This analysis was performed on King County house Sales dataset from 2014 to 2015.

Next questions will be answered:

1. What is dependence between living sqft vs price and lot sqft vs price?

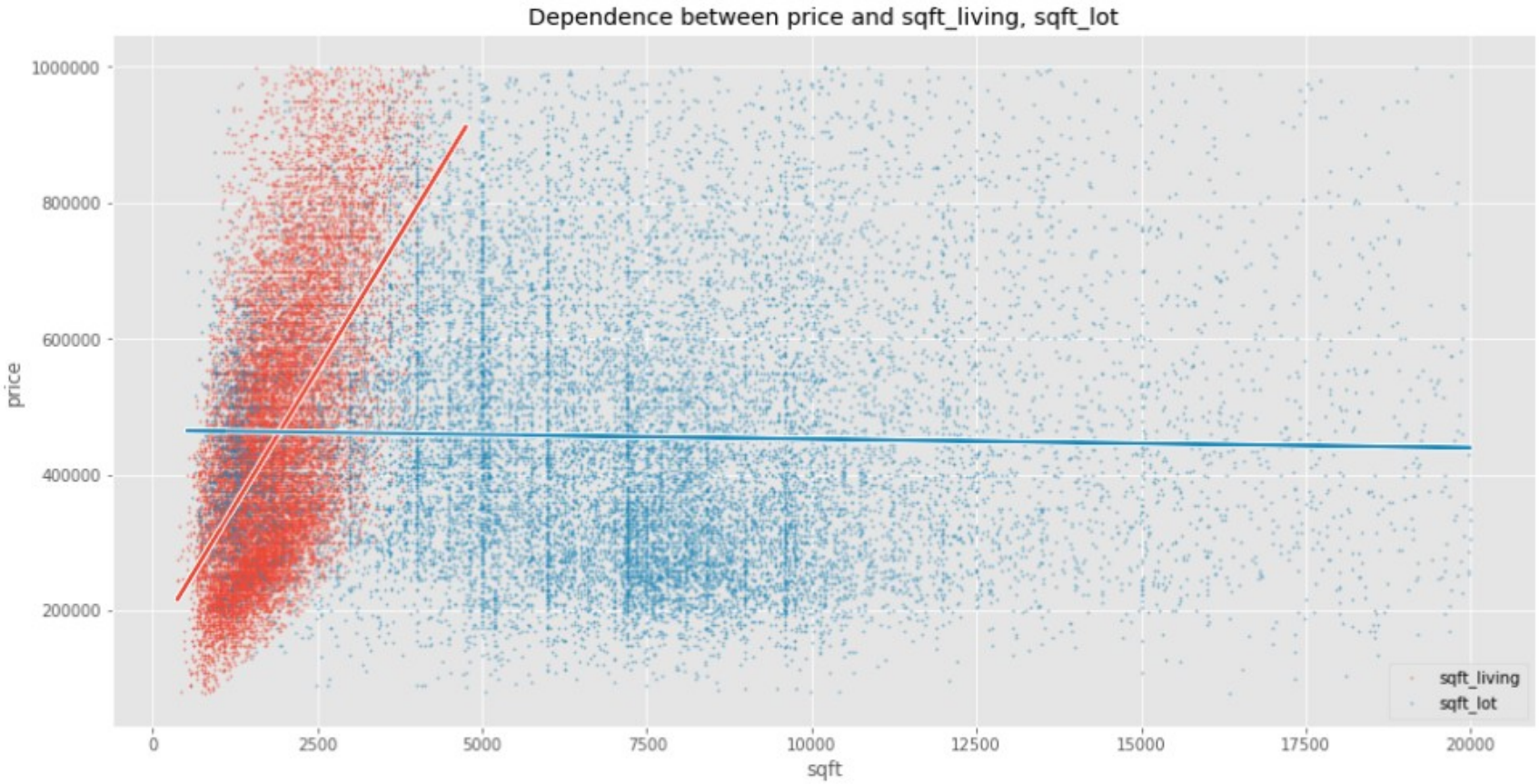
2. Is there a difference in price based on the renovation status within the last 10 years or 10+ years with respect to square footage of living area?

3. Does the price depend on the number of bedrooms?

4. How did the price change over the time for the subset of data for which this data is available?

What is dependence between sqft_living vs price and sqft_lot vs price?

Living square footage makes significant impact on sale price.
Houses with bigger lot square footage have relatively smaller price.

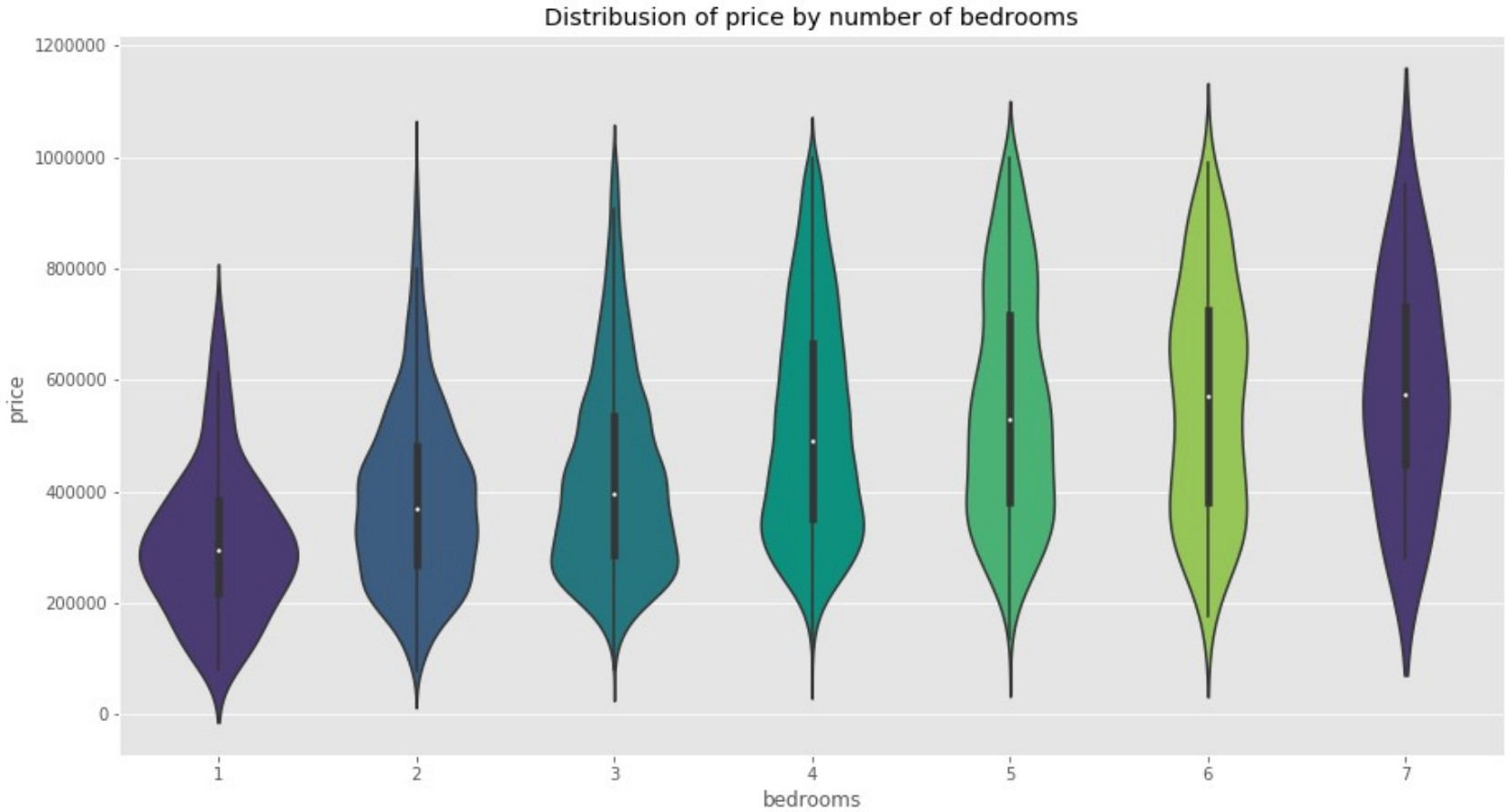


Is there a difference in price based on the renovation status within the last 10 years or 10+ years with respect to square footage of living area?

From the visualization below we can see that year of renovation does not have an impact on house price.

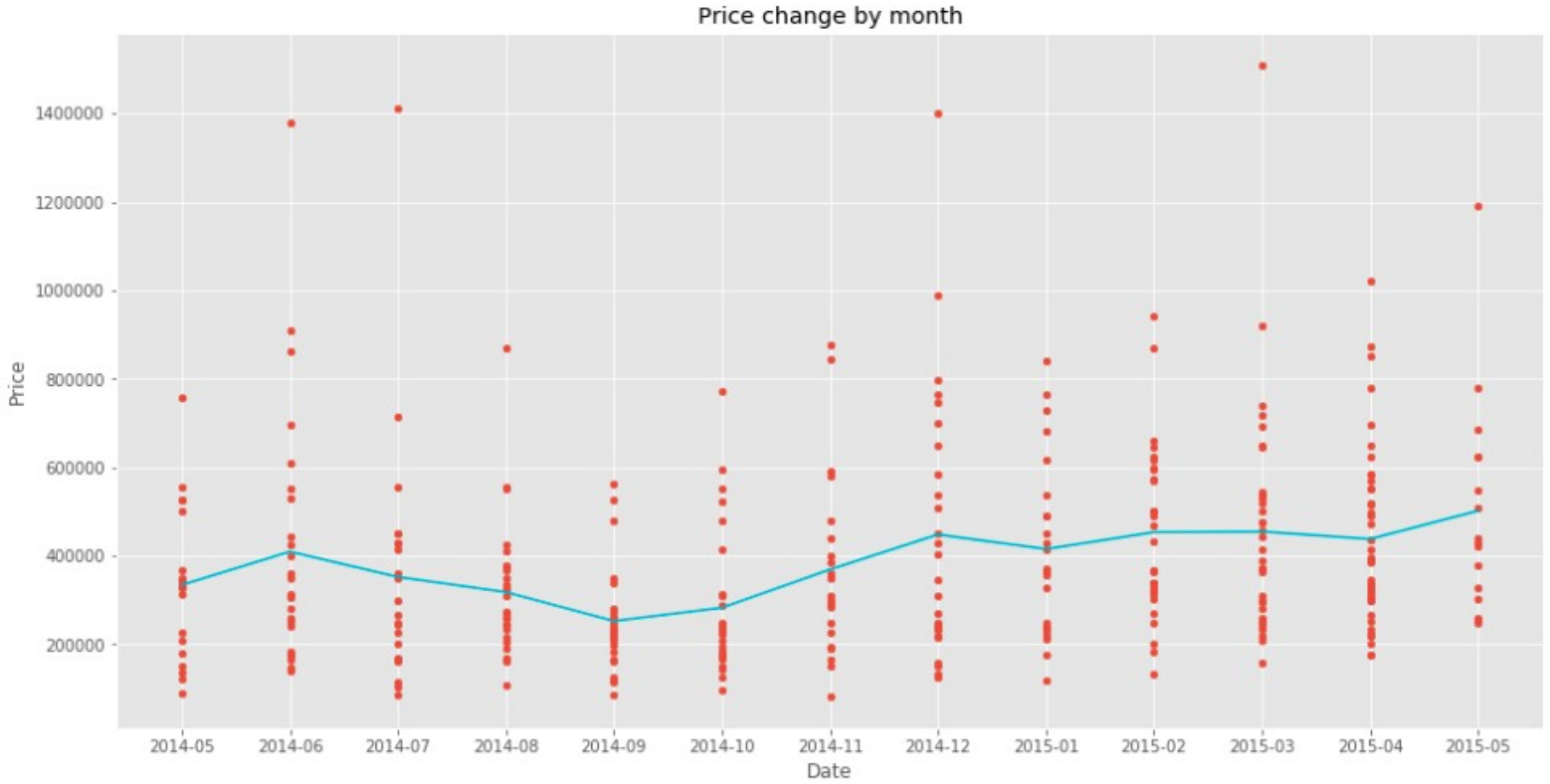
Does the price depend on the number of bedrooms?

There is a notable difference in price between 1br and 2br apartments, as seen from the violin plot.
The following increase in Br does not produce such a difference.



How did the price change over the time for the subset of data for which this data is available?

The price increased from $334020.11 on 05/2014 to $501558.75 as of 05/2015.
The price increased by 150%.



Conclusion:

1. Living square footage is a significant predictor of the sale price. Houses with bigger lot square footage have slightly lower price.

2. Recent renovation status does not have an impact on the house price.

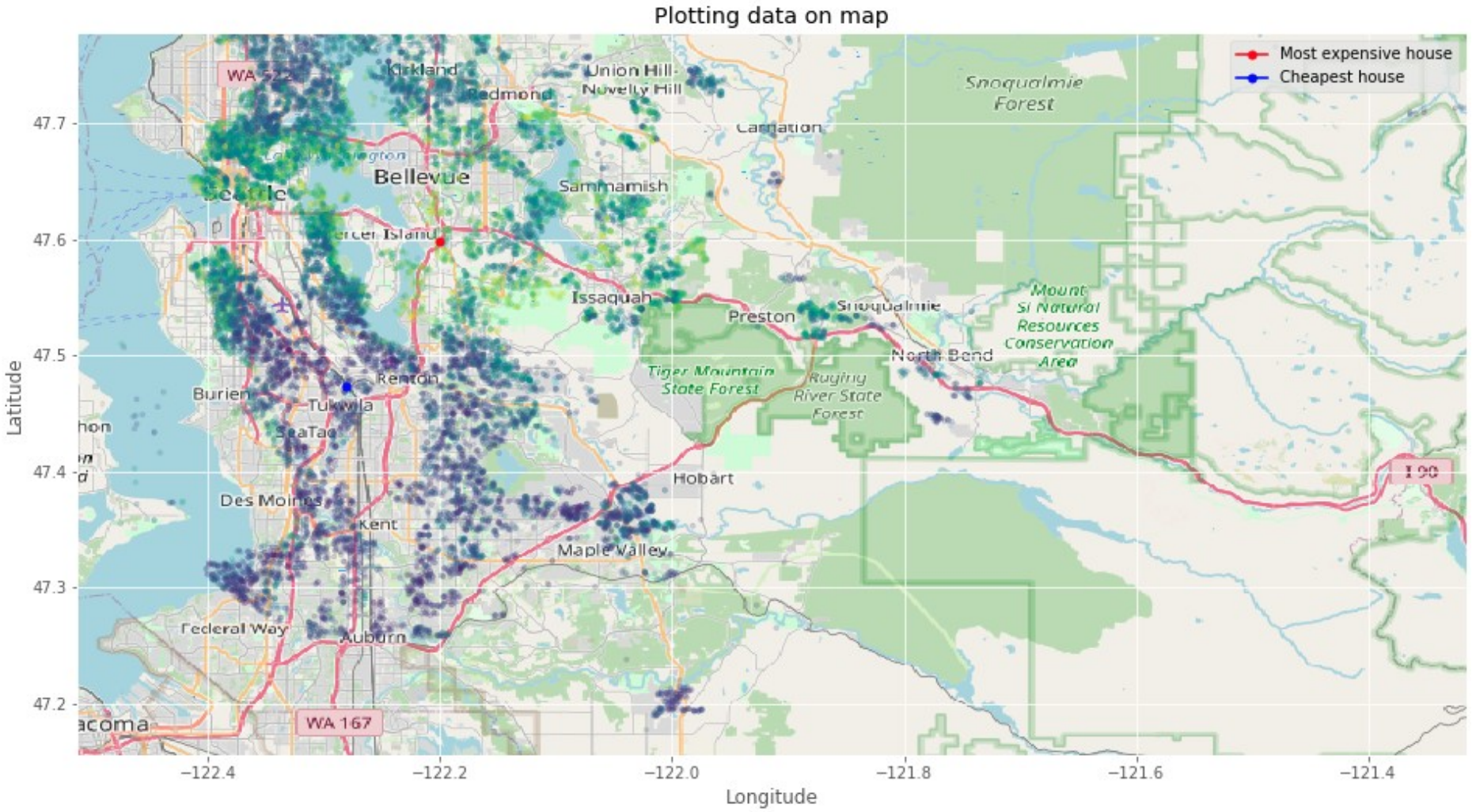
3. There is a notable difference in price between 1br and 2br apartments, the following increase in Br does not produce such a difference.

4. The mean house price increased by 150% throughout the year.

Future work:

In the future, detailed analysis of big properties can be done, given that they did not fit well into the model.
Check possible interaction in the model to improve the overall model fit and predictability.

Thank you!


Plotting data on map
Most expensive house
Cheapest house
Latitude
Longitude
47.7
47.6
47.5
47.4
47.3
47.2
−122.4
−122.2
−122.0
−121.8
−121.6
−121.4
Kirkland
Redmond
Union Hill-Novelty Hill
Carnation
Snoqualmie Forest
Bellevue
Sammamish
Issaquah
Preston
Snoqualmie
Mount Si Natural Resources Conservation Area
North Bend
Tiger Mountain State Forest
Raging River State Forest
Renton
Burien
Tukwila
SeaTac
Hobart
Des Moines
Kent
Maple Valley
Federal Way
Auburn
WA 167
I-90