



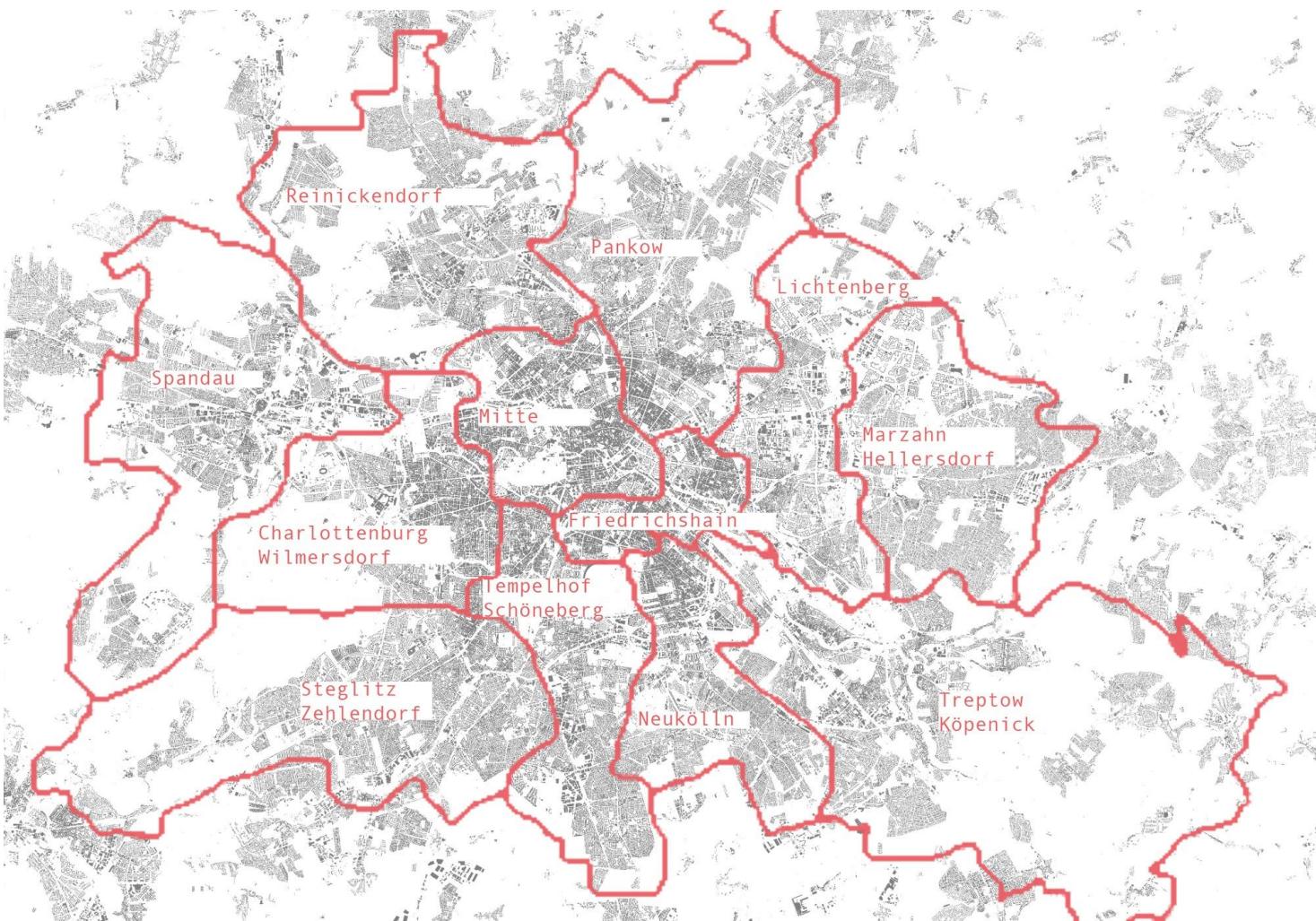
Airbnb Berlin

Marwin Ospina

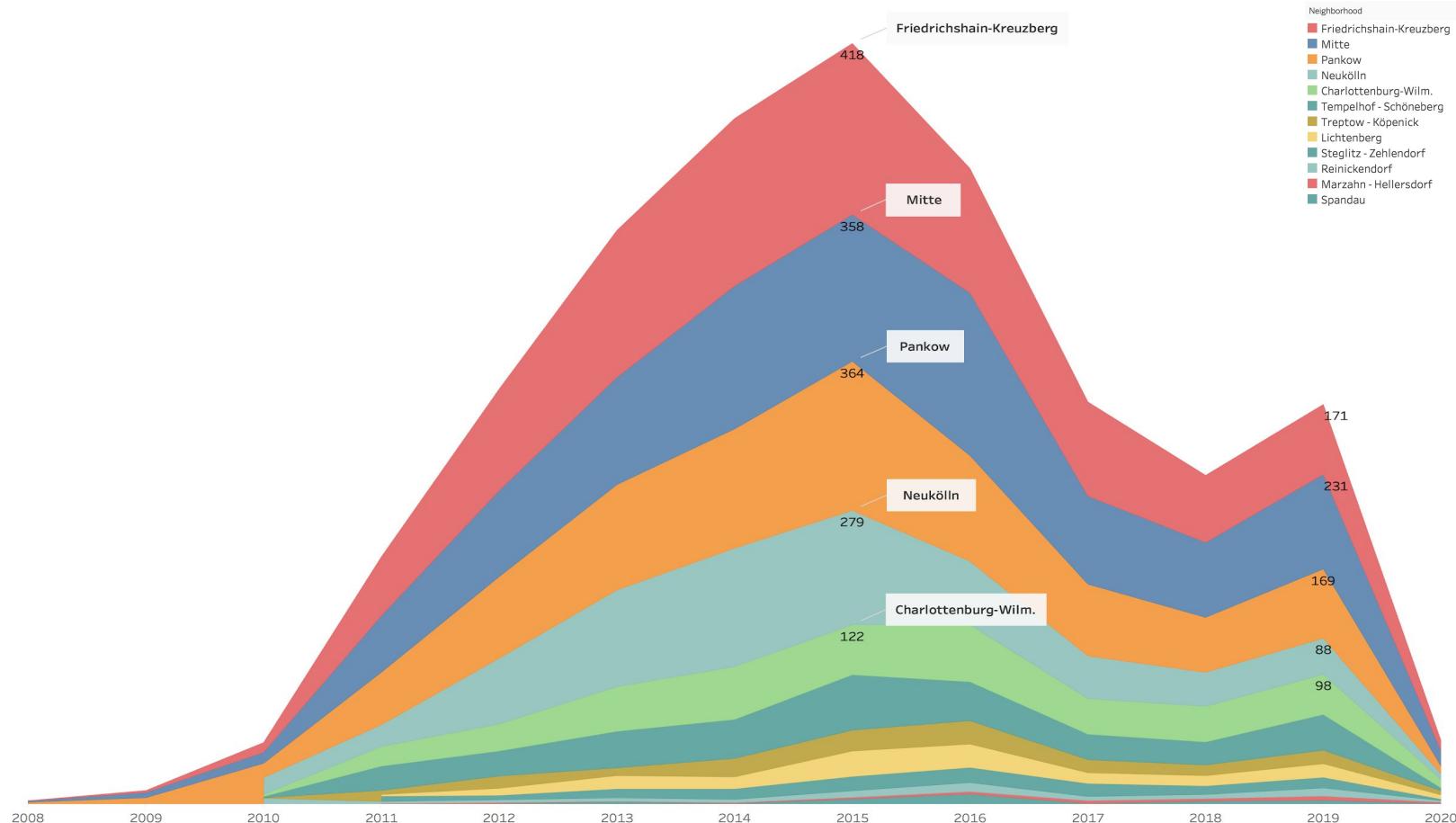


BERLIN

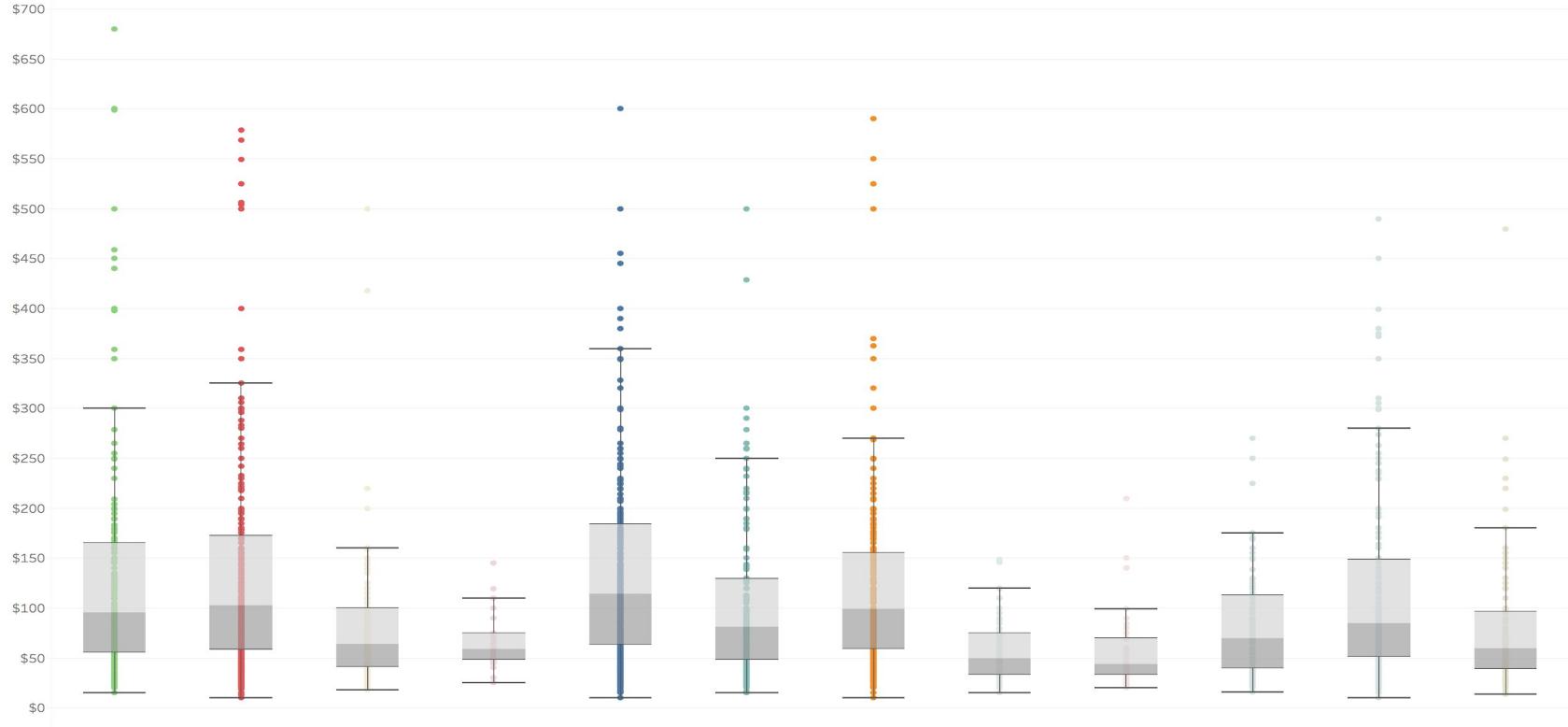
"poor, but sexy"  
Klaus Wowereit



## Total New Listings per Year by Neighborhood



# Listing Price by Neighborhood



Charlottenburg-Wilmersdorf, Friedrichshain-Kreuzberg

Upper Whisker: \$300  
Upper Hinge: \$166  
Median: \$96  
Lower Hinge: \$56  
Lower Whisker: \$15

Lichtenberg

Upper Whisker: \$325  
Upper Hinge: \$173  
Median: \$103  
Lower Hinge: \$59  
Lower Whisker: \$10

Marzahn - Hellersdorf

Upper Whisker: \$184  
Upper Hinge: \$130  
Median: \$81  
Lower Hinge: \$49  
Lower Whisker: \$15

Mitte

Upper Whisker: \$360  
Upper Hinge: \$184  
Median: \$114  
Lower Hinge: \$63  
Lower Whisker: \$10

Neukölln

Upper Whisker: \$250  
Upper Hinge: \$130  
Median: \$99  
Lower Hinge: \$59  
Lower Whisker: \$10

Pankow

Upper Whisker: \$270  
Upper Hinge: \$155  
Median: \$99  
Lower Hinge: \$59  
Lower Whisker: \$10

Reinickendorf

Upper Whisker: \$120  
Upper Hinge: \$60  
Median: \$40  
Lower Hinge: \$20  
Lower Whisker: \$10

Spandau

Upper Whisker: \$100  
Upper Hinge: \$40  
Median: \$20  
Lower Hinge: \$10  
Lower Whisker: \$10

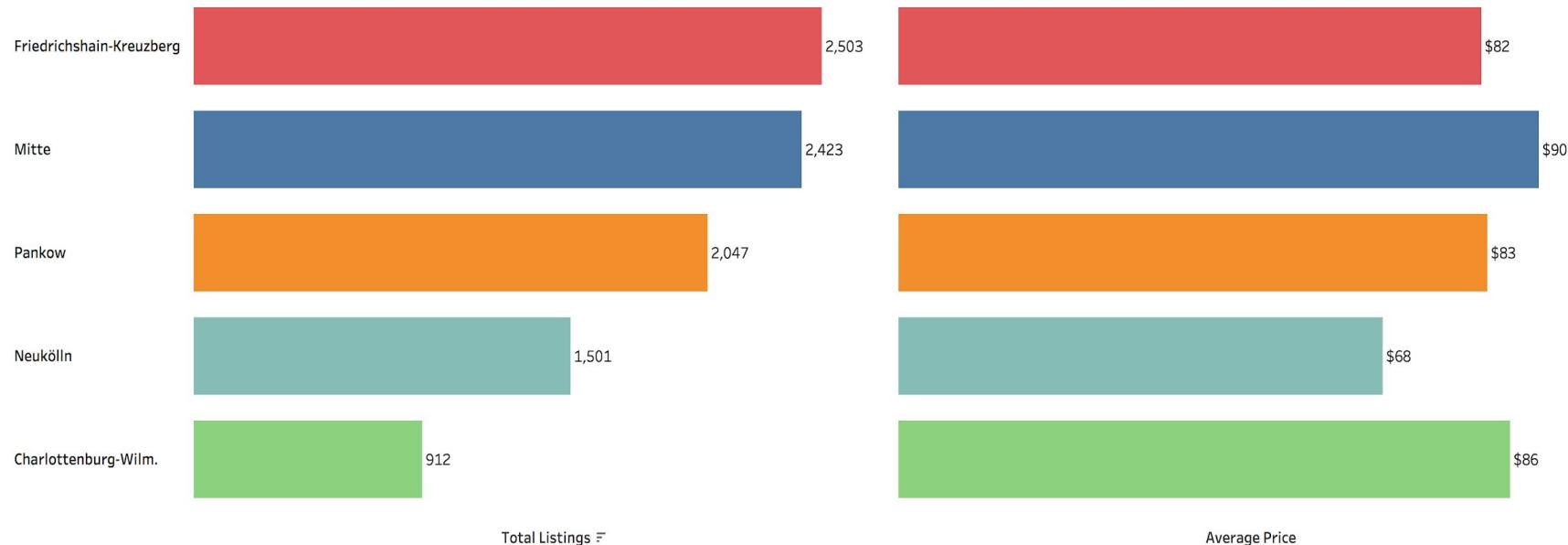
Steglitz - Zehlendorf, Tempelhof - Schöneberg

Upper Whisker: \$270  
Upper Hinge: \$140  
Median: \$100  
Lower Hinge: \$60  
Lower Whisker: \$10

Treptow - Köpenick

Upper Whisker: \$180  
Upper Hinge: \$110  
Median: \$80  
Lower Hinge: \$40  
Lower Whisker: \$10

# Total Listings and Average Price by Neighborhood



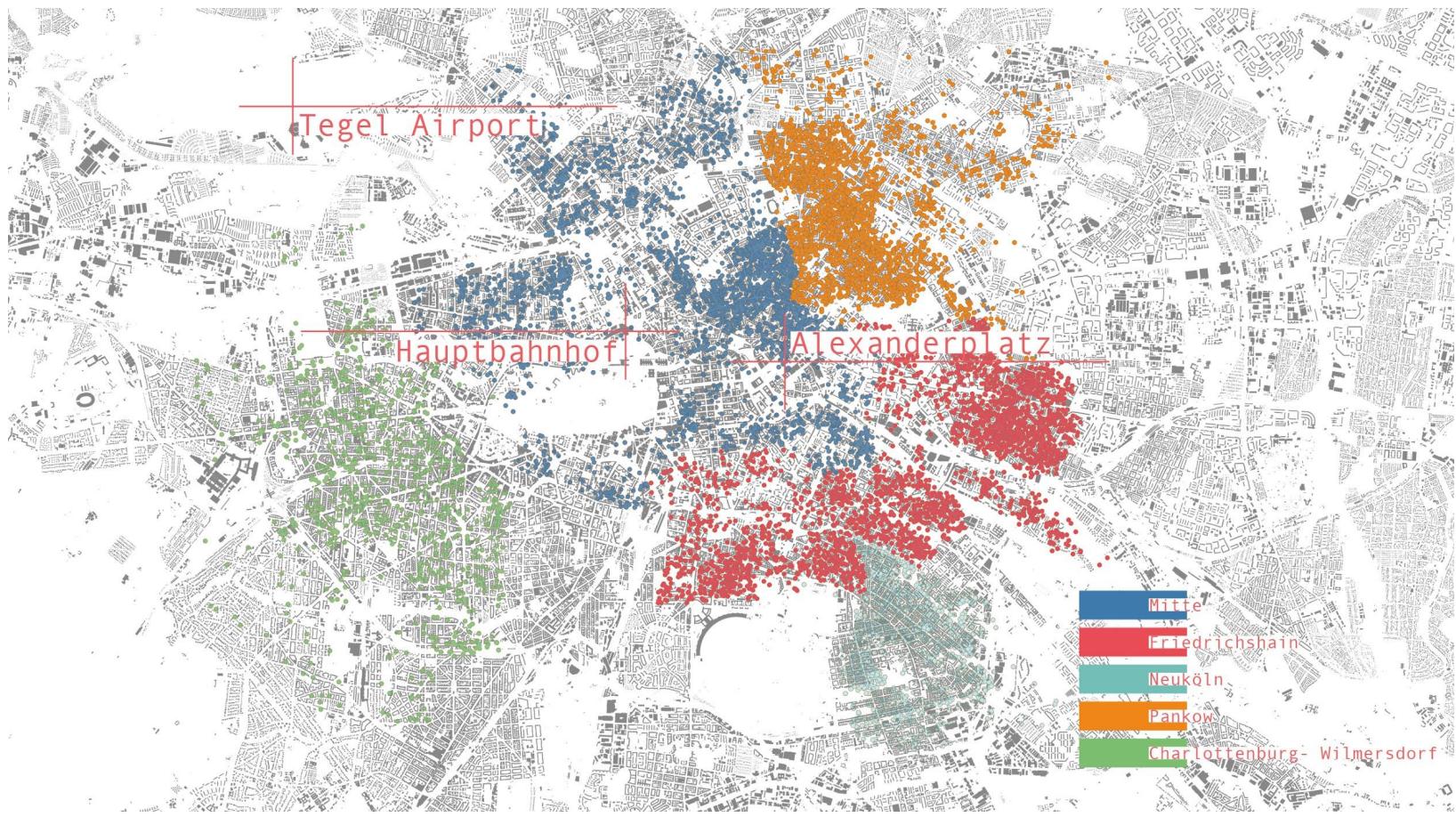
## Total Listings per Bedroom-size Apartment By Neighborhood

	0	1	2	3	4	5
	Bedrooms					
Friedrichshain-Kreuzberg	230	1,518	601	123	26	2
Mitte	316	1,337	565	164	34	5
Pankow	207	1,182	487	138	32	1
Neukölln	154	934	350	55	5	3
Charlottenburg-Wilm.	104	524	210	61	7	5

## Average Price per Bedroom-size Apartment By Neighborhood

	0	1	2	3	4	5
	Bedrooms					
Friedrichshain-Kreuzberg	\$59	\$69	\$99	\$143	\$254	\$328
Mitte	\$63	\$75	\$111	\$163	\$195	\$196
Pankow	\$64	\$71	\$97	\$140	\$168	\$199
Neukölln	\$55	\$62	\$79	\$117	\$139	\$386
Charlottenburg-Wilm.	\$61	\$68	\$109	\$156	\$253	\$342

# Spatial Distribution of Listings for Top-5 Neighborhoods



# Linear Regression Model - Ordinary Least Squares

OLS Regression Results				coef	std err	t	P> t	[0.025	0.975]	
<b>Dep. Variable:</b>	price	<b>R-squared:</b>	0.361	Intercept	30.9656	3.696	8.377	0.000	23.720	38.212
<b>Model:</b>	OLS	<b>Adj. R-squared:</b>	0.361	neighborhood[T.Friedrichshain-Kreuzberg]	-25.0929	2.404	-10.437	0.000	-29.806	-20.380
<b>Method:</b>	Least Squares	<b>F-statistic:</b>	596.3	neighborhood[T.Mitte]	-20.7023	2.491	-8.311	0.000	-25.585	-15.819
<b>Date:</b>	Fri, 16 Oct 2020	<b>Prob (F-statistic):</b>	0.00	neighborhood[T.Neukölln]	-23.4845	2.158	-10.884	0.000	-27.714	-19.255
<b>Time:</b>	16:45:41	<b>Log-Likelihood:</b>	-37996.	neighborhood[T.Pankow]	-29.0426	2.537	-11.448	0.000	-34.016	-24.069
<b>No. Observations:</b>	7385	<b>AIC:</b>	7.601e+04	bathrooms	60.9248	1.895	32.153	0.000	57.210	64.639
<b>Df Residuals:</b>	7377	<b>BIC:</b>	7.606e+04	bedrooms	21.6982	0.673	32.219	0.000	20.378	23.018
<b>Df Model:</b>	7			distance_to_city_center	-8.9604	0.581	-15.417	0.000	-10.100	-7.821
<b>Covariance Type:</b>	nonrobust									

```
r2_score(y_test, y_test_pred)
```

```
0.30702164682451183
```

## Conclusion, Recommendations & Next-Steps

- The neighborhoods to consider are Friedrichshain-Kreuzberg, Mitte, Pankow, Neukölln, and Charlottenburg-Willemstorf for their proximity to the city center and many tourist attractions
- Recommend investing in four and five bedroom apartments as there is a demand from group travelers and little competition
- Narrowing down to Friedrichshain-Kreuzberg and Charlottenburg-Willemstorf for their low number of listings/competition and significant price difference between different size apartments
  - Friedrichshain-Kreuzberg is popular amongst the adults for its nightlife, alternative and hip-culture
  - Charlottenburg-Willemstorf is a family oriented neighborhood that is safe and clean, with parks and universities
- Next step will be to find a model to integrate into the data in order to be able to predict future prices

Thank You!

Questions & Comments:

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