

Where to buy a cheap & large home



In King County, Washington

Source: <https://kingcounty.gov/>

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Facts about me & client's expectations

About me

- Aspiring data scientist
- Consulting service for house buyers
- Based on West Coast of the U.S.

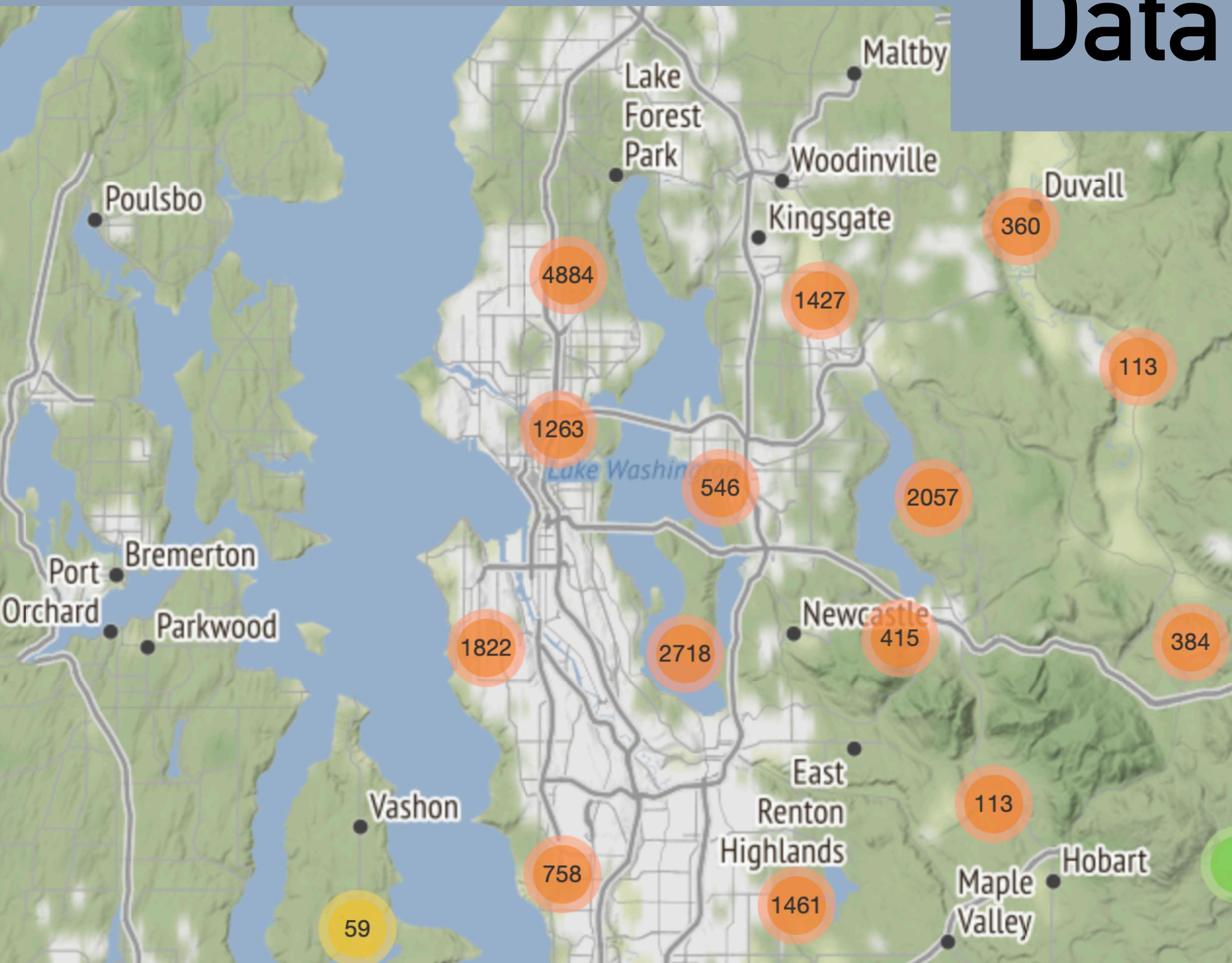
My client

- Thomas Hansen
- Has five kids
- No money
- Wants to live in a nice & social neighbourhood
- Wants to know when & where to buy his new home

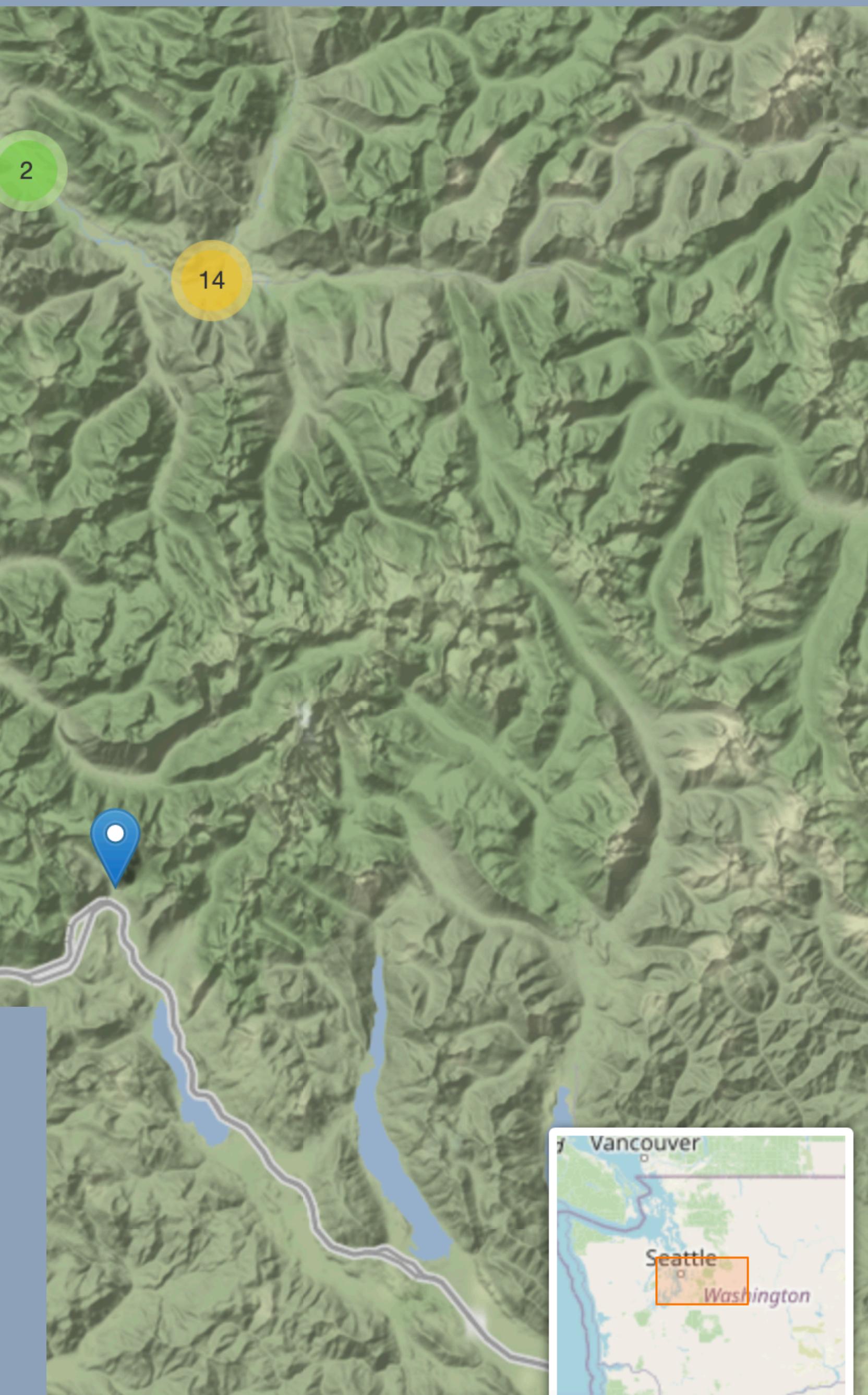
Data set

- King County Housing Data
- Home Sales in King County, USA
- Collected in 2014 and 2015
- Info about location, prices, area of houses and lots as well as house conditions

Data Overview



- 21597 entries of which 177 are for the same house
- NaN entries for waterfront, view, sqft. basement and year renovated
- Prices range from 78,000 USD to 7,700,000 USD
- Most houses close to Seattle



Research questions / hypothesis

1. Which areas are nice social neighbourhoods?

Those close to the city centres.

2. Where can the client get a large, cheap house?

He needs at least 5 bed rooms, 2 bath rooms, price below 400,000 USD

3. Does a cheap house mean it is in a bad condition?

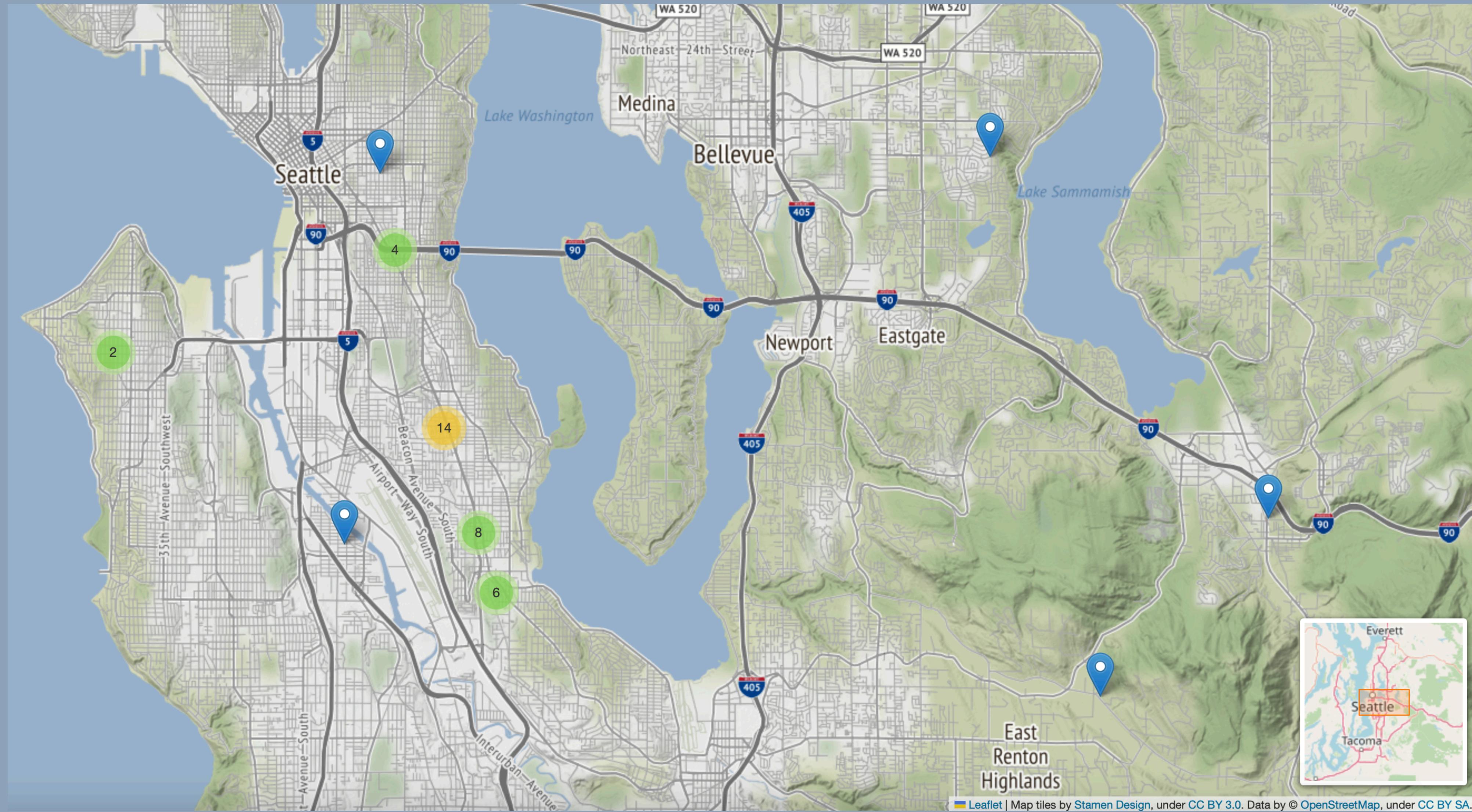
Yes.

4. When are cheap houses sold?

Not in summer, as people are busy being on vacation.

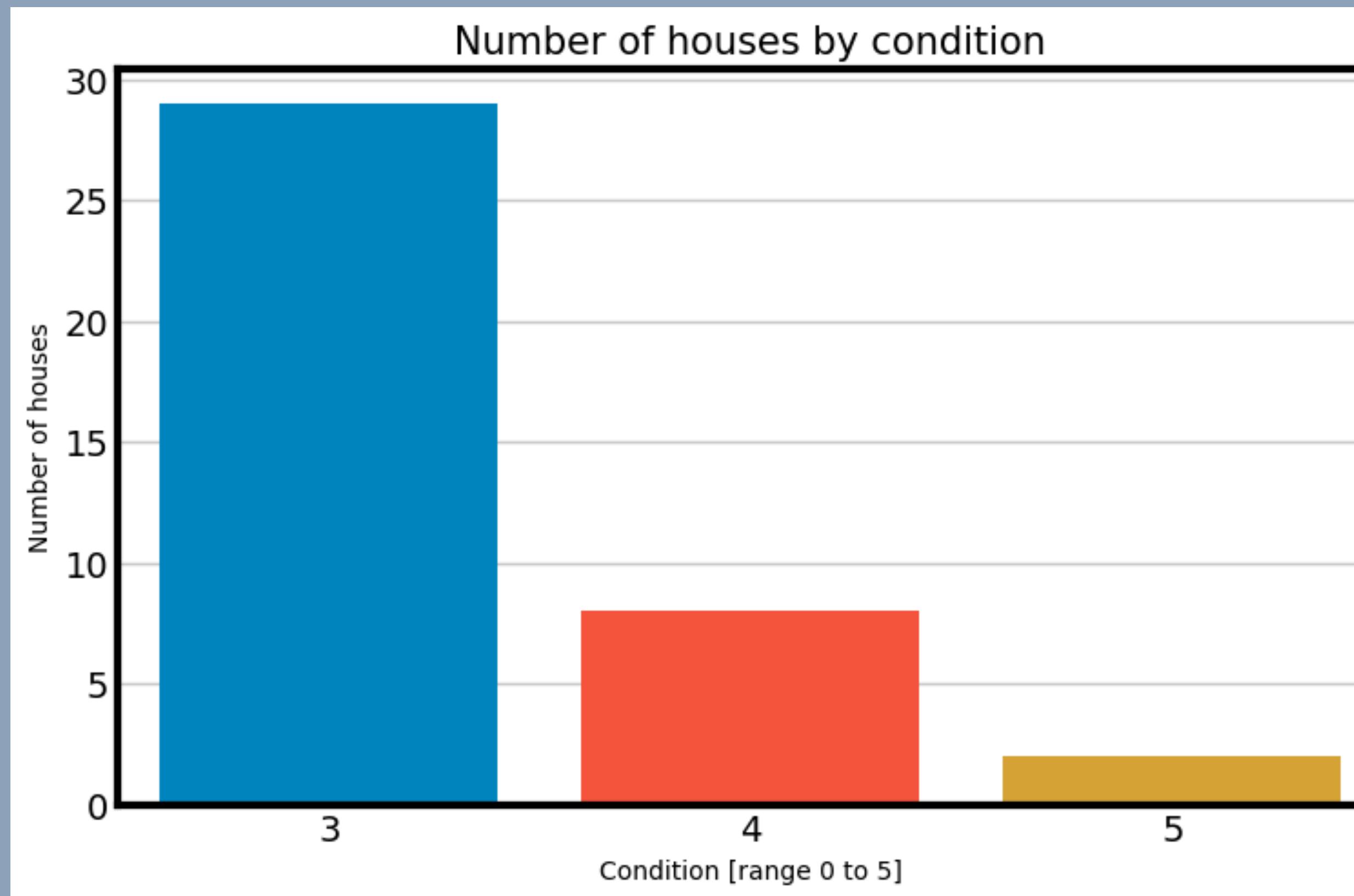
Result of hypothesis testing

1. & 2. Areas for his conditions, only 39 houses left, all nice



Research questions / hypothesis

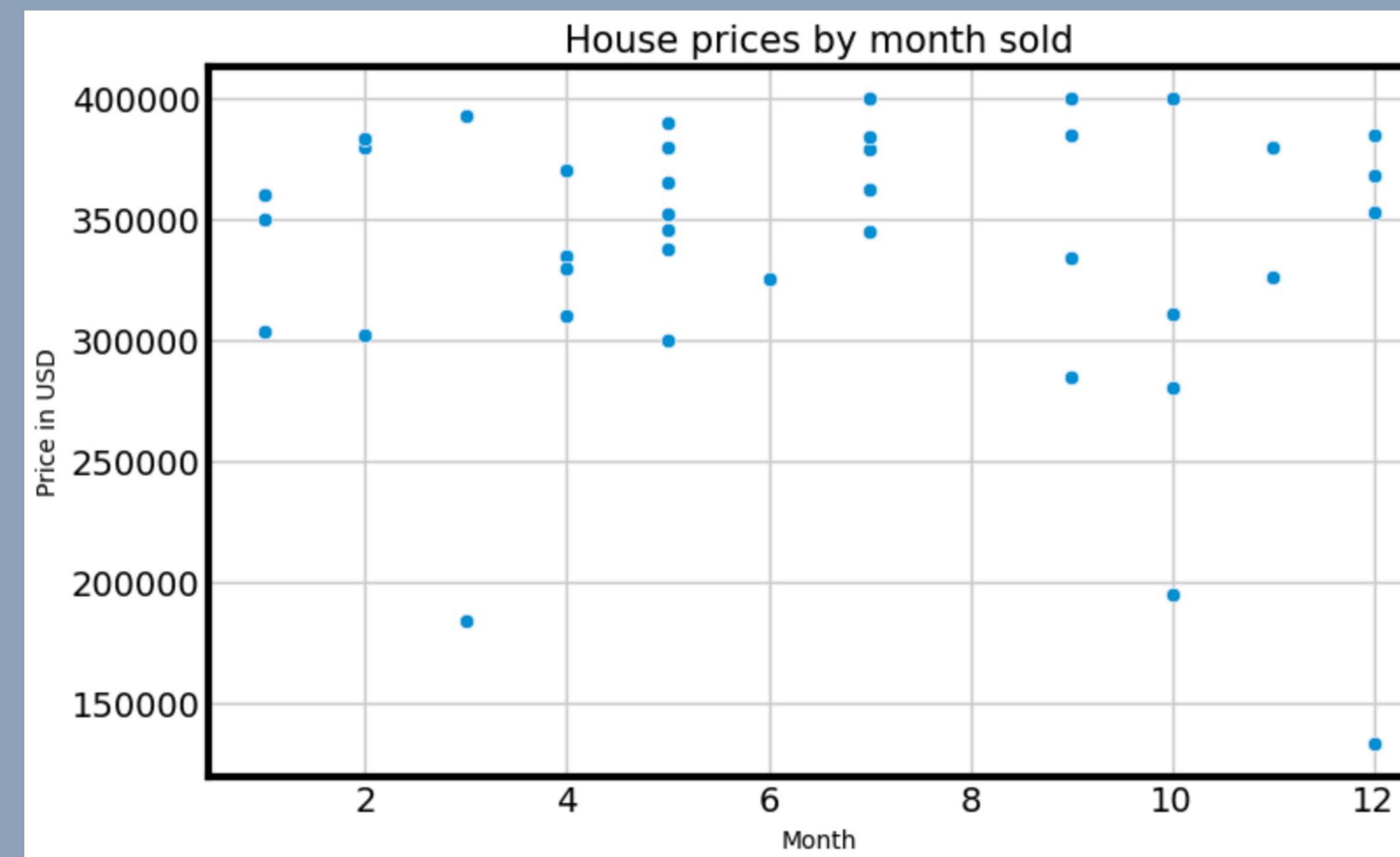
3. Condition of the houses



Of the 39 houses, 37 are not renovated.
Further analysis: age of houses

Research questions / hypothesis

4. Best time to buy a house



Descript. Statistics:

- average lowest in fall
- Most expensive in summer
- Cheapest sold in winter

Insights & recommendations for client

- Limited amount of houses
- Most of them need to be renovated
- There are fitting houses close to the city centre of Seattle & in nice areas
- Best to buy in fall or winter

Conclusion

- Top of the iceberg
- Lots of room for improvement
- Limited data due to client's wishes
- Further iteration: analyse age of houses, extend the number of houses, calculate correlations