



DATA ANALYSIS / EDA PROJECT – NOVEMBER 2023

Marita Schmidt – 30. November 2023

THE CLIENTS

- William Rodriguez and Samuel Davis
- University Professor and Doctor of Dental
- moving to Seattle for job-related reasons
- Searching for 2 Houses



WHICH KIND OF HOUSES?

City House

- central
- condition higher than standart
- 2 bathrooms minimum
- 2 bedrooms or more
- younger than 15 years or renovated
- has to found fast!!

Country House

- rural environment
- non-renovatend
- standart Condition
- can be found over a year

Budget for both up to \$1,5 Million

THE DATASET

- King County Housing Data:
 - Home sales in King County
(Seattle and around)
 - 21597 Houses
 - Period: May 2014 – May 2015



QUESTIONS AND HYPOTHESIS

Questions

- Where to find?



- What Houses?



- When to Buy?



Hypothesis

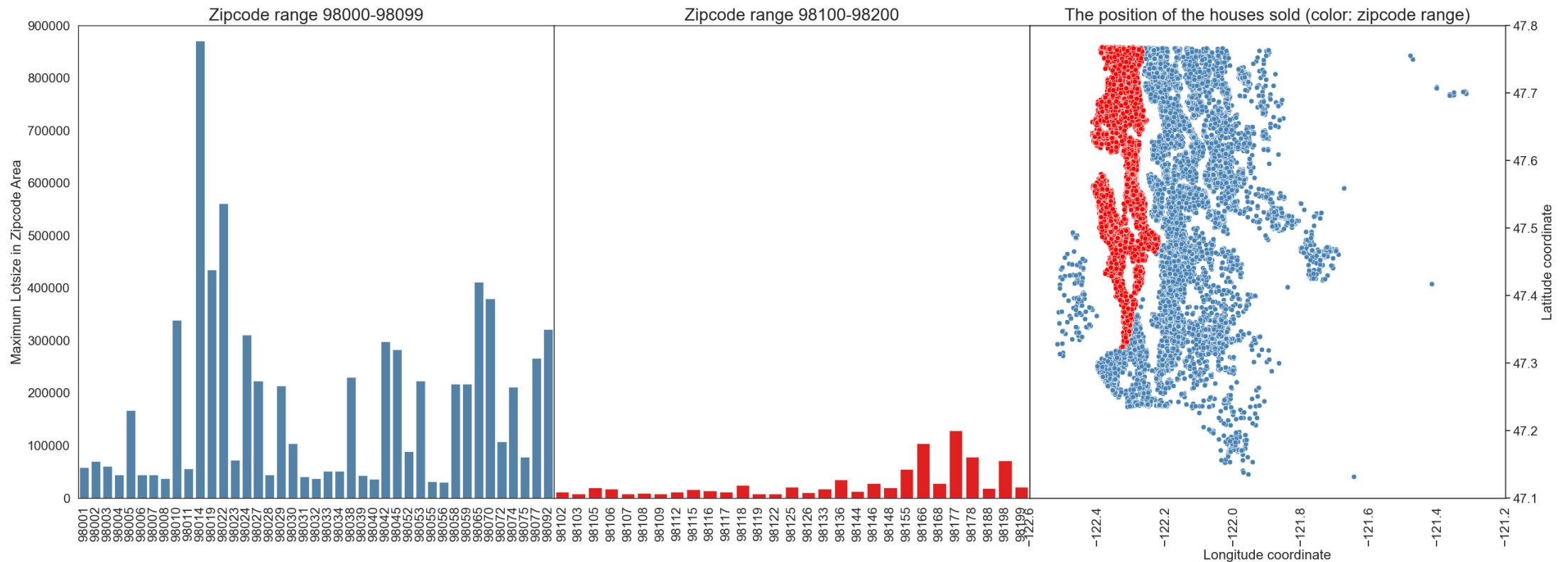
- The lots in the city are tiny in comparison to the lots of the country houses.

- with higher price you will get better conditions

- prices go up and down over the year

Let's see if these hypothesis can be confirmed!

MAXIMUM LOTSIZE OF THE NEIGHBARHOOD IN ZIPCODE AREA



It is very clear to see that the lot sizes in the 2nd half of the zipcodes are much smaller.
If you look at the position of the zipcode, you can see that these areas are also connected.

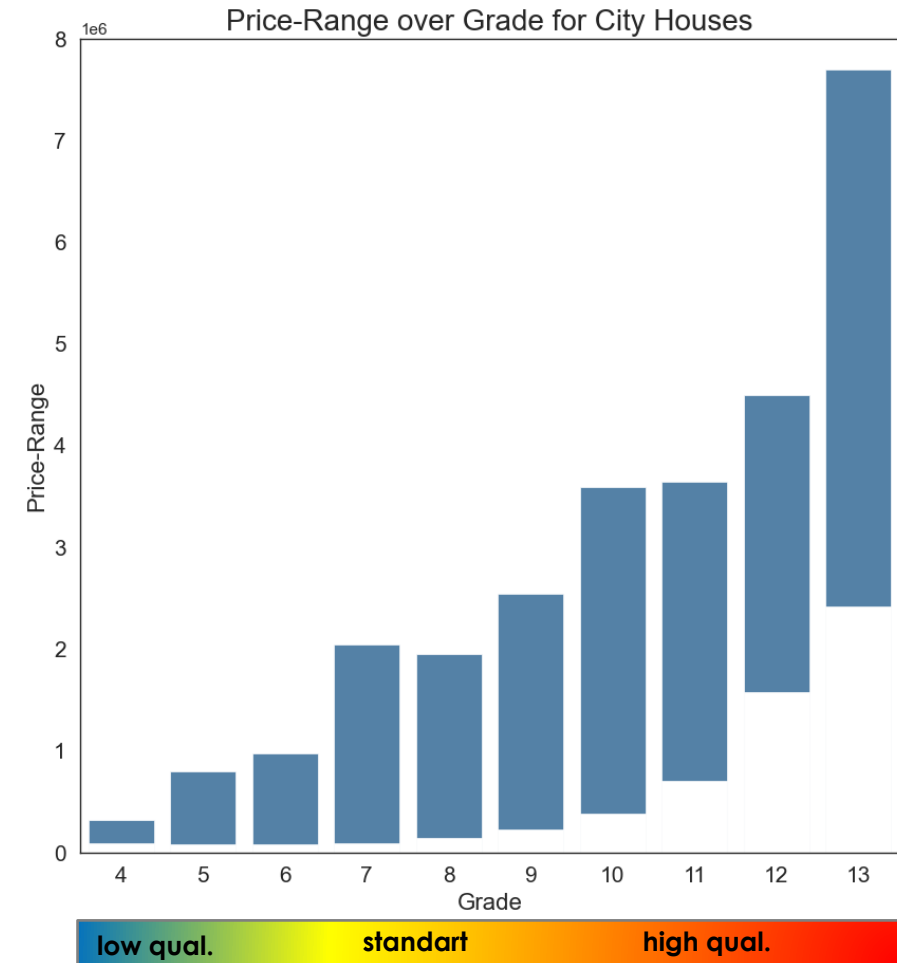


CONCLUSION FOR ZIPCODE AREA

- Due to the correlation of the lotsize and the zipcode-range we can assume to find
 - ...the city house in the zipcode range 98100-98199
 - ...the country house in the zipcode range 98000-98099

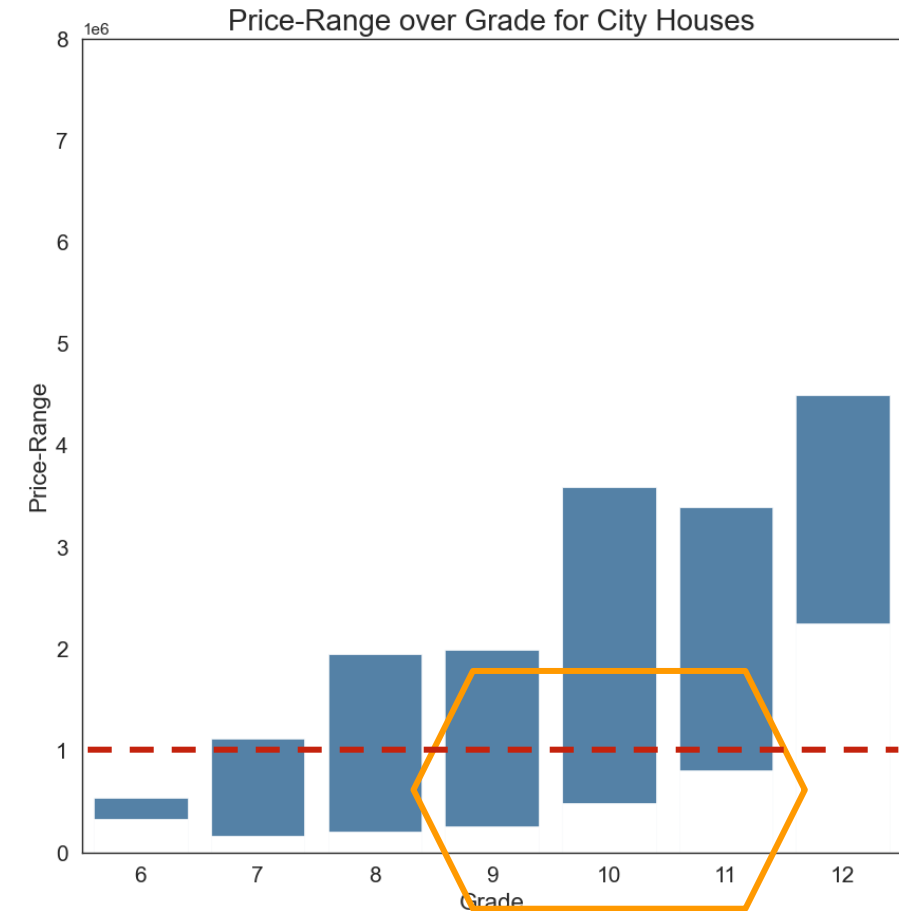
KING COUNTY GRADING SYSTEM

- houses in the data set were rated based on the *King county grade system*
- the system represent the construction quality of buildings
- the houses in the dataset are rated from 4 to 13
- grade 7 and 8 represent the normal standart
- the plot shows the price-range of the city houses for each grade
- price and rating correlate with each other



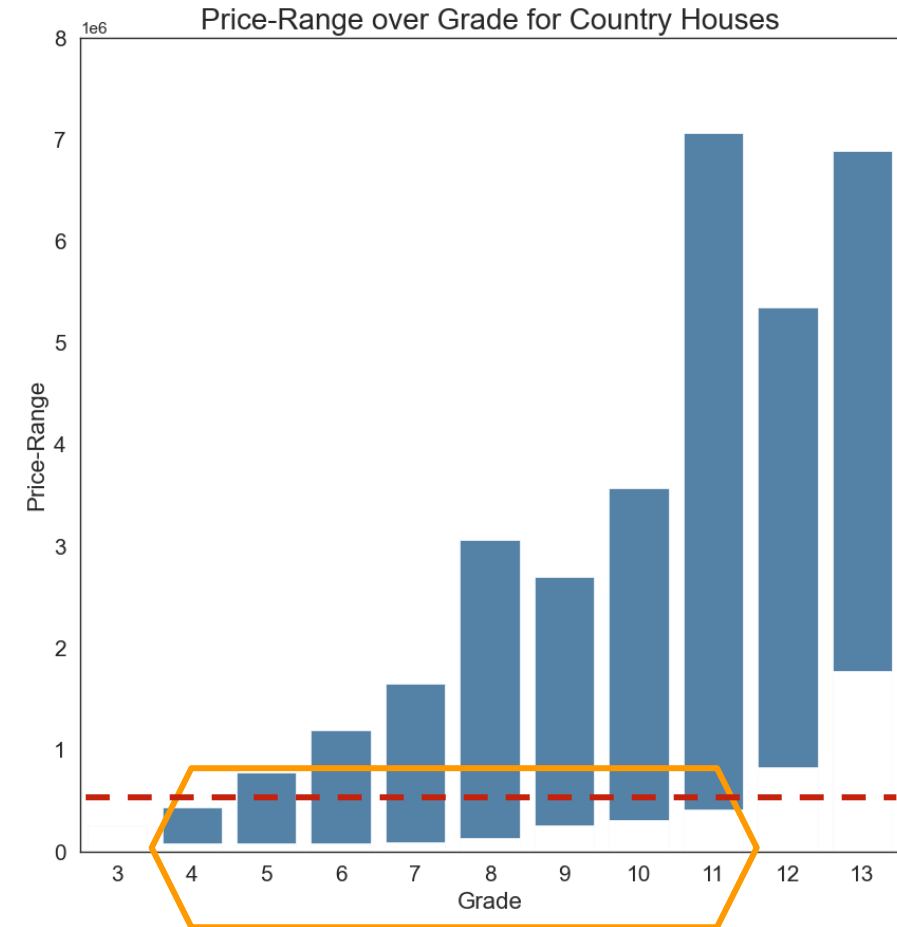
BUDGET FOR THE CITY HOUSE

- filtering the plot data with our specifications:
 - 2 bathrooms minimum
 - 2 bedrooms or more
 - younger than 15 years or renovated
- for condition with higher standart we can choose grades 9 - 11
- this fits to our budget up to \$1.000.000



BUDGET FOR THE COUNTRY HOUSE

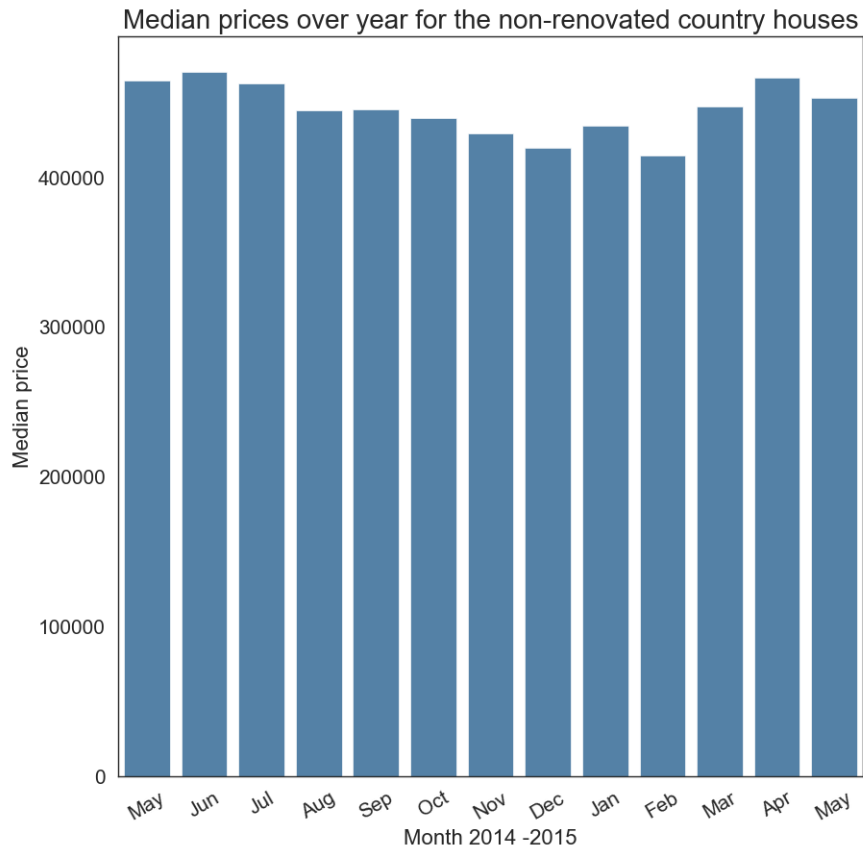
- the country house has no specification, it just has to be non-renovated
- with the leftover budget, the clients will have a wide range of grades to choose (grade 4 – 11)



CONCLUSION AND SUGGESTIONS FOR THE HOUSEPRICE

- The best Budget-range for the city House will be \$750.000 – \$1.000.000
 - the clients can get the higher standart with the grade 9-11
- The best Budget for the country house will be up to \$500.000
 - the clients can choose in the range of grades 4 till 11

PRICE OVER THE YEAR



- The townhouse has to be bought immediately
 - But for the country house they have planned a longer period of time for the search
 - The plot shows the median price for the non-renovated country houses of each month of the data set
- It can be seen that the prices of houses which are sold in winter are lower



CONCLUSION FOR PRICE OVER TIME PERIOD

- The plot shows, that the prices in winter are lower.
- However, it should be noted that the data was only collected for the period of one year.
- It is possible that it is like this every year, but this cannot be verified with this data.



SUMMARY

City House

- zipcode range 98100-98199
- Budget \$750.000 – \$1.000.000
- *Kind county grade system:* grade 9 - 11

Country House

- zipcode range 98000-98099
- Budget up to \$500.000
- Best time to buy is probably winter