

EDA - housing sales data set

neuefische project

Adam Zabicki - 16.2.2024

Setting

- I am a Data Scientist :)
- employed in a real estate consulting firm
- my task is to help people making reasonable (data based) decisions
- this presentation is made for a client



Client

William Rodriguez



- buyer / two people
- looking for 2 houses

city house
central & fast

fast
can not wait for a better price

countryside
best timing & non-renovated

best timing
willing to wait for good offer

non-renovated
want to have a summerhouse
need space for guests

timeframe
compare prices of last 8 weeks

bedrooms
2 to 3 bedrooms (1?)

condition
at least 4

timeframe
season dependency?

condition
1 or 2

bedrooms / lot
more 2 bedrooms
or
garden > 200 m²

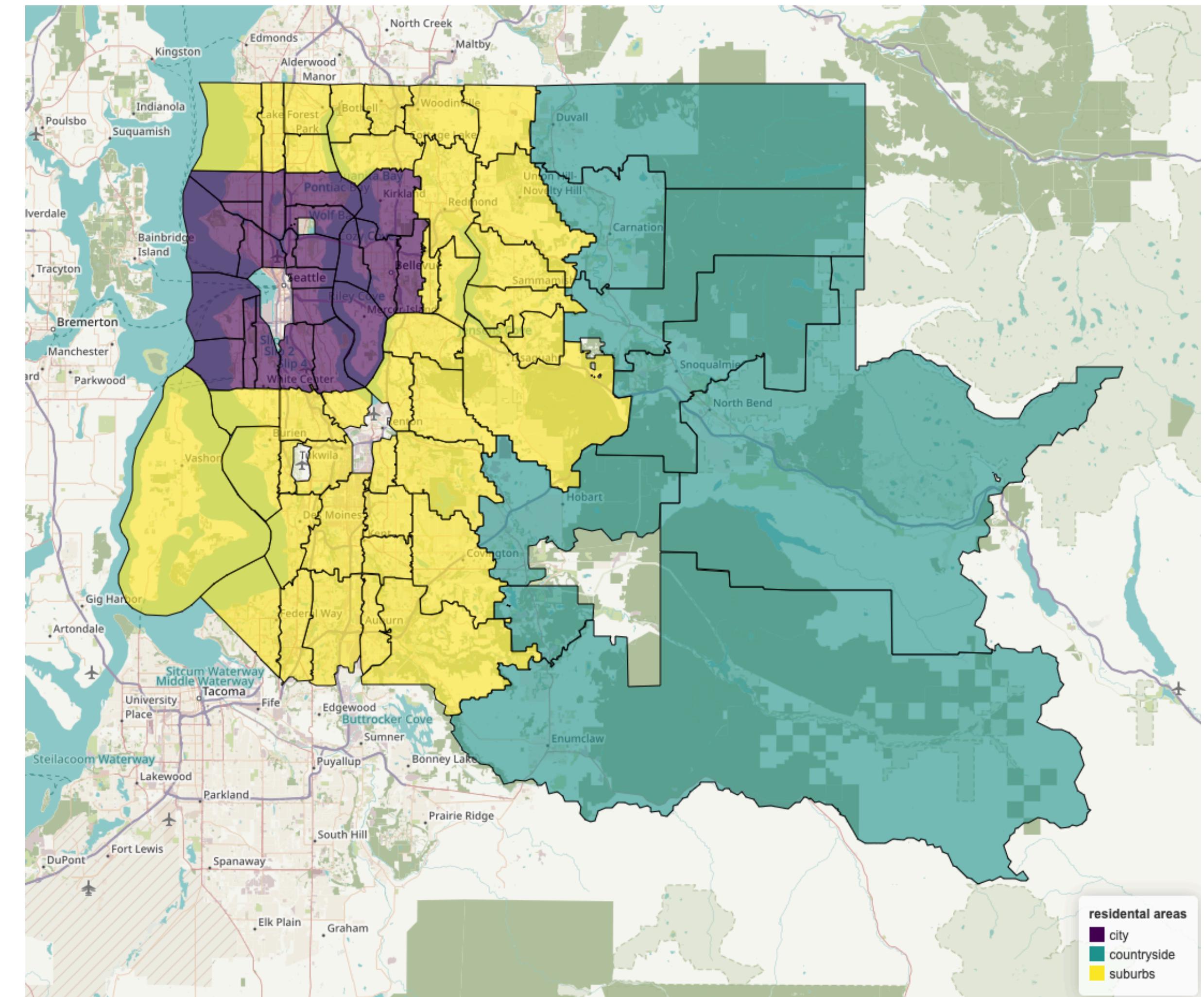
City v. Countryside residential areas

- based on *zip code*
- visual inspection / satellite images
- 3 different residential areas

city Seattle downtown and a bit of the surrounding districts

suburbs surrounding the city and still populated with (bigger) cities

countryside outside of suburbs and less densely populated



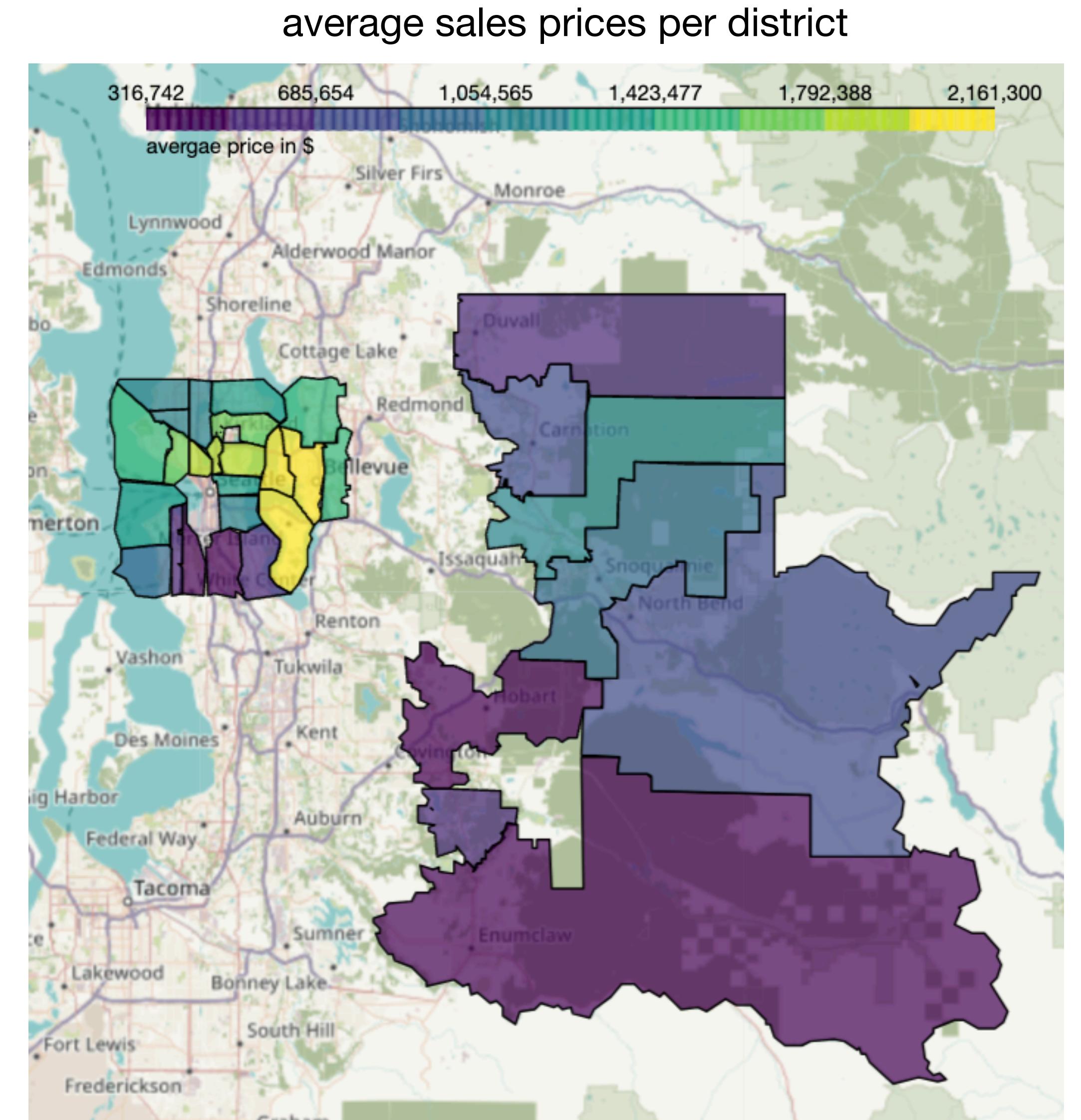
City v. Countryside price differences

- no restrictions
- overview over market situation
- # of houses

city : 7072
countryside : 1844

city is more expensive

although there are also cheaper districts

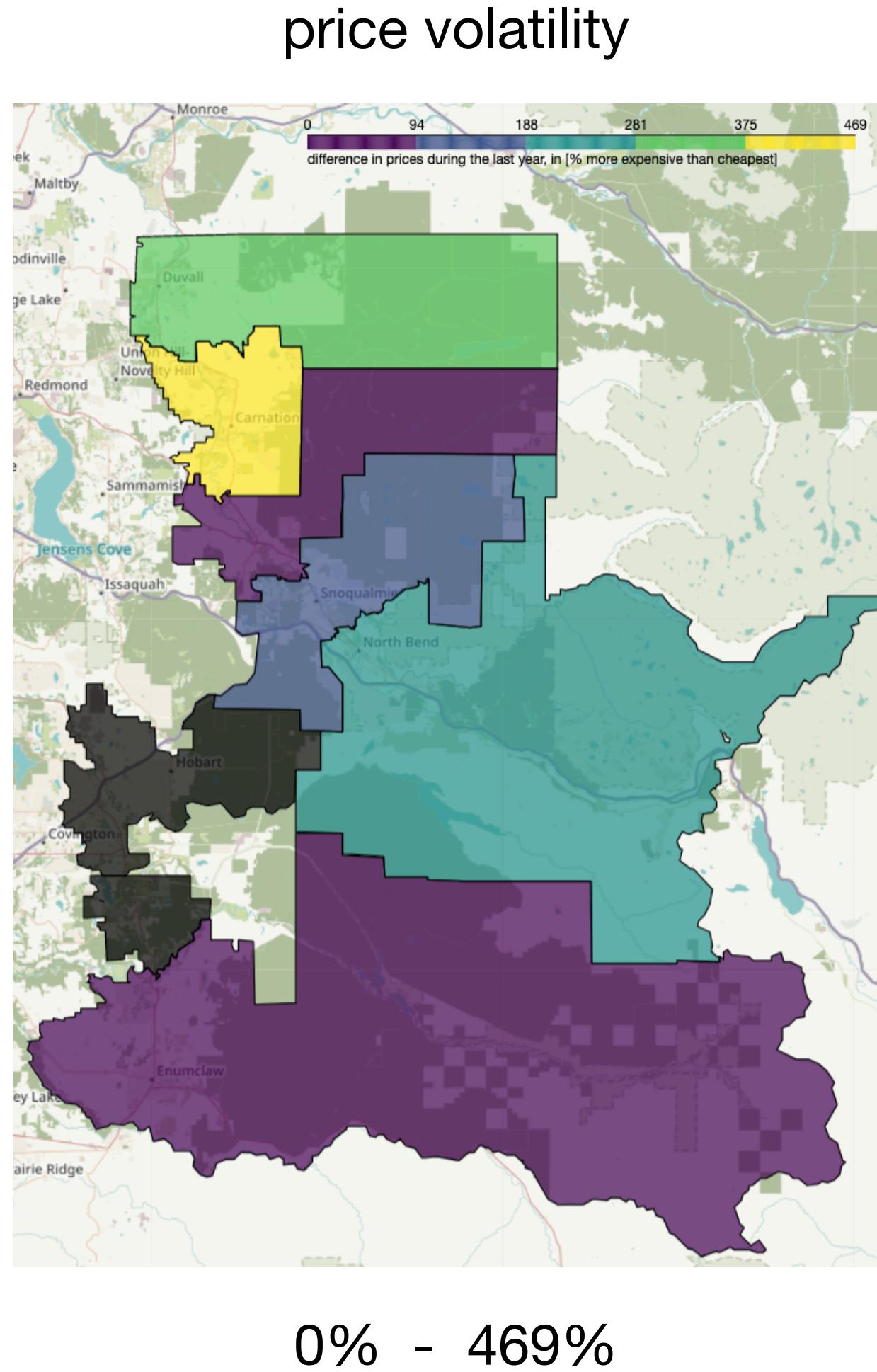


city \$319.500 - \$2.161.000
countryside \$316.700 - \$586.100

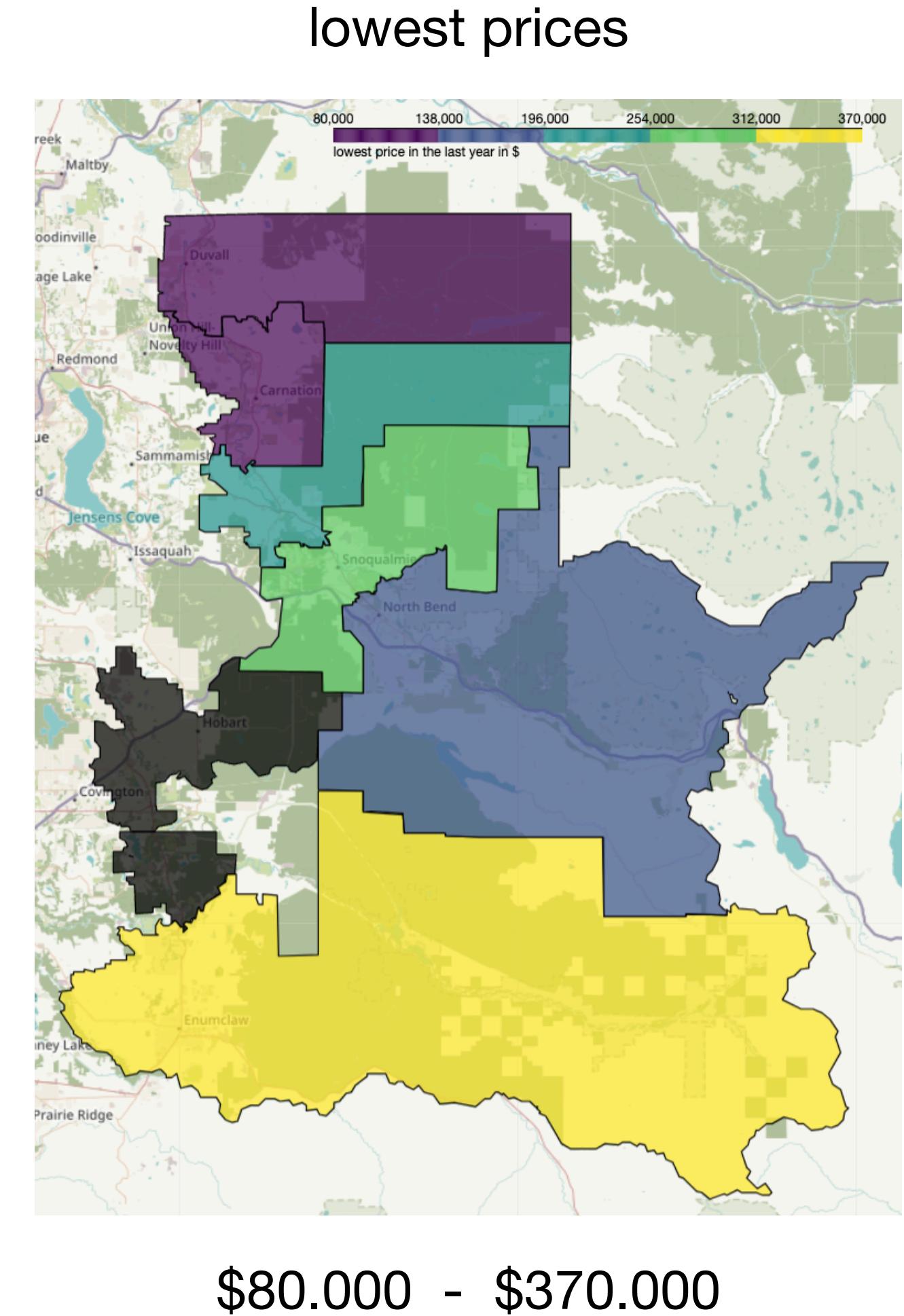
Summer House price fluctuations

- restrictions on *condition & bedrooms | garden*
- # of houses
countryside : 15 (!)
- do prices change during the year?
how much could you save if you
wait for a better timing?

northern districts are cheaper



*it's worth to wait, since the northern
districts are also more volatile*

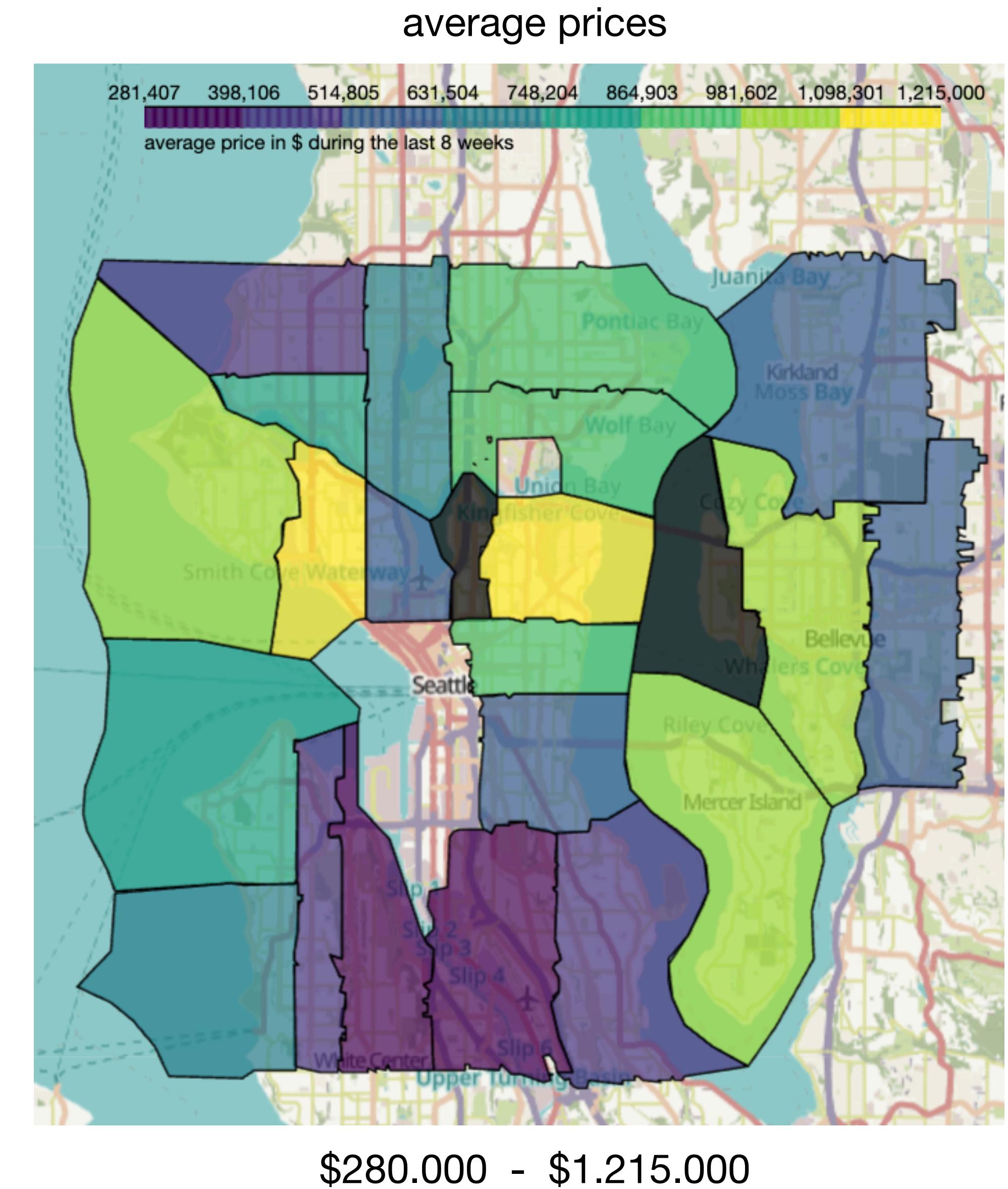


City House district differences

- restrictions on *time frame & condition* & *bedrooms*
- # of houses
city : 1539
- what are current house prices?
should i search in specific districts?

Districts differ a lot from each other

In order to propose a certain district, more information needed (e.g. budget, workplace...)



Hypothesis 3 ???

Houses in need of a renovation are less affected by price fluctuations

complete data set

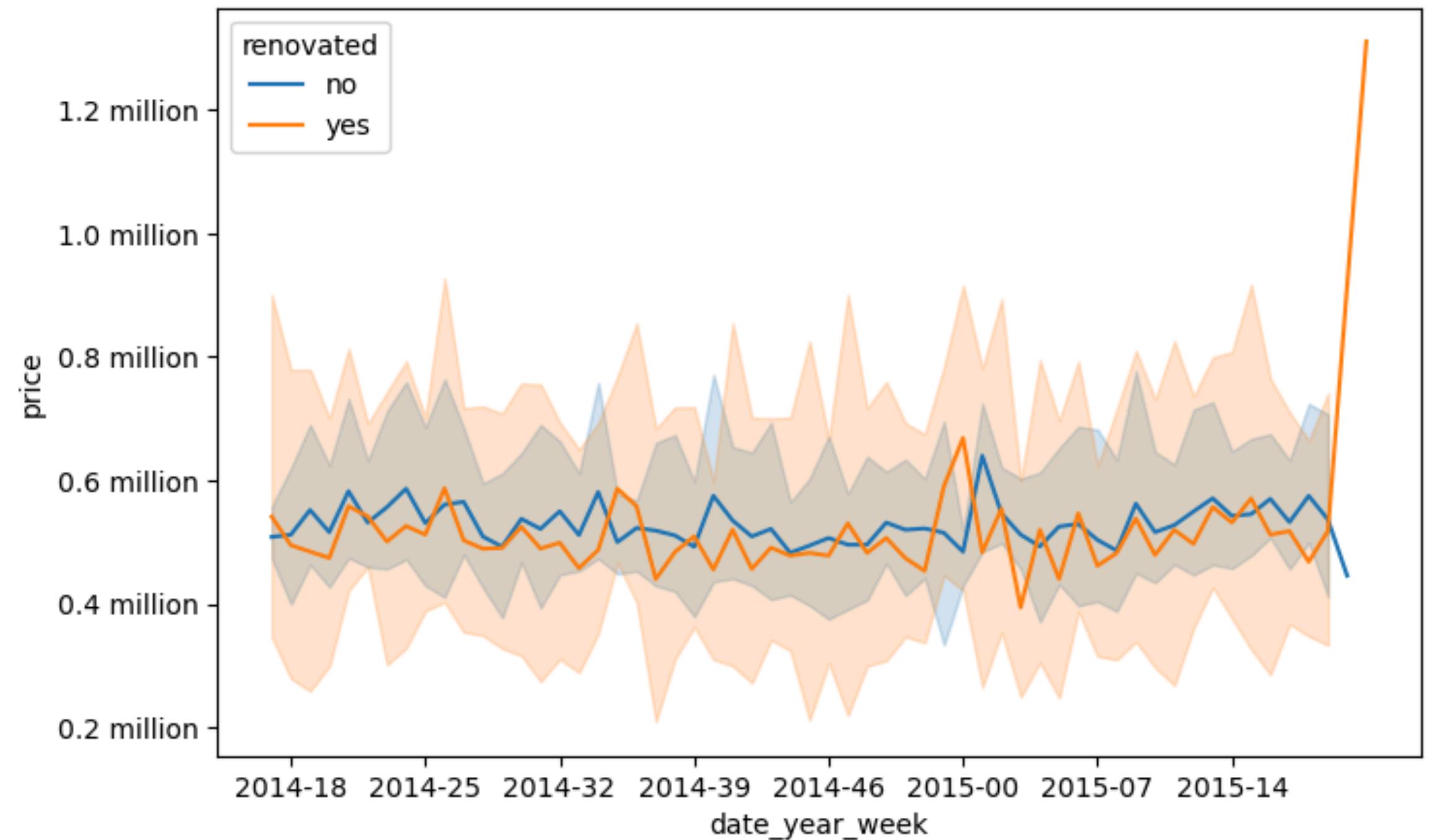
renovated: conditions 4 & 5

un-renovated: conditions 1 & 2 & 3

(including 3 for lack of data if excluded)

no difference between both categories

whether in average price, nor in any kind of fluctuation

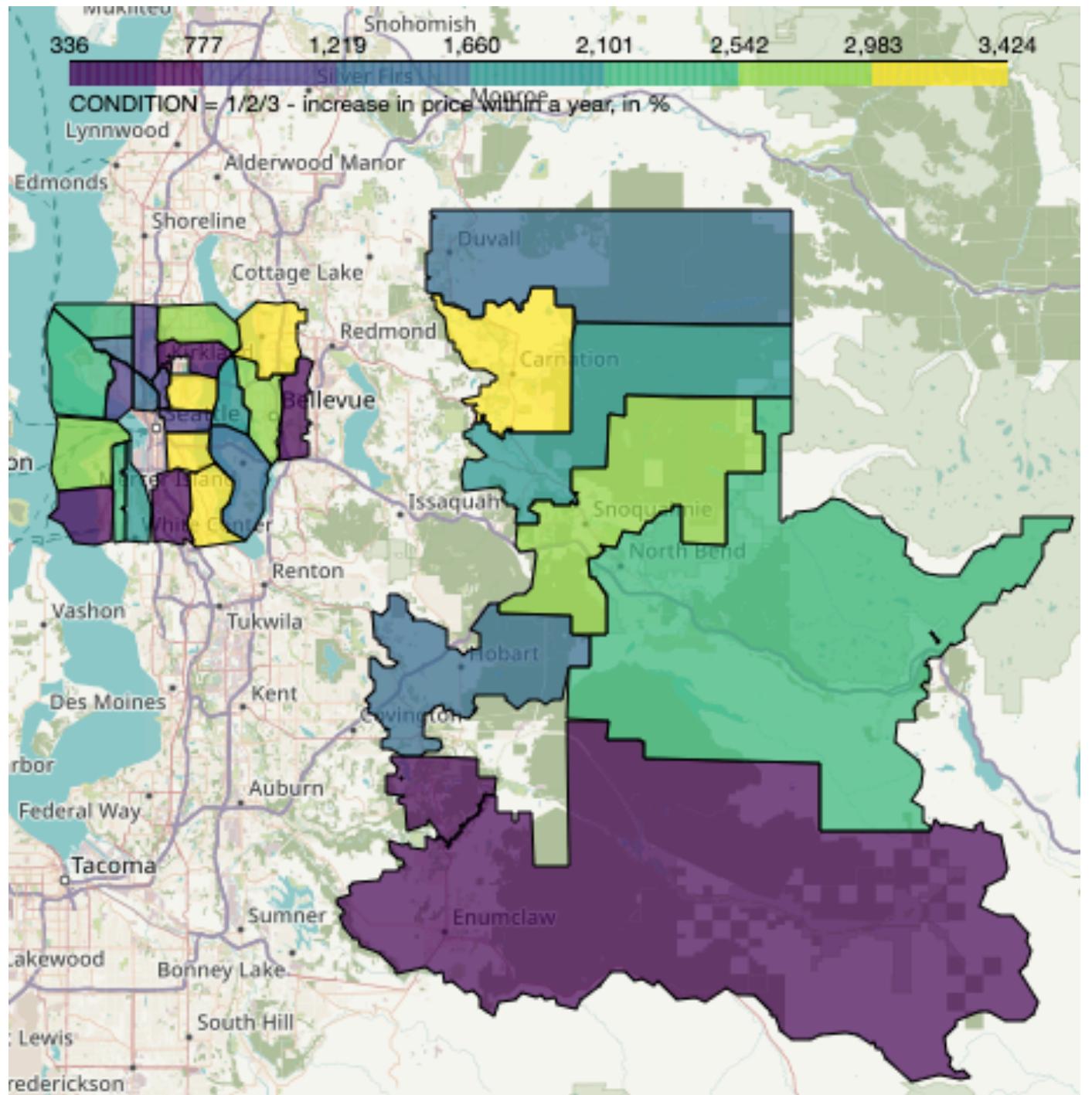


Hypothesis 3

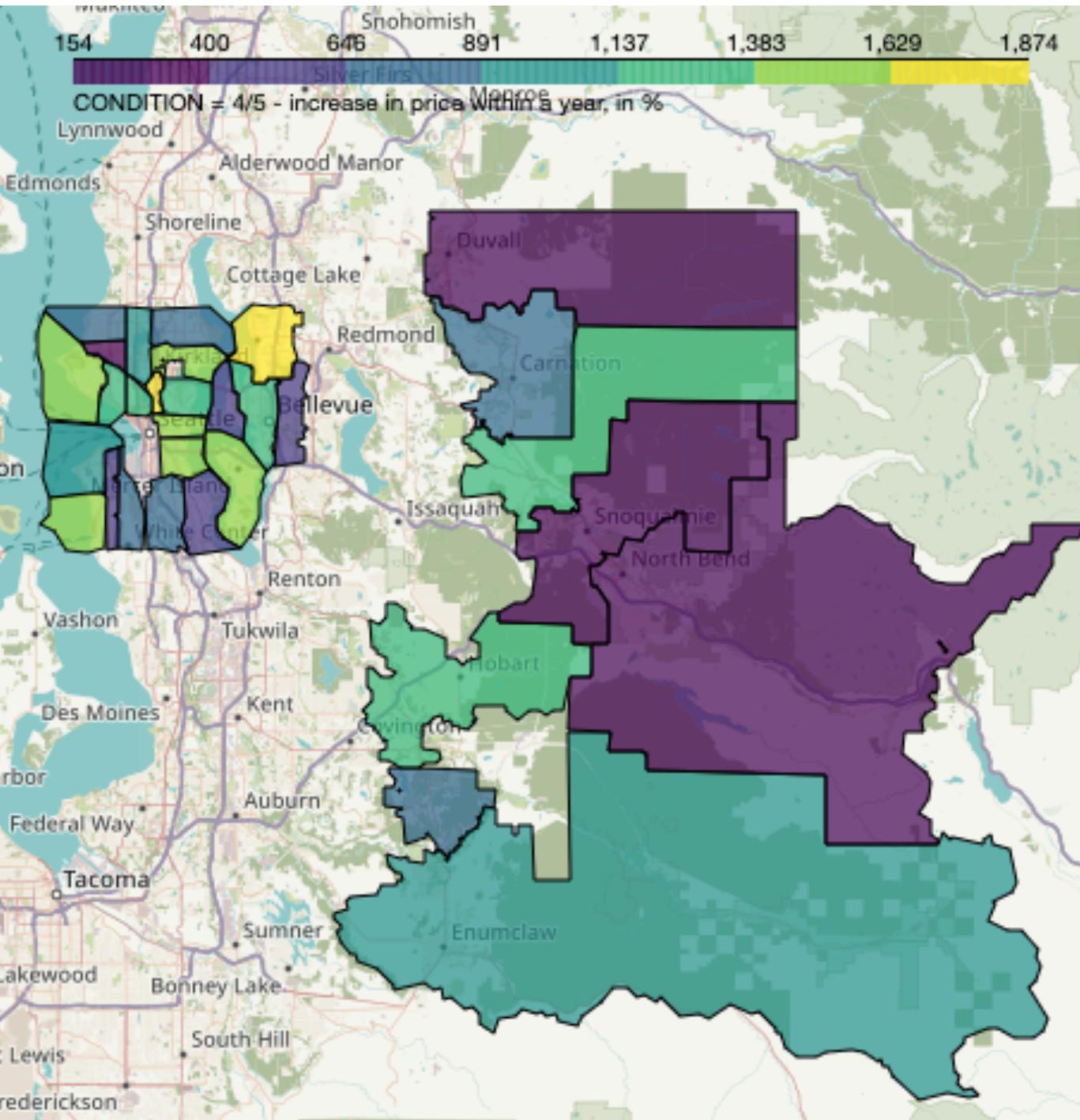
price fluctuations per district

Houses in need of a renovation are less affected by price fluctuations

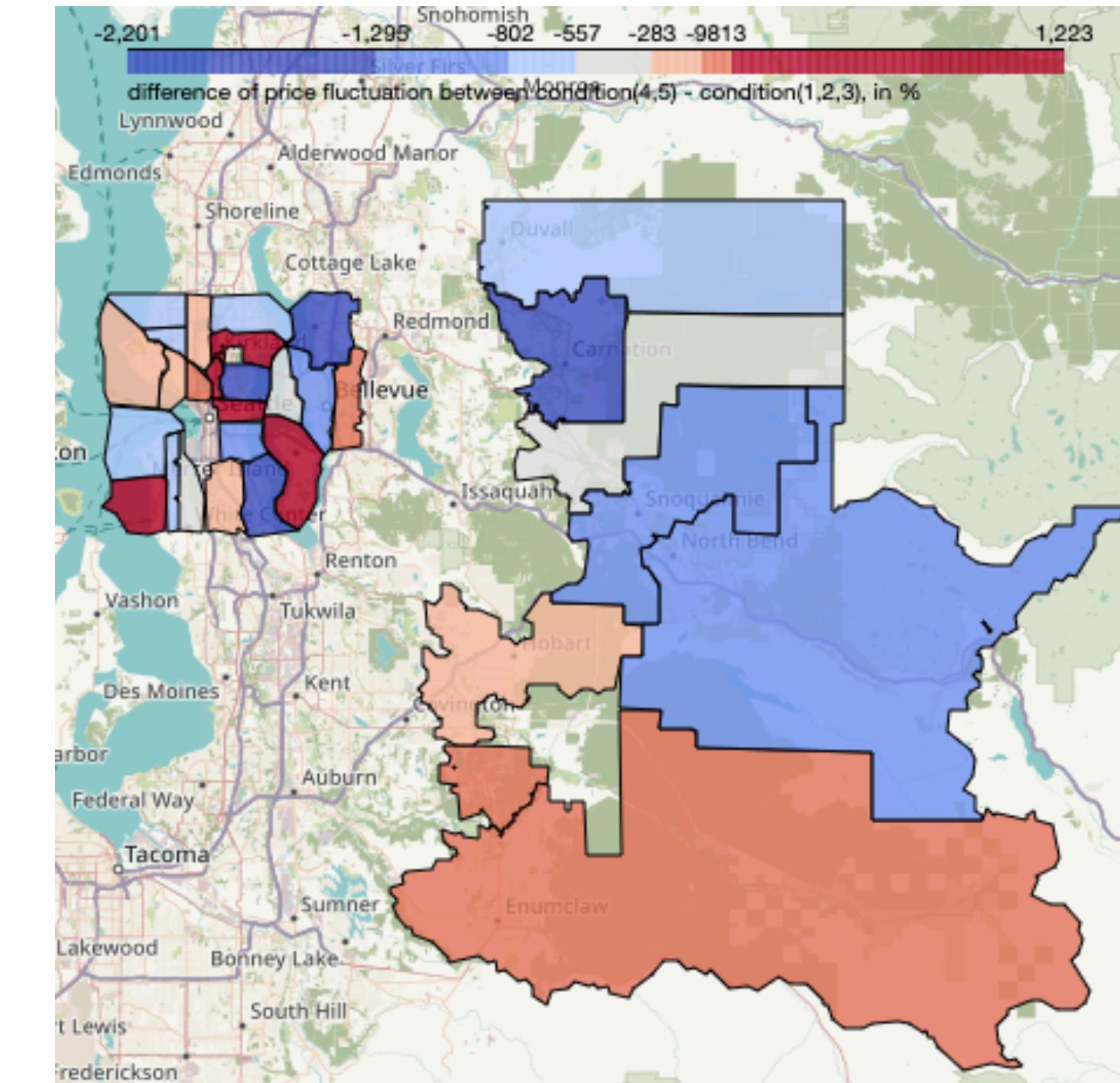
un-renovated



renovated

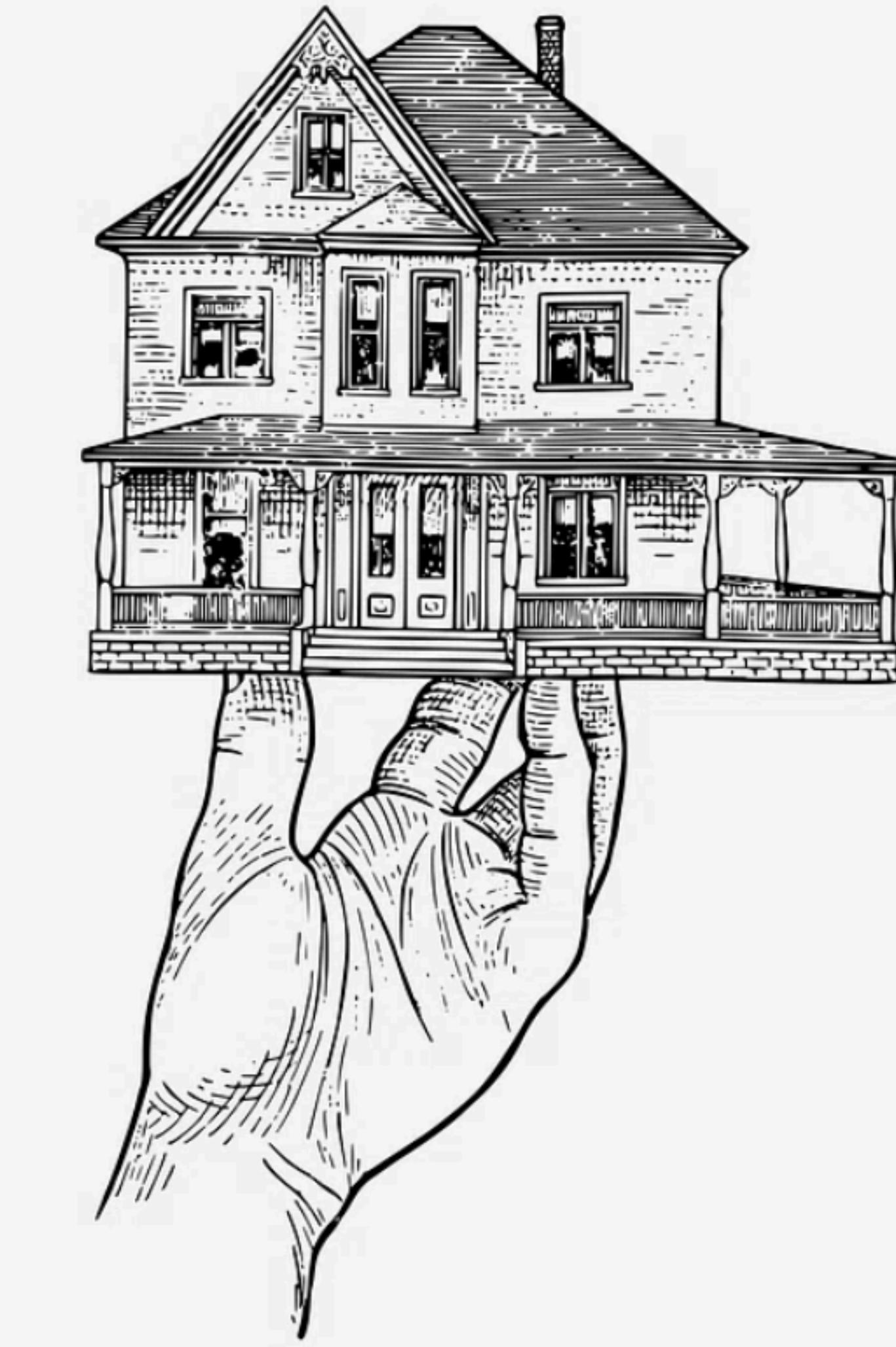


difference



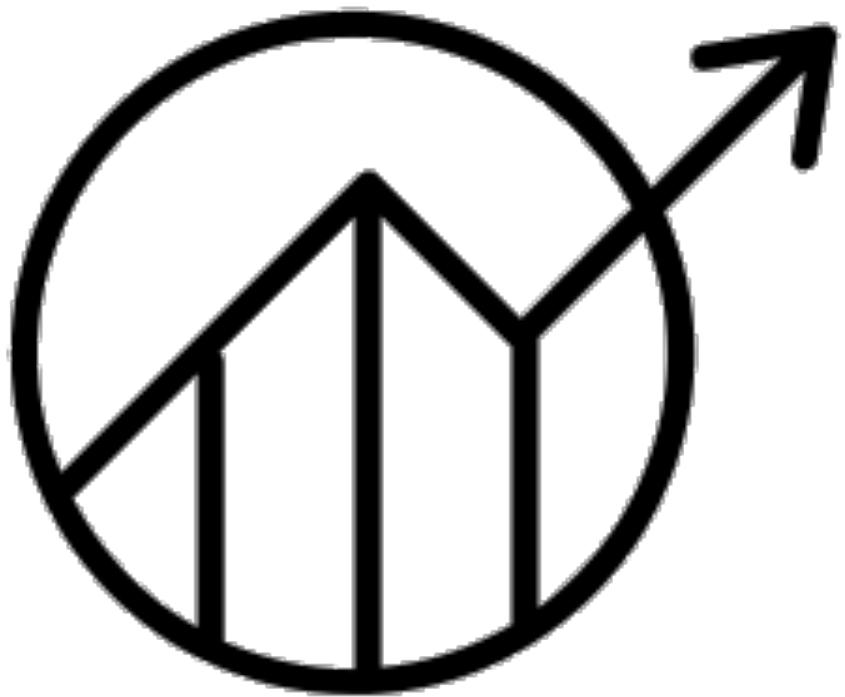
it depends on the district

**Thank you
... any Questions?**



things to improve

- different library for map
 - legend options are limited...
- just took *screenshots*
-



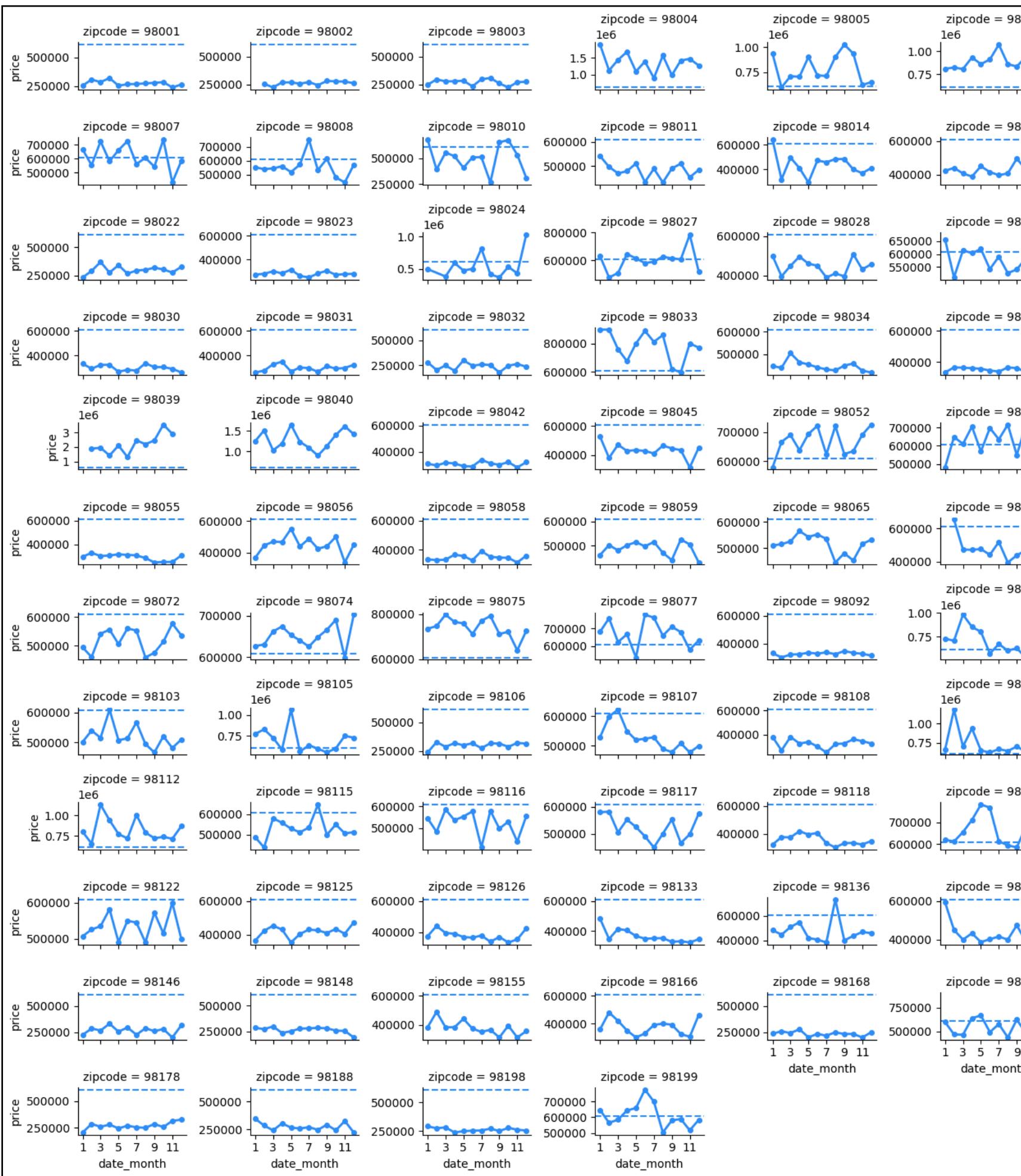
Hypothesis 3

what about districts?

for data
people
only !!

Houses in need of a renovation are less affected by price fluctuations

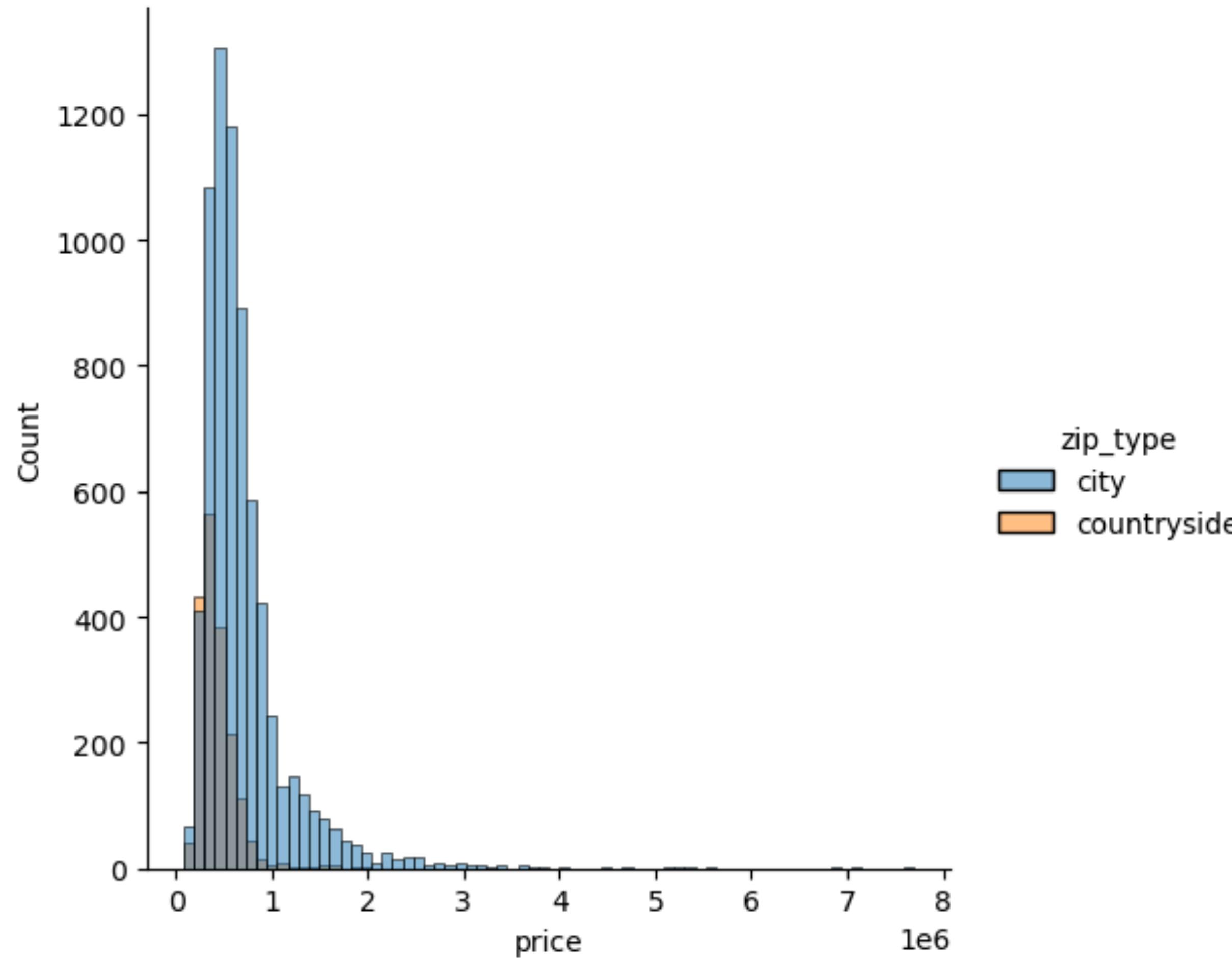
renovated



un-renovated

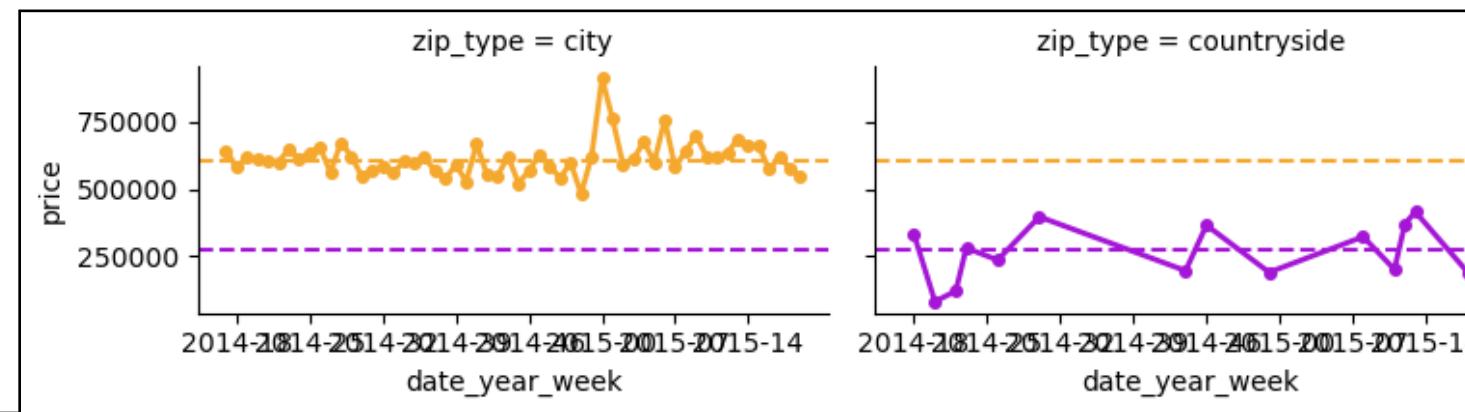


overall distribution of prices



price fluctuation

City



Countryside

