



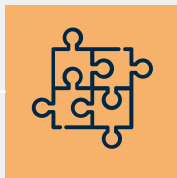
# Location Matters

Forecasting real estate prices in King County

Tobias Seidel

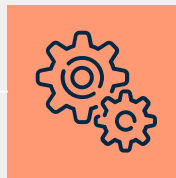
# Today's content

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01

Finding our client's  
new home



02

Price forecasting  
model



03

Technical  
background

01.

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# Our client

Finding the dream estate for our client





## Our client Gigi

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His background:

- Seattle's star architect
- 40 years old
- Single
- Large circle of friends
- Boat owner

His criteria:

- Modern building
- At least 2 bedroom
- At least 2 bathrooms
- Waterfront is a must



# We selected only the best areas for our client

## Burien



\$4,800/m2

City lofts in Burien

## Mercer Island



\$6,000/m2

Exclusive Mercer Island Condo

## Sammamish



\$6,500/m2

Living next to Gates and Bezos





# Notable observations

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Spending a lot of money is not easy. Few houses actually meet the criteria:

- Only 43 out 21,000 homes meet the requirements
- Waterfront view is an absolute luxury and very rare
- Size of the house is not the decisive factor

## Bonus fact:

- Average additional cost of the waterfront is between **\$500,000 to \$1,000,000** in the selected areas





02.

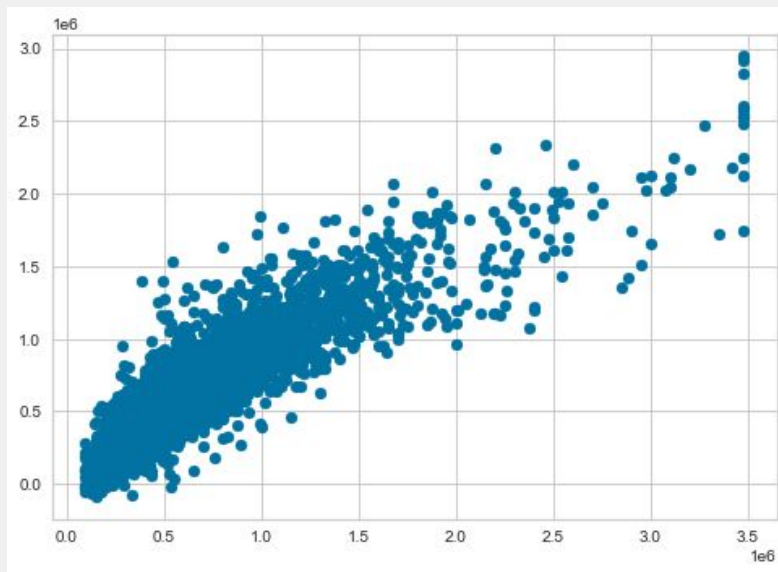
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## **Price forecasting model**

# About this model

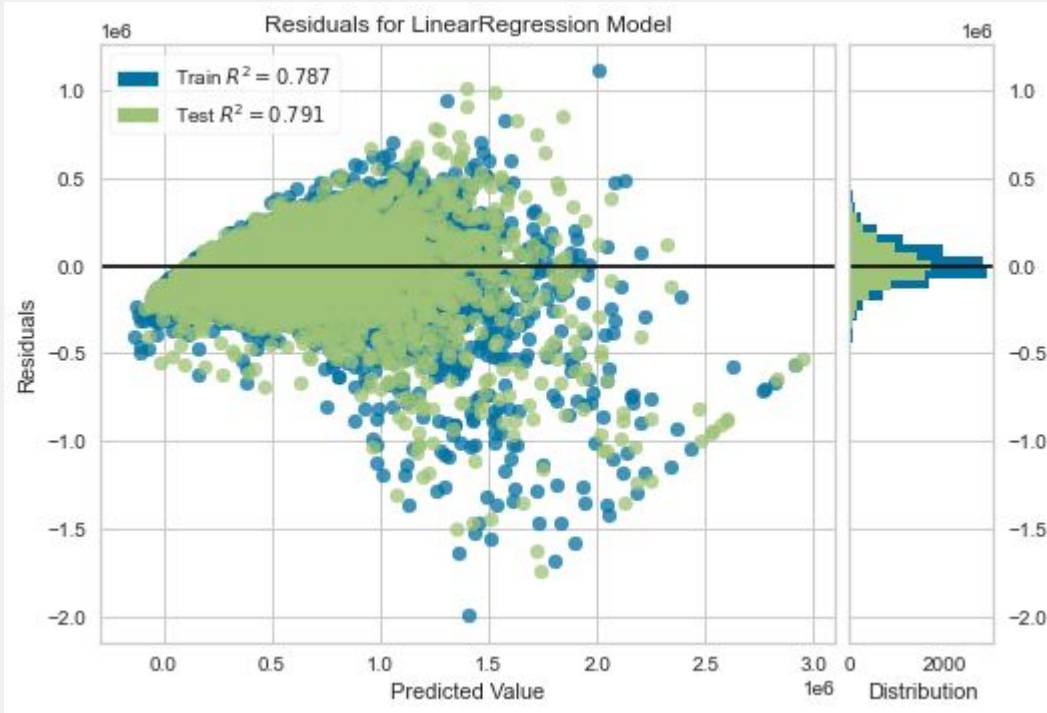
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- A **(multiple) linear regression** model to forecast home prices in King County
- **Reverse geocoding** used to transform latitude and longitude data into neighborhoods
- Optimized to reduce RSME





# The results of our forecasting efforts



**0.79**

**R-square value**

Model reflects 79%  
of variability

03.

## Technical background



# Technical background

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## Data cleaning

- Missing values in four columns were removed through median values
- Bed & bathrooms converted to integers
- Outlier values were removed using quantiles
- Square feet values were converted to square meters

## Feature engineering

Female colleagues discussing work at oClose-up confident adult woman posing

- Price per square meter was added
- Using the `reverse_geocode` library long and latitude data was converted to cities
- City names were converted to numeric values through dummy data



# THANKS!

Do you have any questions?

Make sure to follow me on  
GitHub to get more  
information about this  
research

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