

EDA project

Real estate analysis in King County, WA
for Erin Robinson
by Leon Pichotka

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Scope of the analysis

King County, Washington, USA

Real estate, 20000 houses in the data set

Stakeholder: Erin Robinson

→ wants to invest in poor neighborhood

→ is buying and selling

→ wants costs back and a little profit

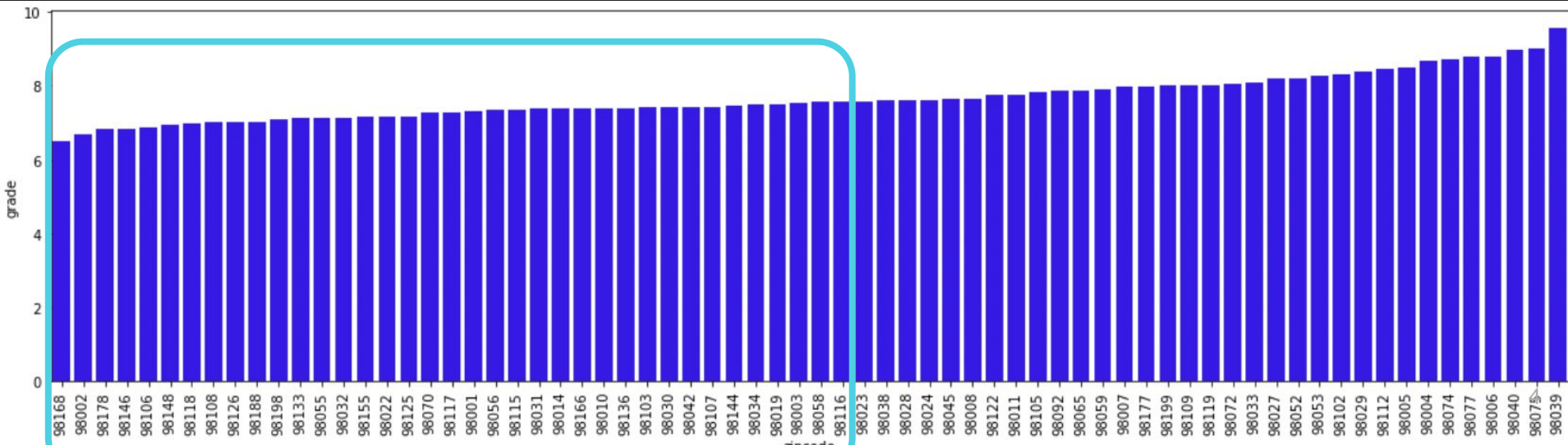
→ wants to act socially responsible

Research questions and Hypothesis

Research question	Hypothesis
1 Are there unpopular ZIP code regions?	There is a clear ranking in mean grade per zip code.
2 What is a poor neighborhood?	Correlation between price and grade: the lower the grade, the lower the price?
3 Is the price a good indicator for poorness?	The bigger the house, the higher the price? The bigger the rooms, the higher the price?
4 Is the grade a good indicator for poorness?	The lower the price per sqft, the lower the grade?
5 Is the neighborhood of a poor house also poor?	The lower the size of a house, the lower the size of the neighborhood houses?

Where are the unpopular neighborhoods?

- First limitation by looking for the less popular regions
- as the “grade” is a value acquired by a state-wide grading system describing the overall that could fit as indicator for popularity
- only take the lower 50% of zipcodes into account

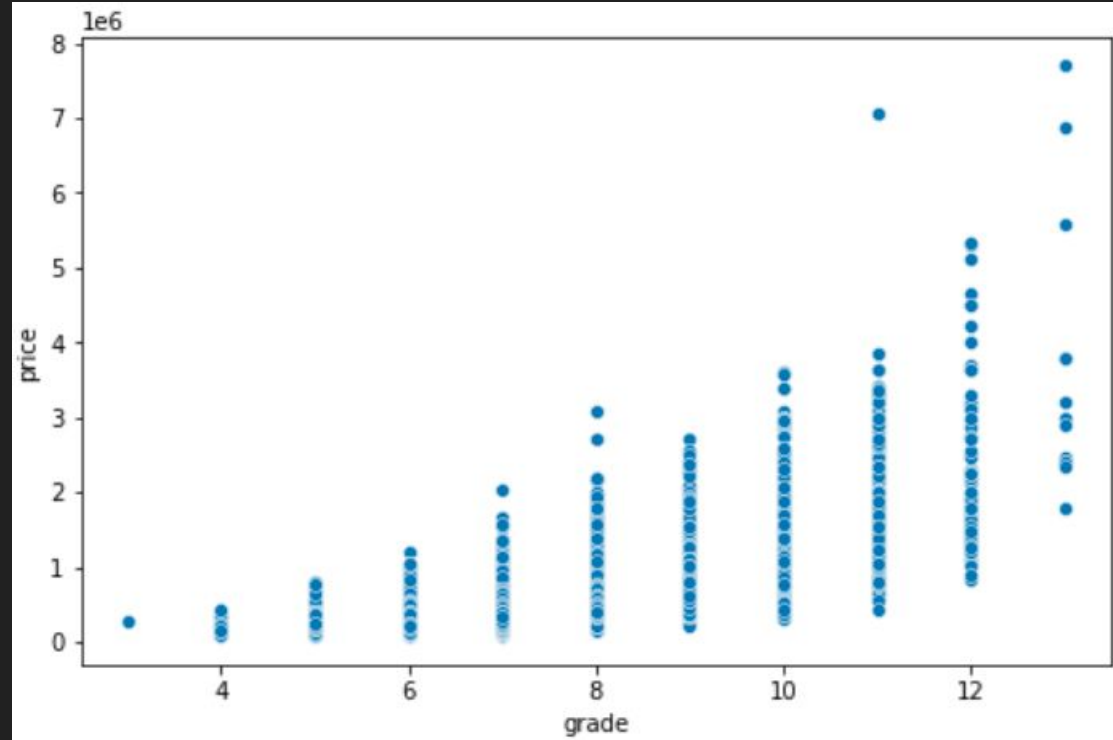


But is unpopular = poor neighborhood?

How to define a poor neighborhood?

- The lower grades are correlating with lower prices!

But is a cheap house a poor neighborhood or just a small house?

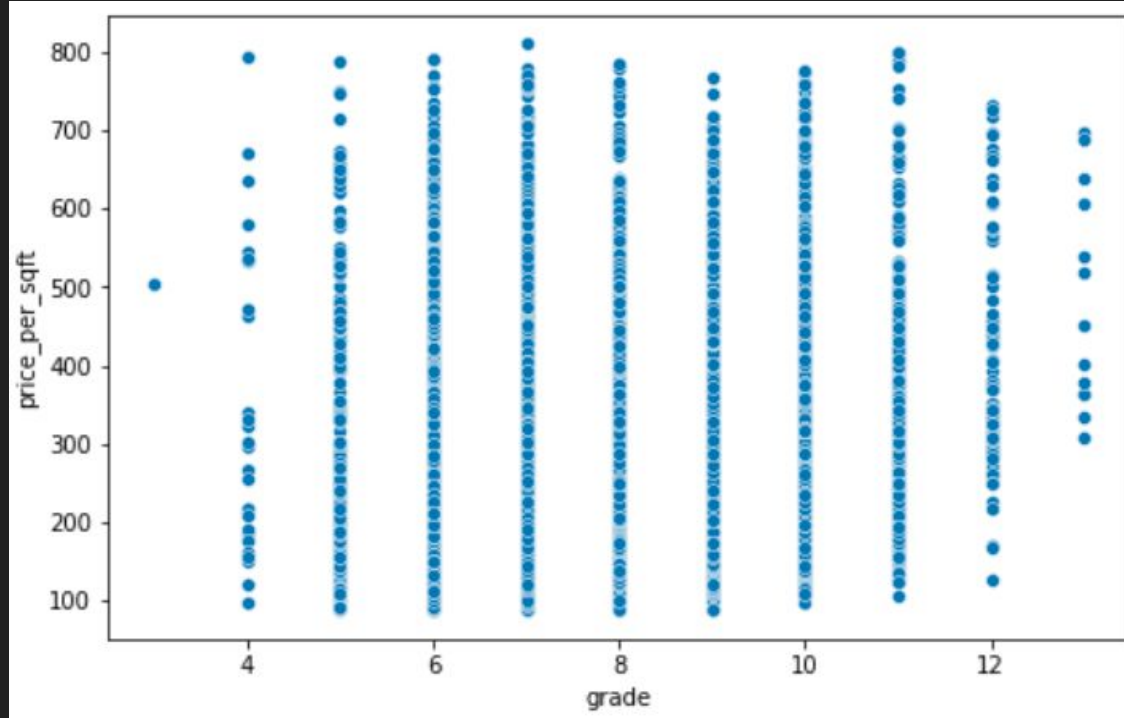


But is unpopular = poor neighborhood?

The price per squarefeet

- is good for comparison
- There is no correlation between the grade and the price per sqft of living space!

The grade doesn't help further to find poor neighborhood!



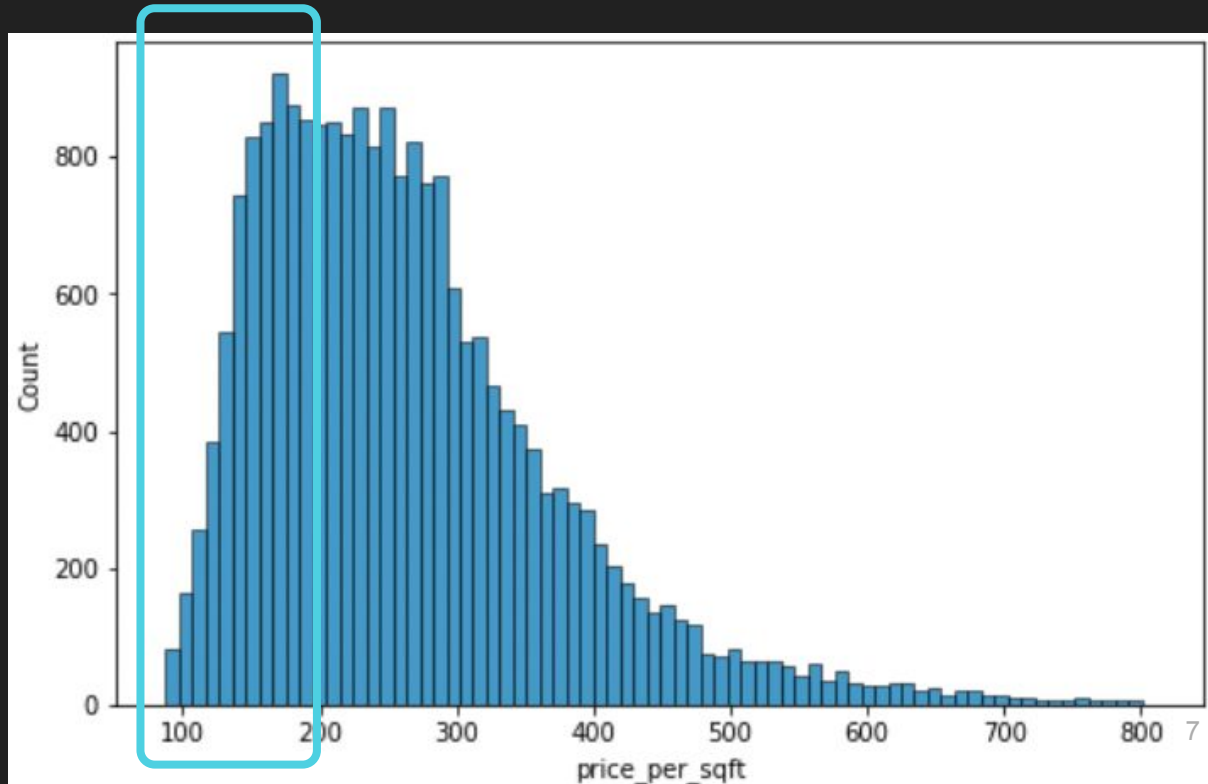
Find poor neighborhood

Price per sqft:

mean = 264 [\$/sqft]

median = 245

lowest 25% = 182

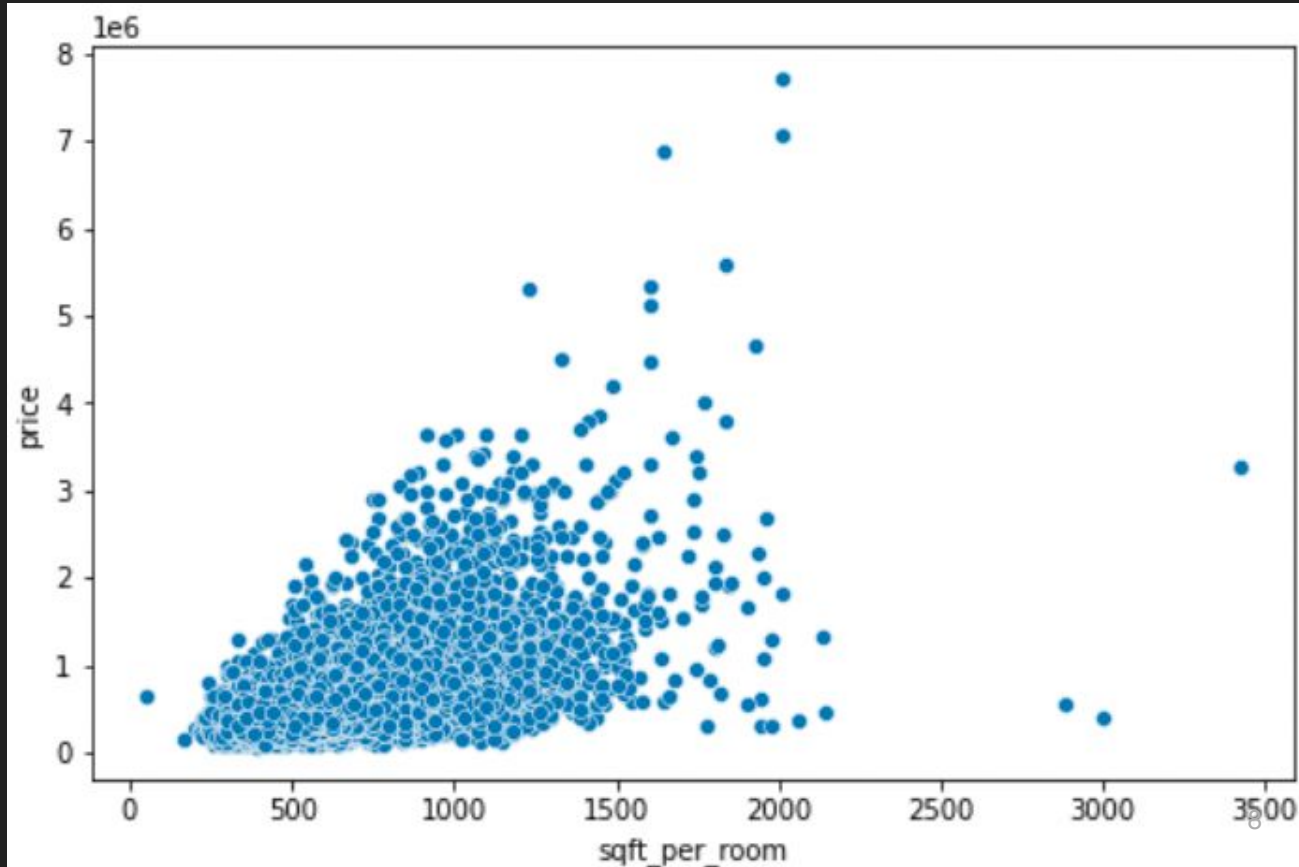


Find poor neighborhood

A good indicator for poor houses/regions could be the **size of the rooms**.

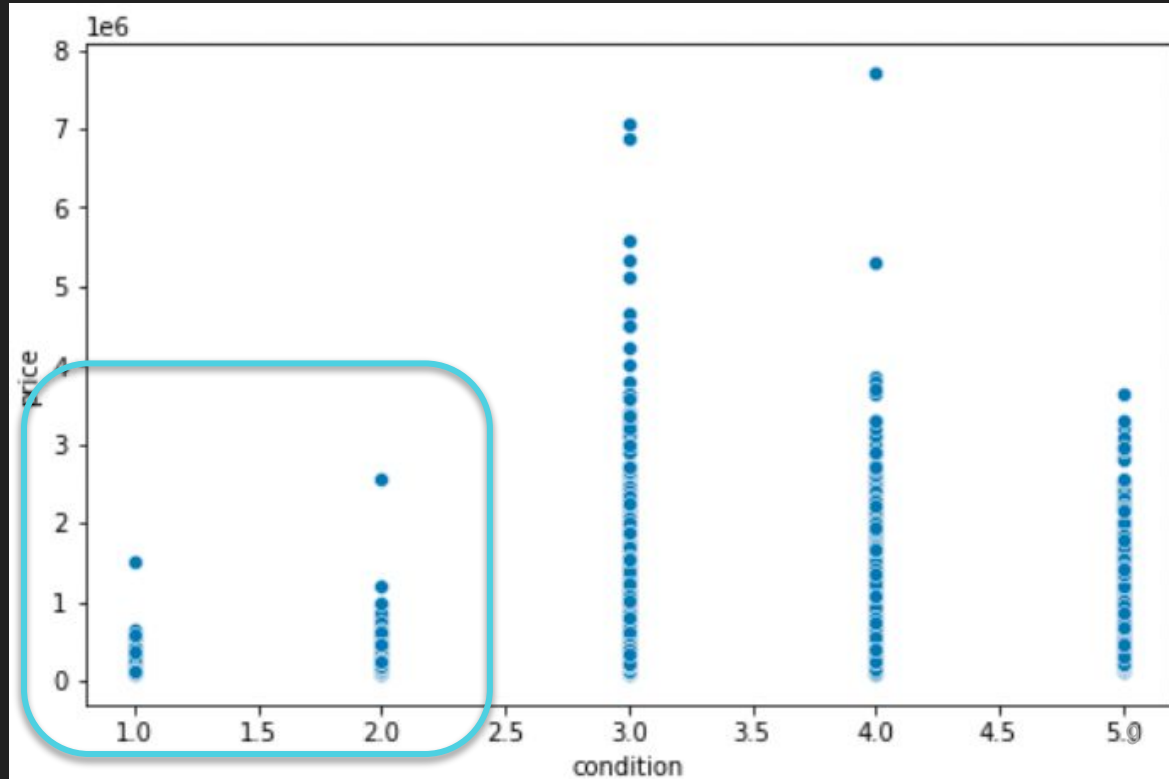
There is also a correlation between the size per bedroom and the price

The lowest 25% should fit for a poor region



And what about the condition of the house?

The correlation between price and condition of a house is not clear, but the price range for the two lowest categories of very low

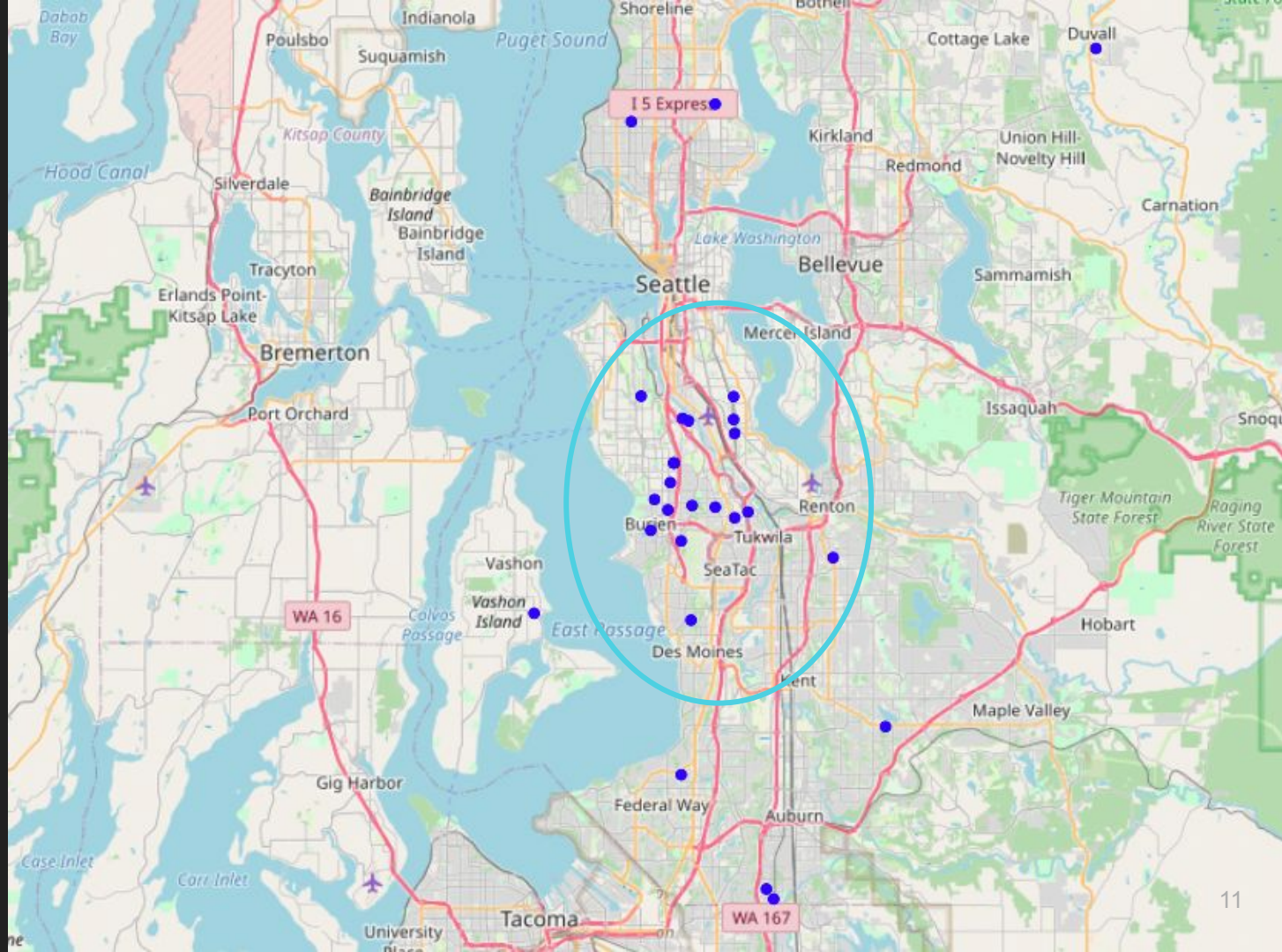


Search parameter

- not in the popular zip code areas: the lower half of zip codes mean grade
- price per sqft living space below 182 \$/sqft (lowest 25%)
- mean size of bedroom below 470 sqft/room (lowest 25%)
- condition of the house max. 2

Result

- 26 possible houses,
- mainly located in the south of seattle



Outlook

- additional data: mean income per zip code
- choropleth with mean income or mean grade per zipcode
- additional data: playing grounds, to find houses fitting for families
- for research question 5: “Is the neighborhood of a poor house also poor?”
 - the only available information is the size of the neighborhood houses, at least a price¹⁵ would be interesting as additional information