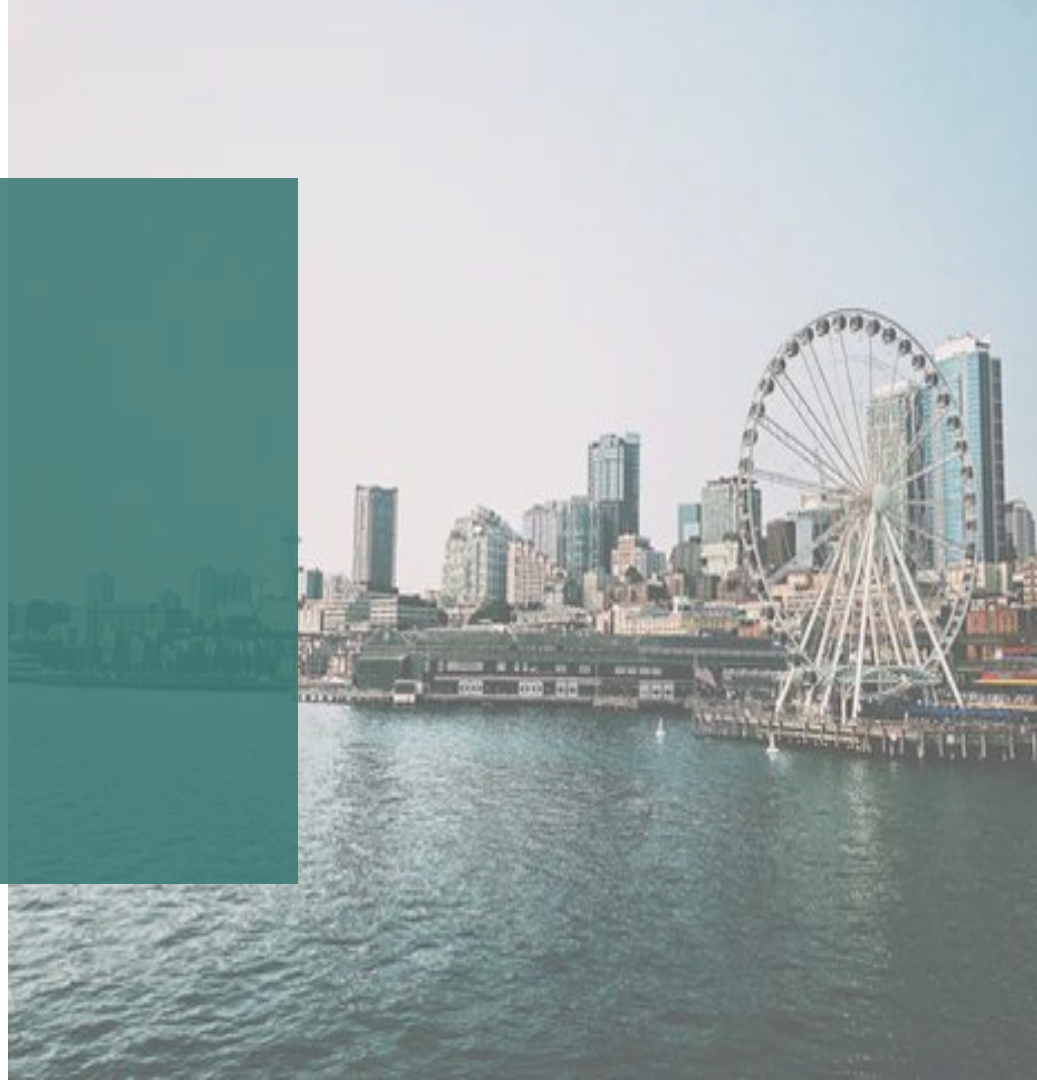
PHASE 2 FINAL PROJECT

EDA & Linear Regression of
King's County Housing Data



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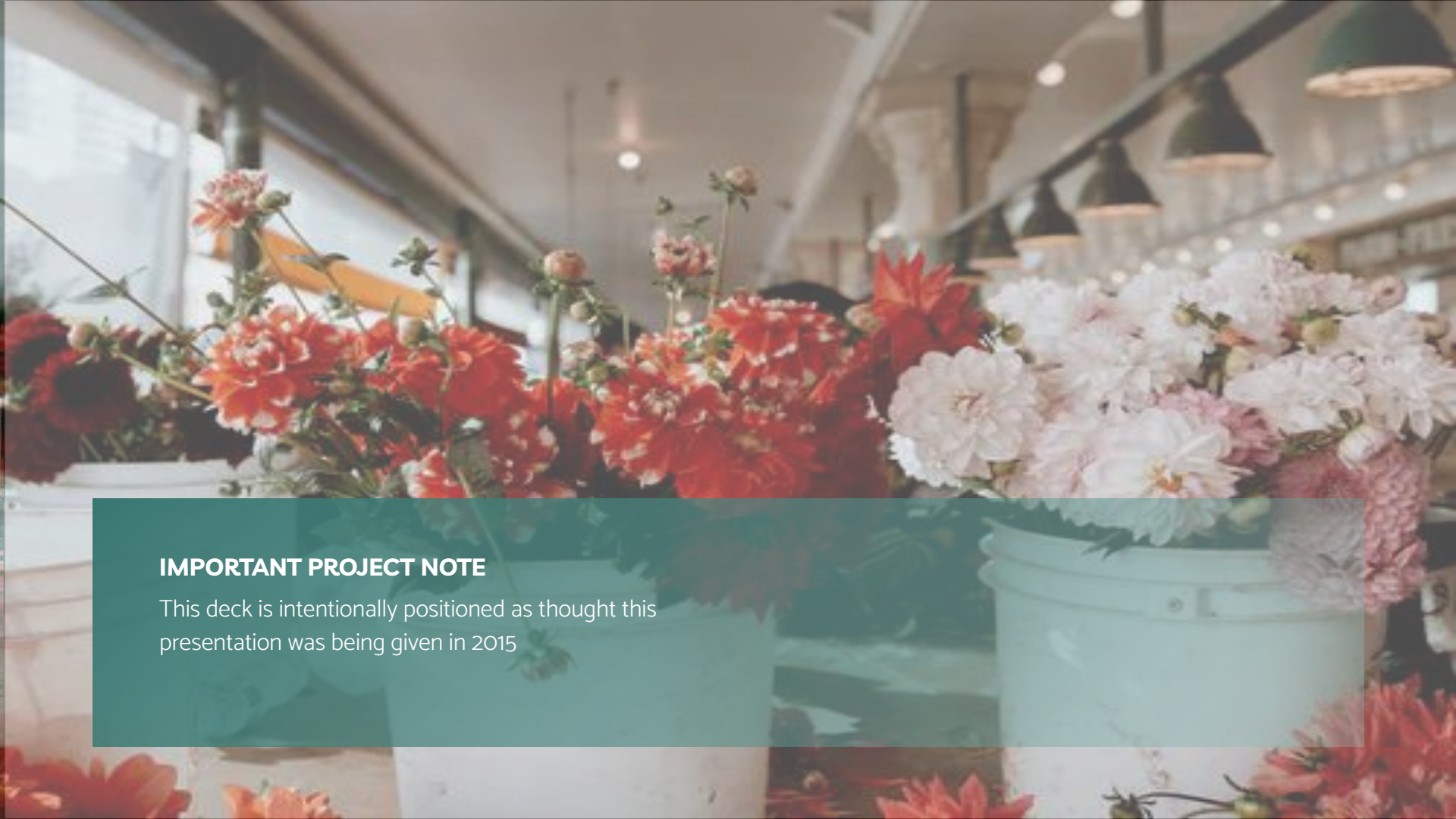

IMPORTANT PROJECT NOTE

This deck is intentionally positioned as thought this presentation was being given in 2015

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ABOUT THE PROJECT

01

THE NEED

PROJECTED JOB GROWTH

Projected to add at least 115,000 new jobs by 2035

POPULATION GROWTH

2014 surpassed census projections by 11%

HOUSING MARKET GROWTH

%14 percent housing growth from 2000- 2010

HIGH POVERTY LEVELS

The ACS estimates 11% poverty rate

RISE IN RENTALS

The ACS estimates rentals will be 53% of market by 2018

BUSINESS PROBLEM

In an effort to increase access to quality affordable housing, keep people rooted in their neighborhoods and fight the effect of over development King County and Habitat for Humanity are creating a public private initiative aimed at making data driven decisions to inform house acquisition and repairs in the greater Seattle area.

STAKEHOLDERS

King County

EQUITY & SOCIAL JUSTICE STRATEGIC PLAN

Strategic investment upstream with the aim of expanding access & equity in 8 policy areas including housing.

Habitat for Humanity®
Seattle - King County
Serving King & Kittitas Counties

HABITAT FOR HUMANITY

Nonprofit that builds & preserves houses at a low expense for homeowners to keep people in their communities.

PROJECT GOALS

TARGET ZIPCODES

Use the sales data to identify neighborhoods areas that are pat risk or over development.

CHANGEABLE FEATURE ROI

Visualize the effect different features have on home value to understand value add.

REGRESSION ANALYSIS

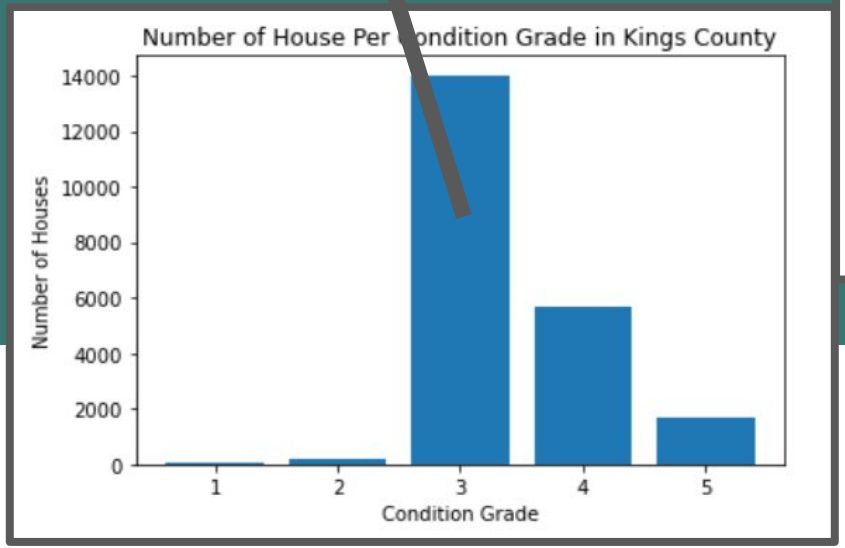
Predict future home prices to help guide strategic housing plan & forecast market trends.

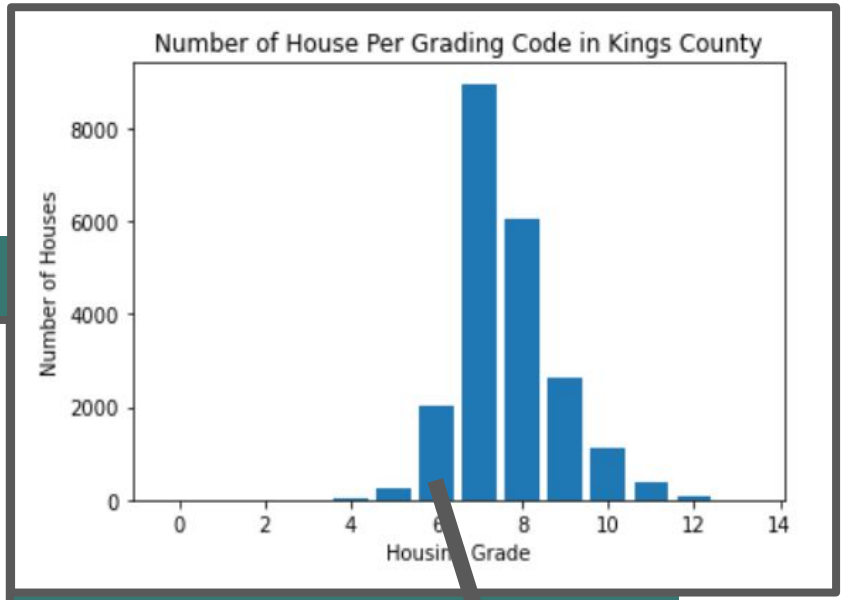
EDA ANALYSIS

02

Distribution of Grade & Condition

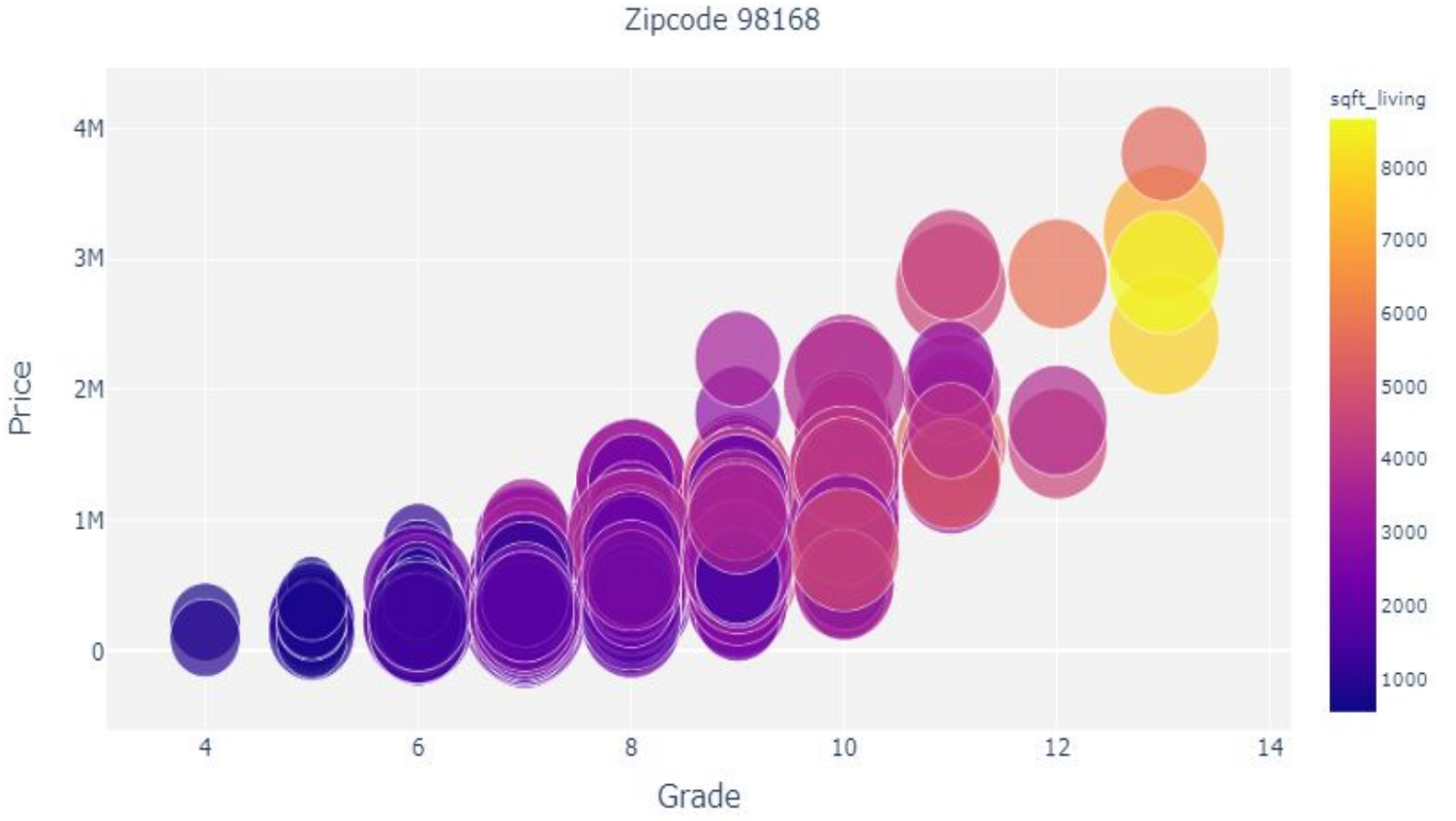
Indicates average quality of build





Minimum grade to be considered "code compliant"

A Picture of Zipcode 98168



Zipcode 98168 By the Numbers

Sale Price Difference

$1,143,076.19

Average sale price of these homes compared to other homes sold in the zipcode

Ratio of Home to Lot

18%

These homes only occupy about 18% of their total lot sq footage

Low End Sales

24.14%

Of all the poor condition and low grade houses come from this zipcode

Age of Home

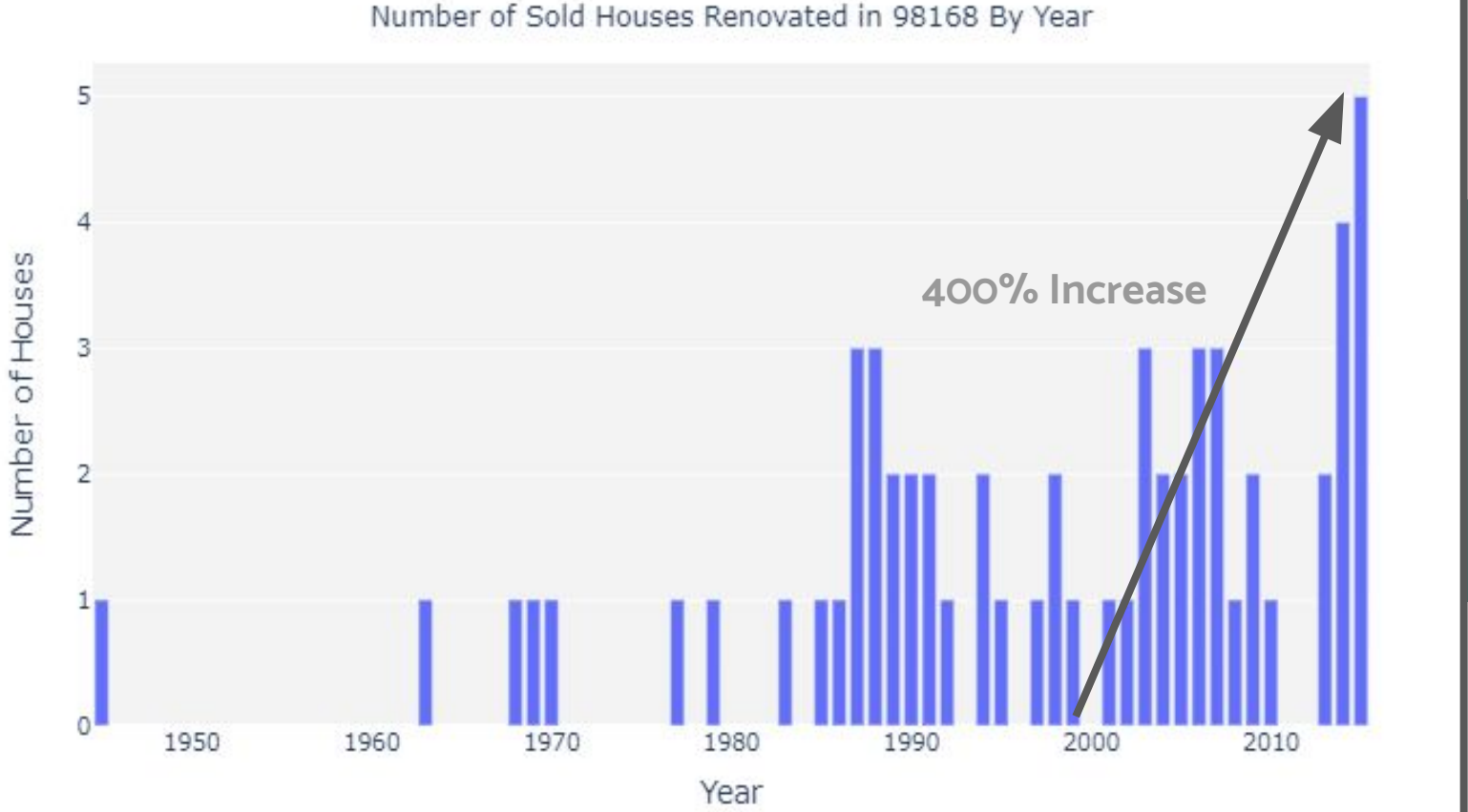
1937

Average age of poor conditioned homes

TAKE AWAY:

Homes similar to the these in the zipcode may be at risk for being sold at low value and “flipped” pushing the current residents out of the neighborhood.

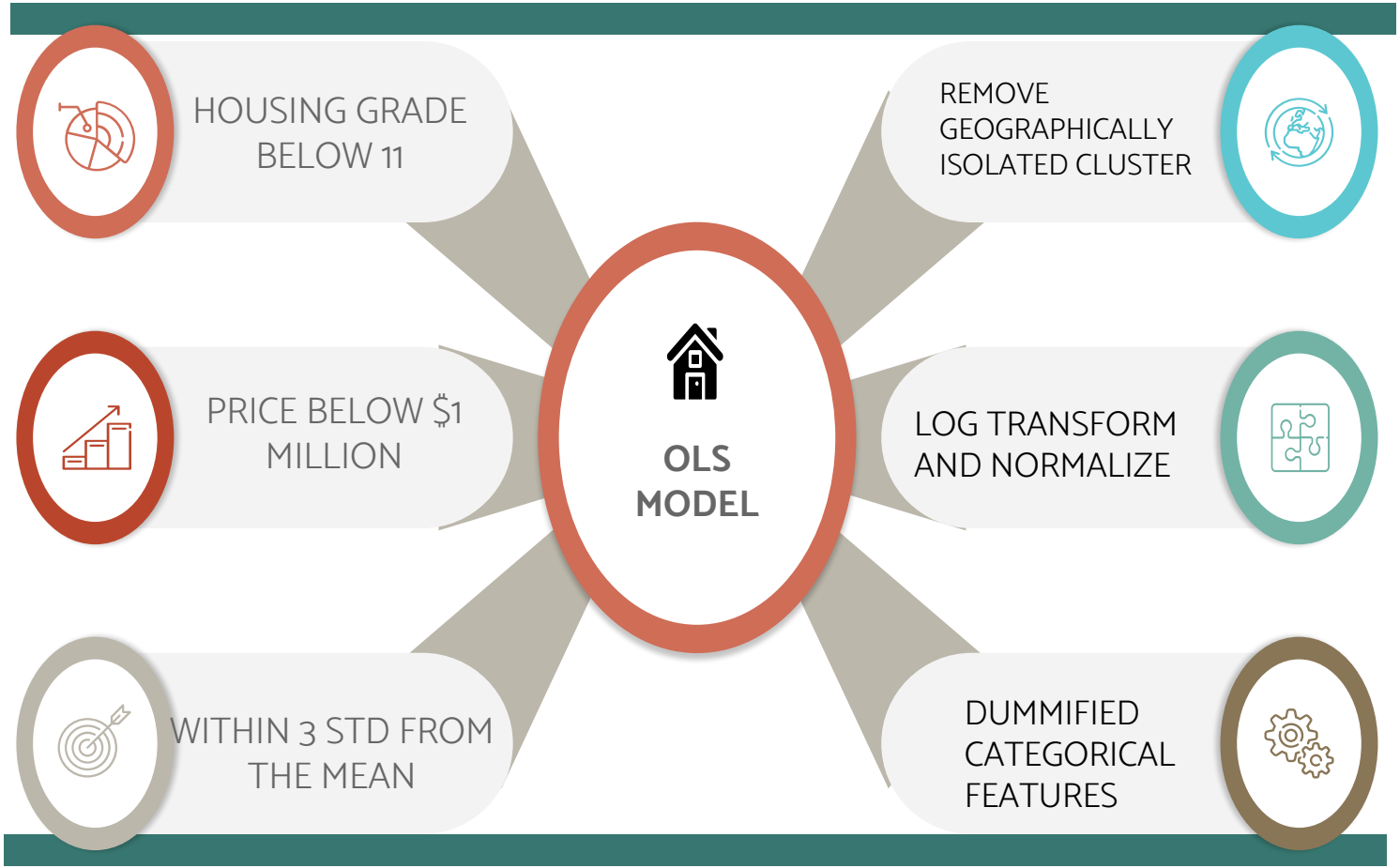
Renovation Visualization



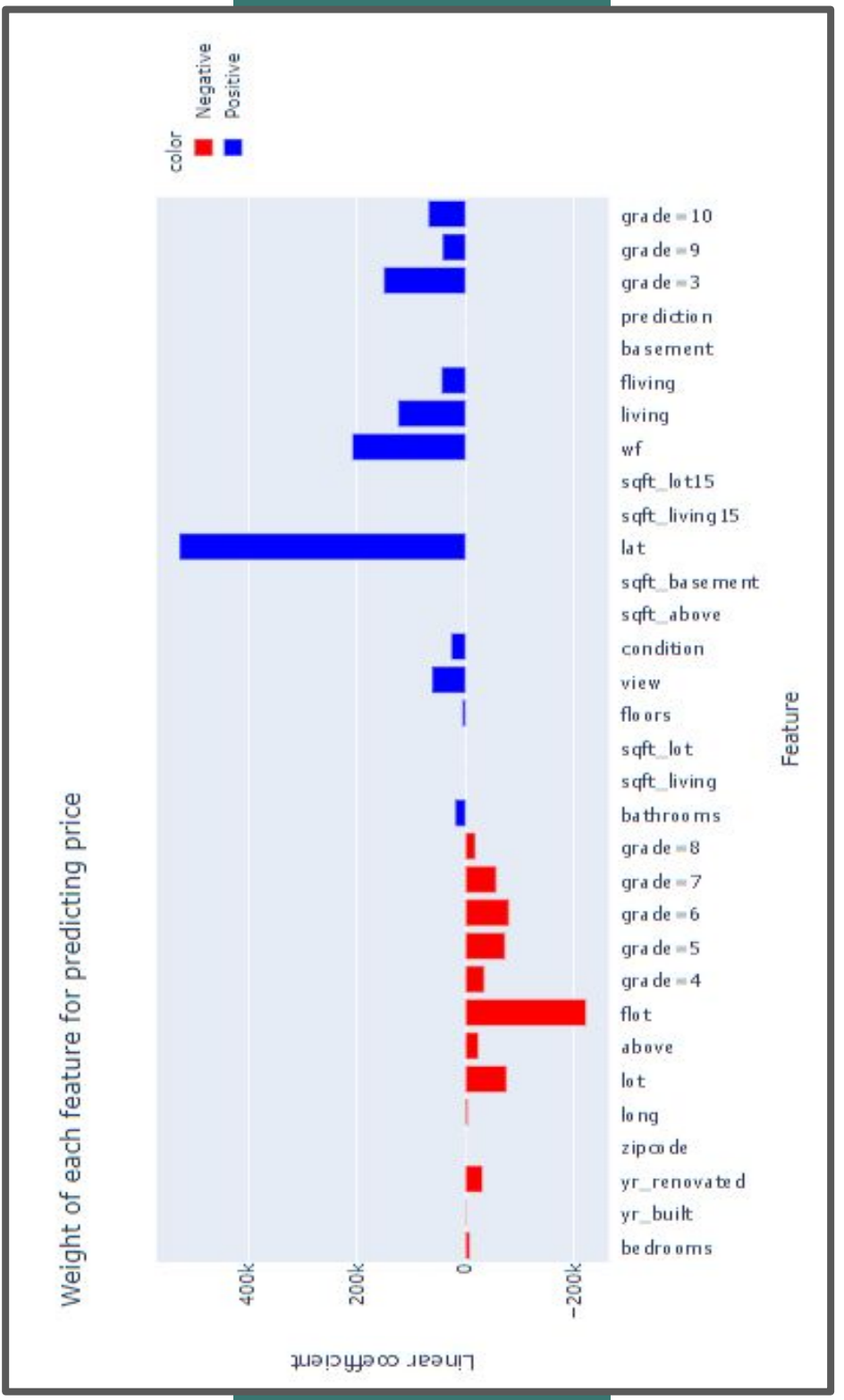
LINEAR REGRESSION

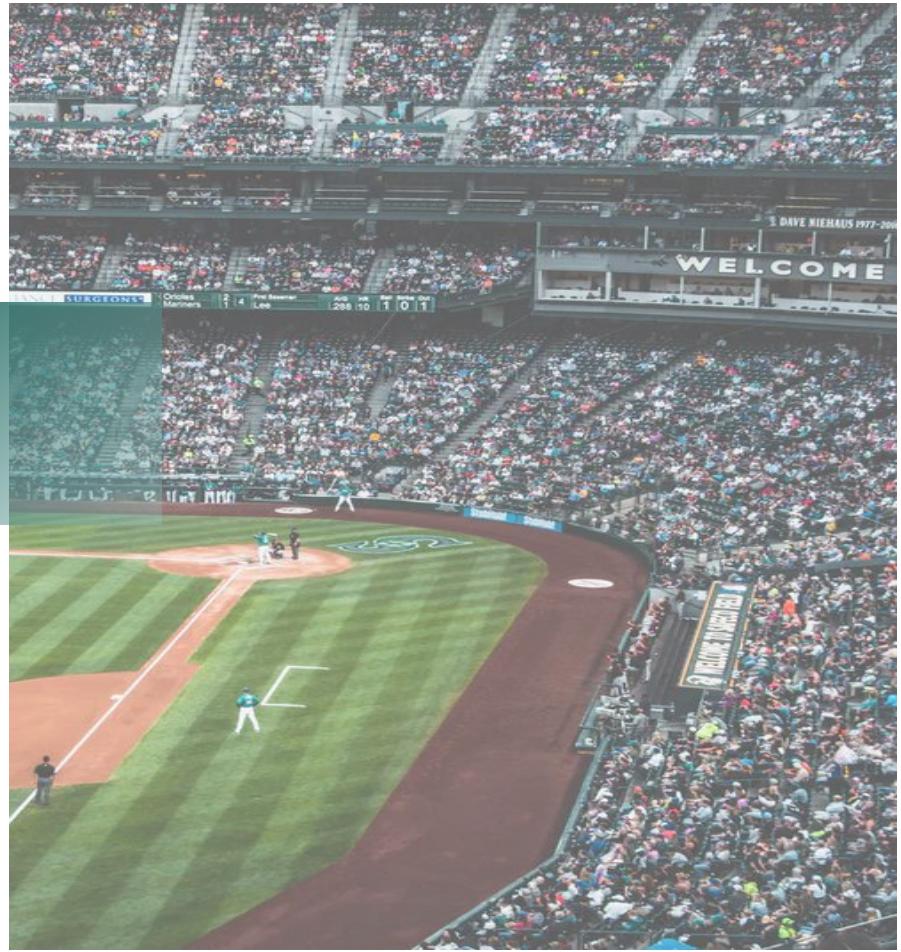
03

Data Transformation



Correlation Between Price and Features in Model:

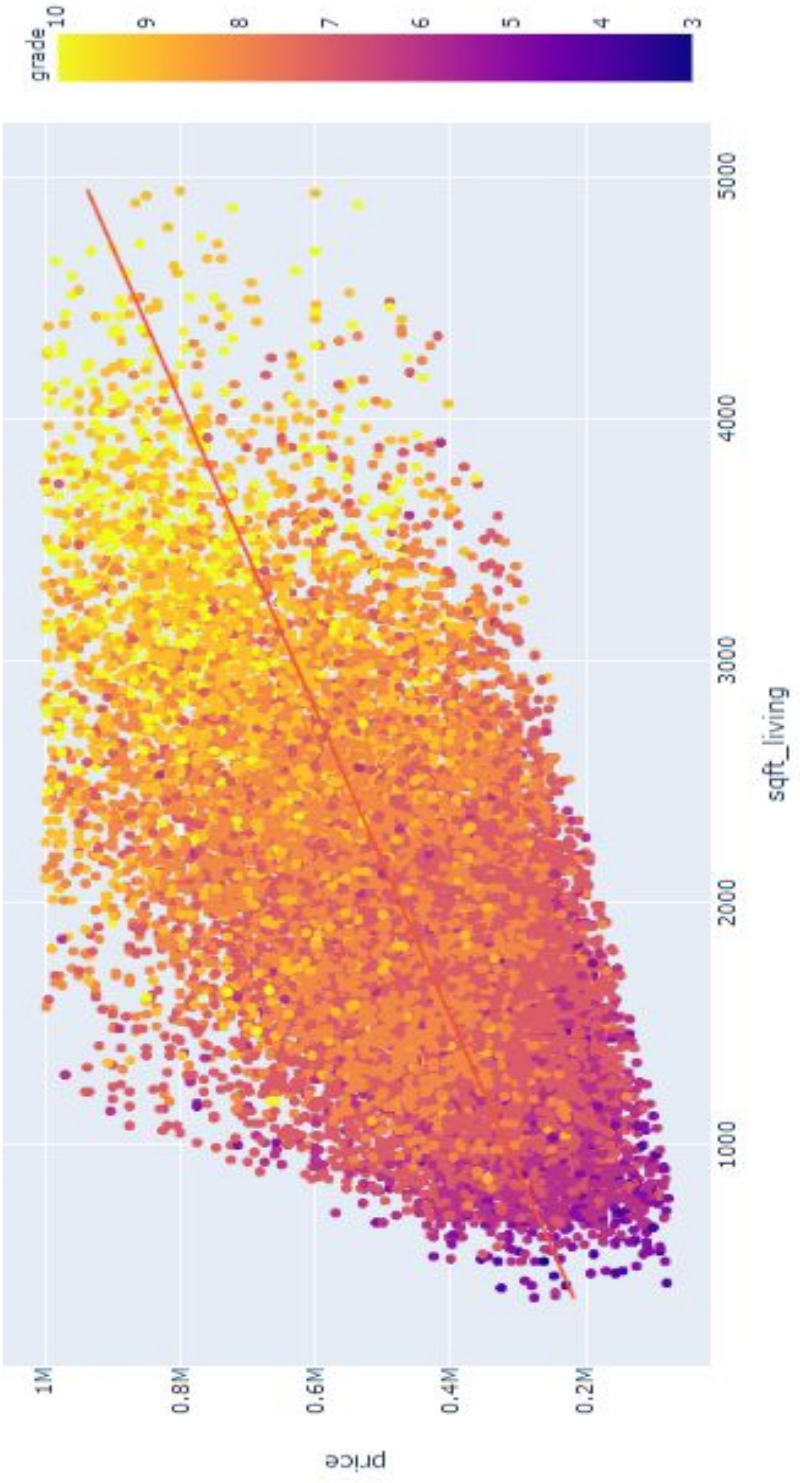




TAKE AWAY:

- Linear Model can predict housing price within $151,997.79.
- This model uses view, grade, lot square footage, and waterfront visibility.

Increase Grade & Sq Footage to Increase Price



CONCLUSION

04

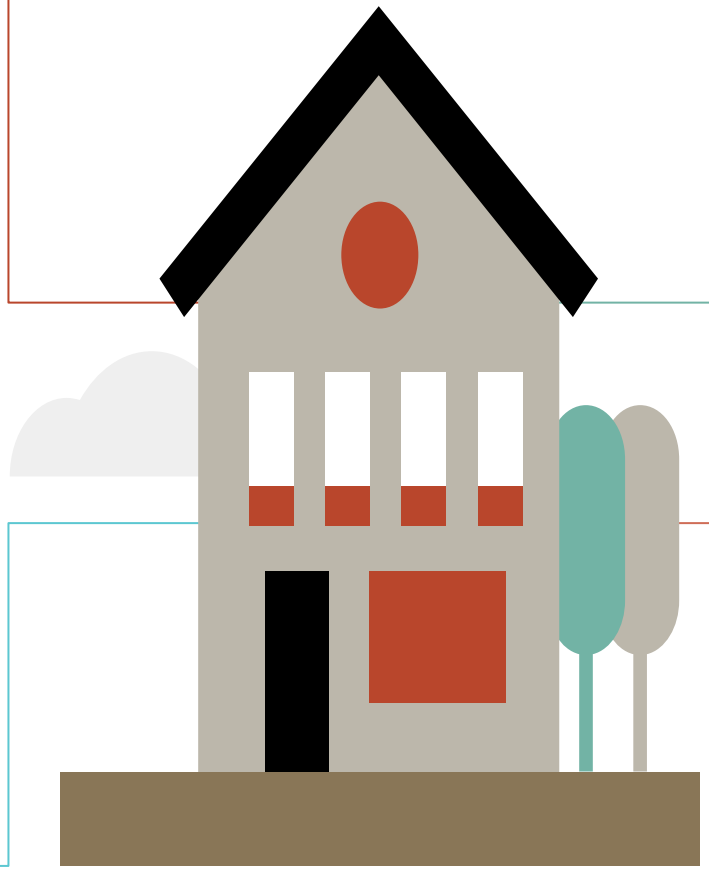
TARGET BUY CRITERIA

01
Below or Minimum Code Grade

Grade 6 or below on the county grading scale of 0-13

02
Home Has Not Been Renovated

Home does not indicate extensive renovations



03
Within City Limits

Home falls within the city border

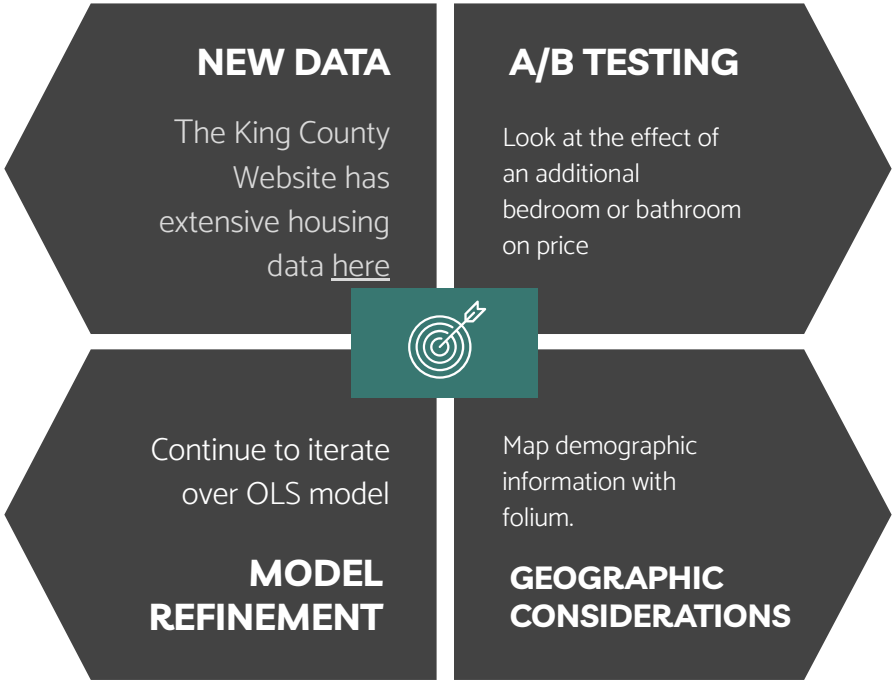
04
Poor Condition of Home

Grade 3 or below on the county grading scale 0f 1 - 6l

FUTURE WORK

05

FUTURE PROJECTS



THANKS

Does anyone have any questions?

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CREDITS

This is where you give credit to the ones who are part of this project.

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