home when those criterias are met. Questions to consider:

1. Is a waterfront property worth more than an inland property?

2. Does the number of viewings to potential buyers affect the housing price?

3. Does the King County grading system affect the housing price?

King County House Sales Dataset

- ~21,600 rows of real estate transactions from King County, Seattle (WA) from 2014-2015
- Columns:
    - bedrooms: number of bedrooms
    - bathrooms: number of bathrooms
    - sqft_living: Square Foot Living Space
    - sqft_lot: Square Foot of Lot
    - floors: number of floors
    - sqft_lot15: Square Footage of nearest 15 lots
    - has_been_renovated: House has been renovated before
    - ratio_15: Ratio of sqft_living to sqft_living15
    - waterfront: Is a waterfront property
    - grade: King County Building Grade
    - sqft_above: Above Ground Square Footage
    - yr_built: Year building was built
    - years_old: Age of the building in years
    - condition: Condition of the house

Average Price of Waterfront Properties vs. Non-Waterfront Properties

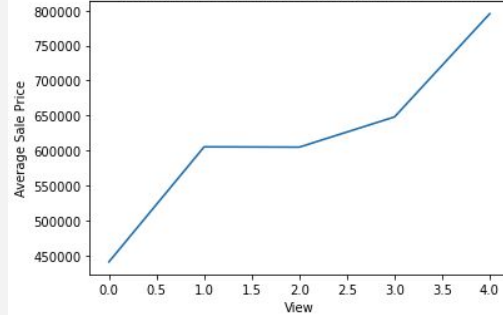Average Price of Properties by Number of Views

Average Price of Properties by Grade
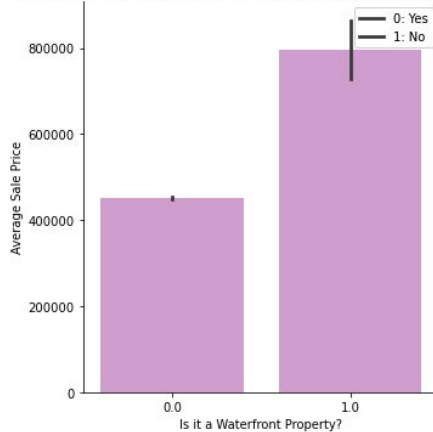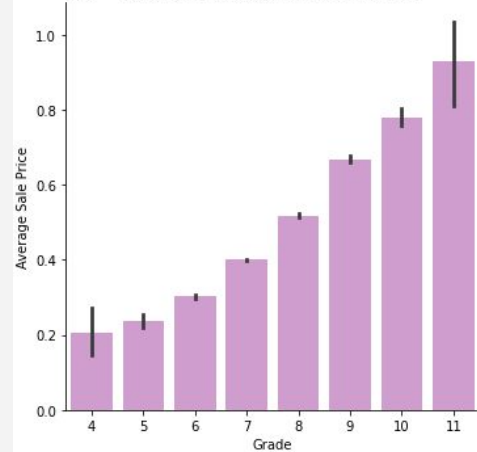
On average,
a waterfront property is worth

$344,597

more

On average,
a property with the most
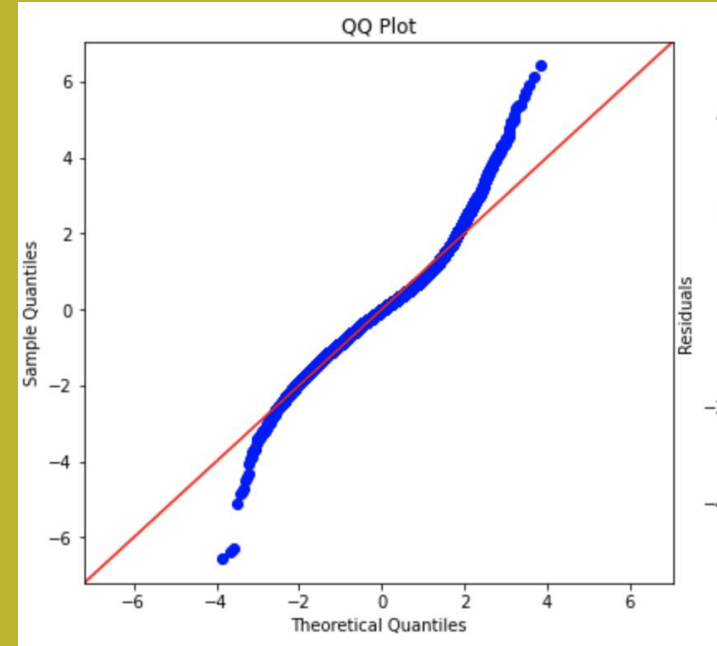number of views is worth

$354,748

more than a property with 0
views

On average,
a property with the highest
grade is worth

$723,700

more than a property with the
lowest grade

Features	Uses feature engineering on zipcode to improve model's predictability
Precision	83%
Error	$78,850

The best model was able to explain 83% of the variance in the average sale price within $78,850.

Waterfront

- Rare properties
- A waterfront property can the increase sales by $271,000

View

- More the potential buys the better
- Every viewing for potential buyers can increase the sales by $34,370

Grade

- Uses King County grading system
- For every increase in grade, the housing price can increase by $41,840

1. **Secure waterfront properties when available.**

2. **Advertise and show the properties to many people.**

3. **Grading matters. Try to get properties with higher grades if possible.**

THANKS!

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