LANDINGPad Realtors

Real Estate Marketing Plan King County

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"At the turn of the century, the average U.S. home value was $126,00. Today that figure has seen a 106% increase in just two decades"

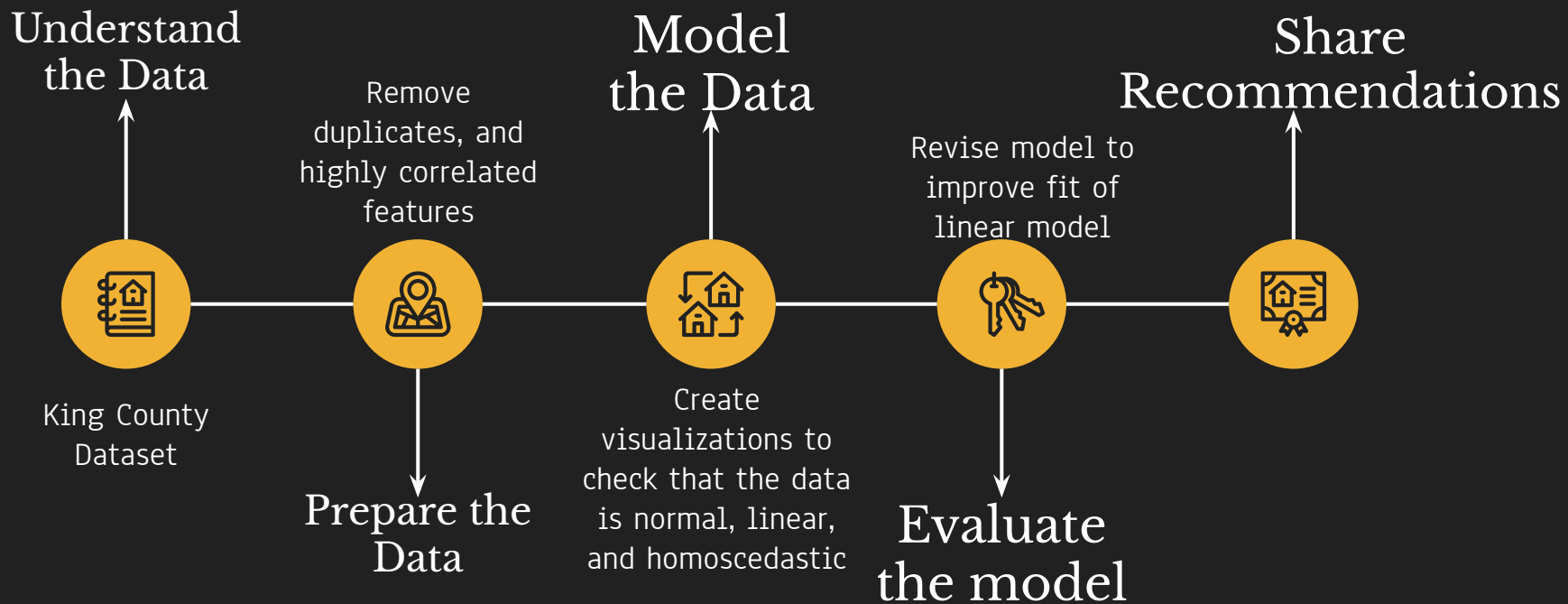—Nick Routley in Visual Capitalist

Project Goals

We want to curate a set of homes for clients based on the following:

- Which neighborhoods have the highest average home price?
- How does the number of bedrooms affect the sale price of a home?
- How does proximity to a highly rated school affect the sale price of a home?

Methods

Understand the Data

Model the Data

Share Recommendations

Remove duplicates, and highly correlated features

Revise model to improve fit of linear model

King County Dataset

Create visualizations to check that the data is normal, linear, and homoscedastic

Prepare the Data

Evaluate the model

Problem

Homeowners want to minimize the purchase price of home while maximizing the proximity to Above Average Schools for their children
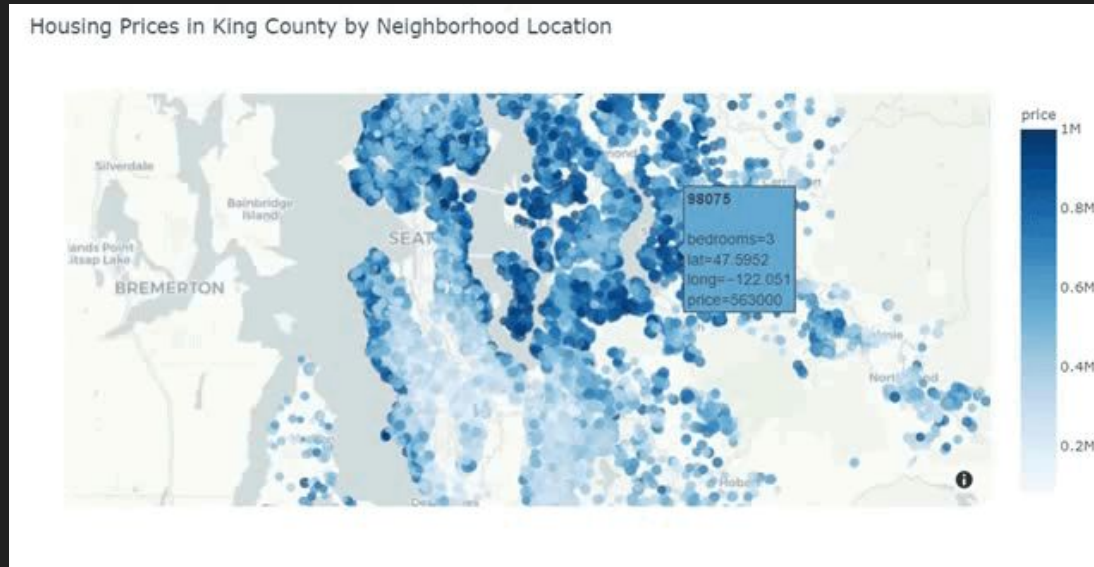
Solution

Linear Regression models can help us identify homes that meet buyer criteria based on historical home sale price of homes in King County

Methods

Square Ft of Living Space vs Price

Which neighborhoods have the highest average home price?

Housing Prices in King County by Neighborhood Location

98075
bedrooms=3
lat=47.5952
long=-122.051
price=563000

price
1M
0.8M
0.6M
0.4M
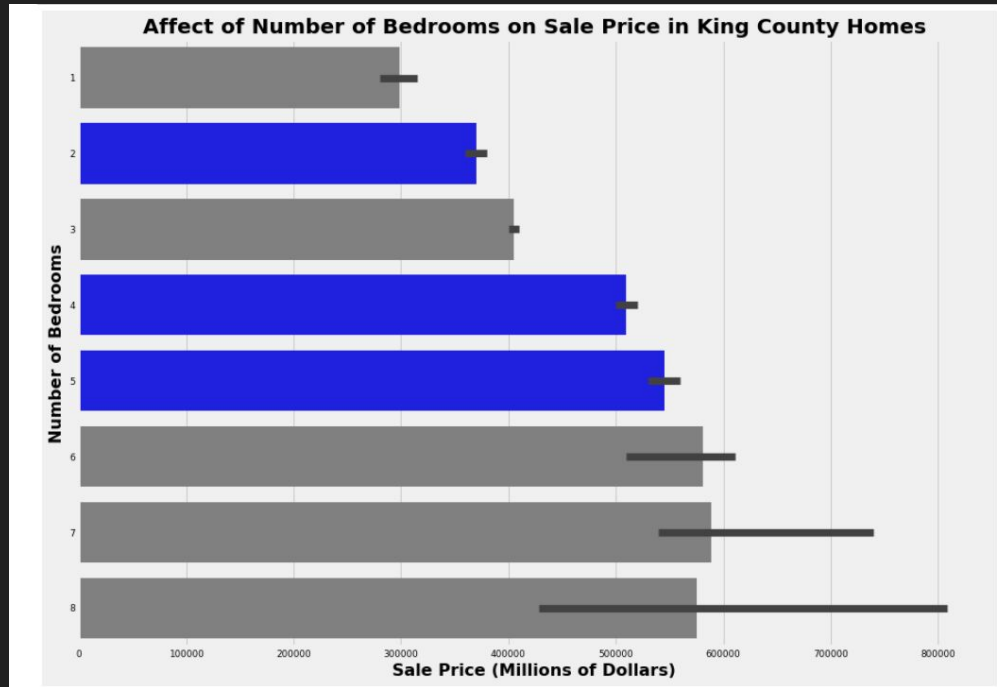0.2M

Number of Bedrooms vs. Sale Price King County Data

● **Neighborhoods**

ClydeHill: $800 K - $1 million

Fremont, Queen Anne and Wallingford:
$660K and $800K

Allentown and Lakeland North:
$200K to 400K

How does the number of bedrooms affect the sale price of a home?

Number of Bedrooms vs. Sale Price King County Data

● **Sale Prices**

Homes with 4 or more bedrooms had sale prices above the median and had little to no variance in price

● **Median Sale Price**

~$594,000

● **Mean Sale Price**

~$467,890

Results:How does proximity to a highly rated school affect the sale price of a home?

Grades	School	Total students enrolled	rating_score	school_id
6-8	Beaver Lake Middle School	852.00	7	16.00
	Issaquah Middle School	988.00	7	15.00
	Pacific Cascade Middle School	1000.00	7	8.00
	Pine Lake Middle School	943.00	8	11.00
9-12	Issaquah High School	2417.00	8	6.50
	Skyline High School	2169.00	10	4.00
K-5	Cascade Ridge Elementary School	487.00	8	8.00
	Creekside Elementary School	723.00	8	9.00
	Endeavour Elementary School	598.00	8	12.00
	Fall City Elementary School	544.00	8	7.00
	Grand Ridge Elementary School	747.00	7	7.00
	Sunny Hills Elementary School	732.00	9	5.00
PK-5	Discovery Elementary School	686.00	9	6.00

Home Price vs. Distance to Schools King County Data

● **School Ratings**

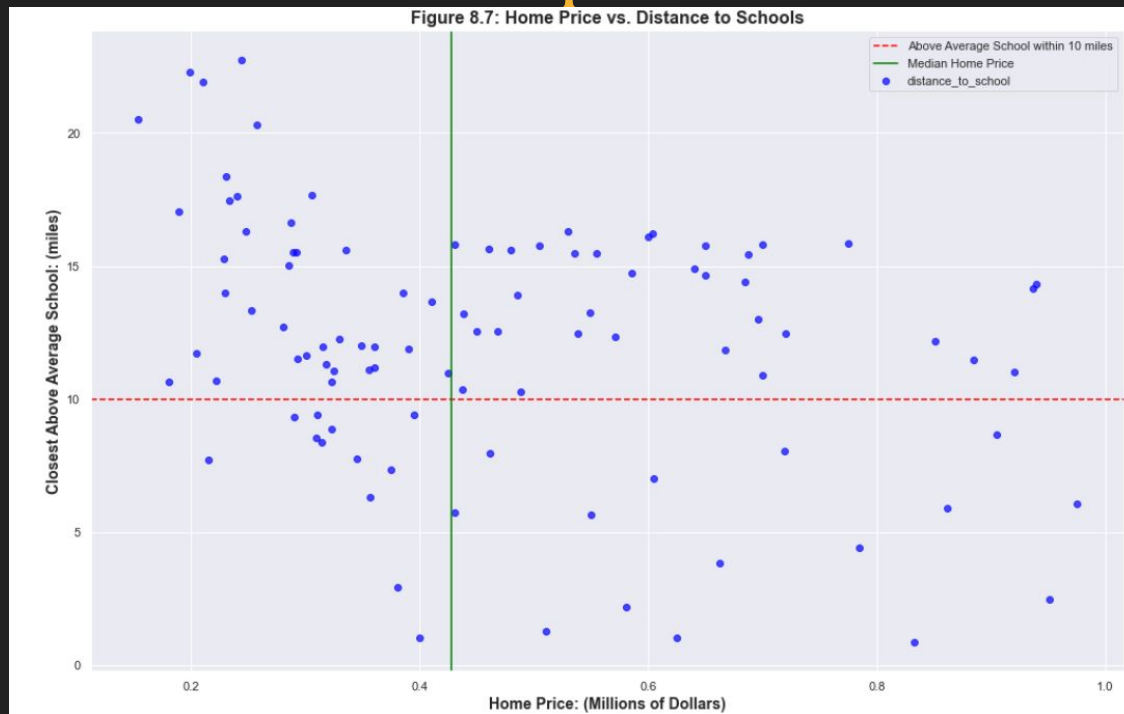Highly rated schools are considered those with a Great Schools (™) rating score of 7 or higher out of 10.

● **Top Elementary School**
Discovery ES

● **Top High School**
Skyline HS

How does proximity to a highly rated school affect the sale price of a home?

Figure 8.7: Home Price vs. Distance to Schools

Home Price vs. Distance to Schools King County
Data

Recommendations

Number of Bedrooms

4-5

Neighborhoods

High: Clyde Hill
Mid: Fremont, Queen
Anne, Wallingford
Low: Allentown
Lakeland

476K

Proximity

Homes that are within
10 miles of an Above
Average school start
around 476 K

800K

Future Work

Explore the effect of distance to local attractions:
- Parks
- third places
- places of worship

on sale price in the King County dataset.

Thank you!

Repo at:
https://github.com/dataeducator/real_estate_linear_regression/blob/main/final_project_phase_2.ipynb

Data:
- King County
- Greatschools
- Unsplash (images)