RECOMMENDATION FOR AN APP THAT PREDCITS HOUSE PRICES

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Agenda

- Business problem

- Insights

- Recommendation

- Caveats

- Questions & Answer

How we can help you win more customers

- King County has more than **2.2 mio habitants** and attracts people from other counties and states

- The problem:
  - **Current** home owners are unsure about **the price they can ask for** when they sell their house
  - **Future** home owners are unsure about **the budget they require** to buy a home
  - **Prices change** with time and economic circumstances and it is difficult to stay up to date

- The solution
  - **An exclusive app** that predicts house prices based on their characteristics
  - Beneficial for you as real estate agency to **win customers**
  - Beneficial for customers to **pay fair prices**
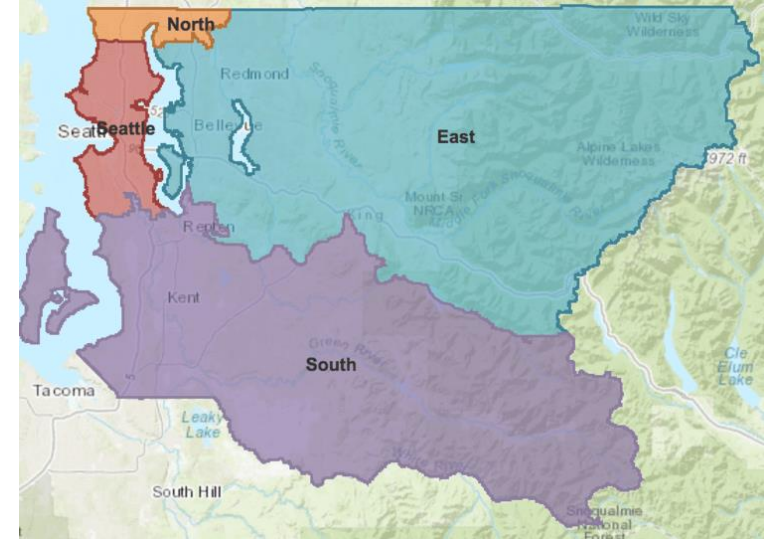
# Which data did we look at and how do we use it?

Data

More than 15.000 houses in King County with the following attributes:

- **Price** | average 980.000 USD

- **Age** | average 52 years

- **Location**

- **Waterfront** (yes/no) | mostly no

- **Basement** (yes/no) | mostly no

- **Renovated** (yes/no) | mostly no

- **Square footage** of house (without basement) | average 1540 sqft

- Construction **grade** | average „Average"

Method

- Multiple linear regression to predict the house price
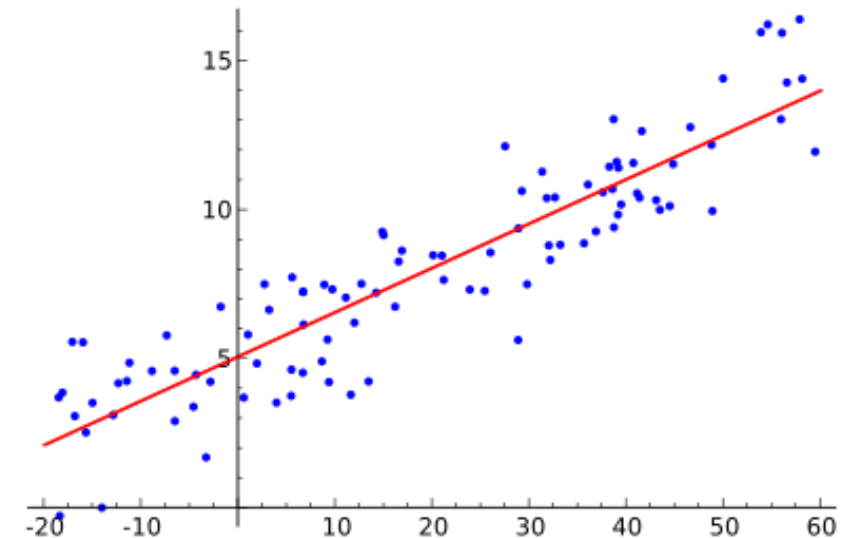
Regression results show a solid model for prediction of house price

- **68% of the variance** in house prices are explained by the **location**, **square footage** of the house, **grade**, **waterfront**, **basement** and **renovation**

- The **higher** the square footage, the **higher** the price

- Houses with a **waterfront** sell for **significantly more** than houses without a waterfront
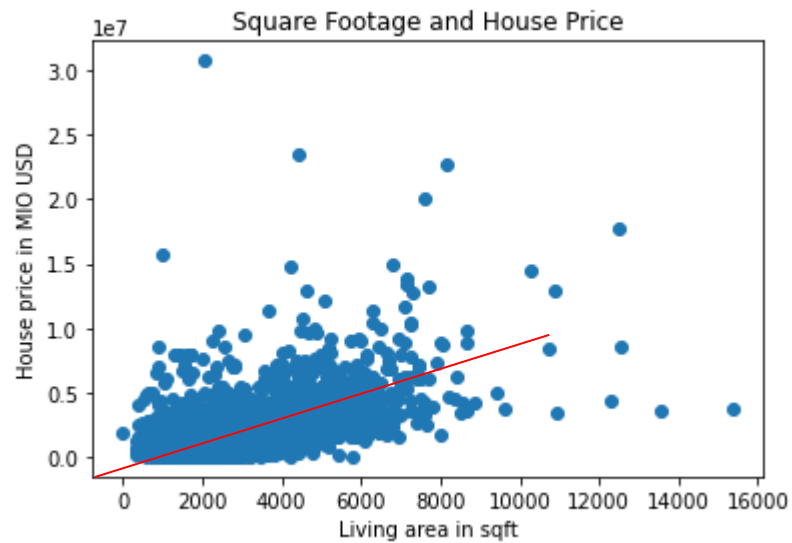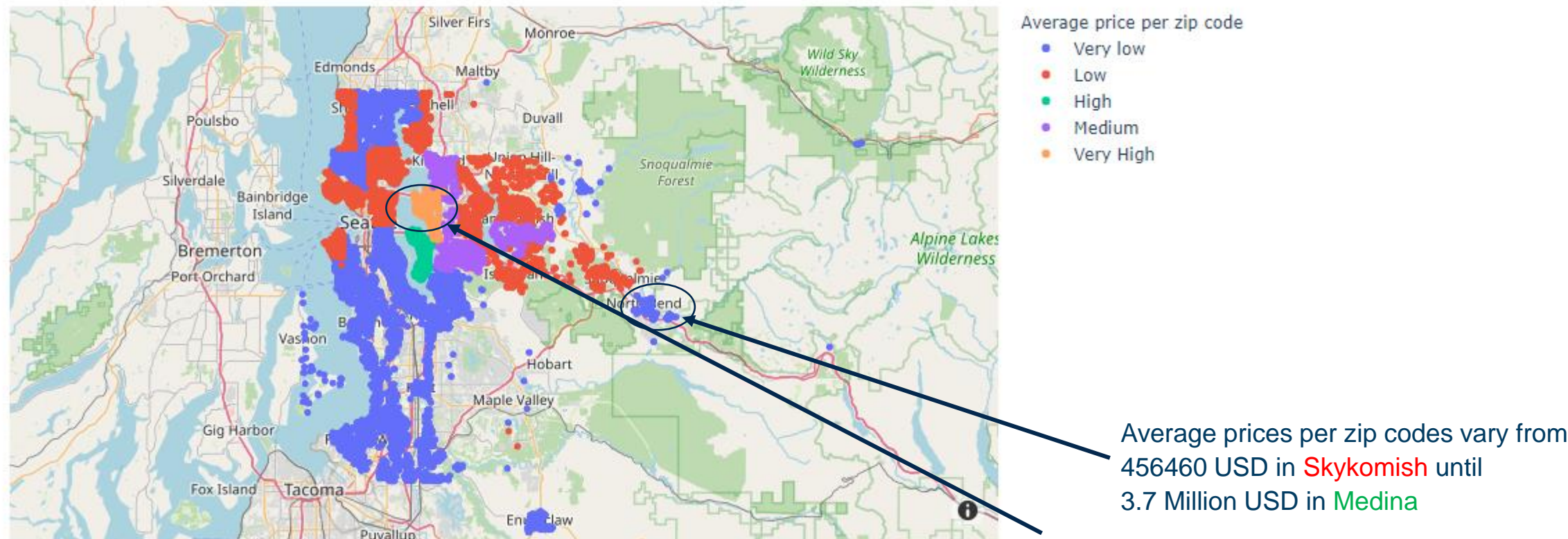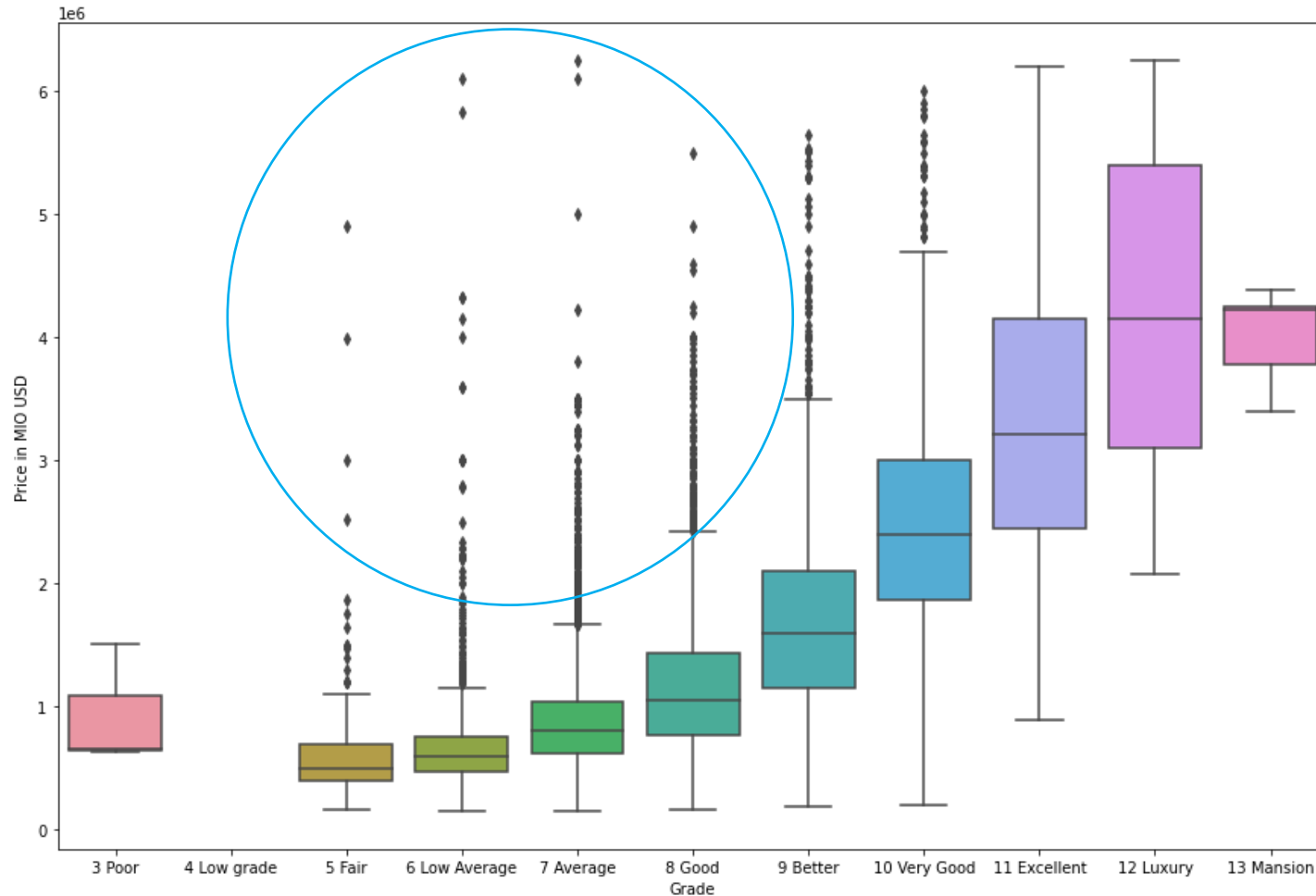

For 10% increase of sqft, price increases by 4%
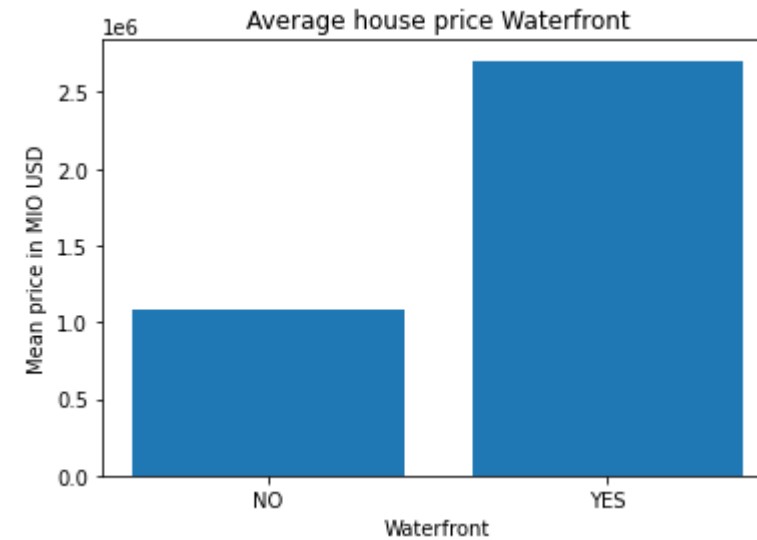
Mean of waterfront homes is 53% higher

The neighbourhood of the property has a large impact on the price

Average price per zip code
- Very low
- Low
- High
- Medium
- Very High

Average prices per zip codes vary from 456460 USD in Skykomish until 3.7 Million USD in Medina

The higher the construction grade, the higher the price

For each increase in construction grade, the price increases by 11%

The **higher the construction grade**, the **wider the price range**

For **lower grades**, there are also **high priced properties**

Limitations & next steps

The model is great for vast majority of houses but not for extreme (low or high) houses

We need to collect more data to include other factors such as

season of house sell

neighbourhood criteria

Development of the app

THANK YOU

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