Undercharging For Your Property?



A Data Analysis on Berlin Airbnb Rent

Project Overview

Question

- What property's features impact airbnb rent price?
- How much should hosts charge for their property according to property's features?

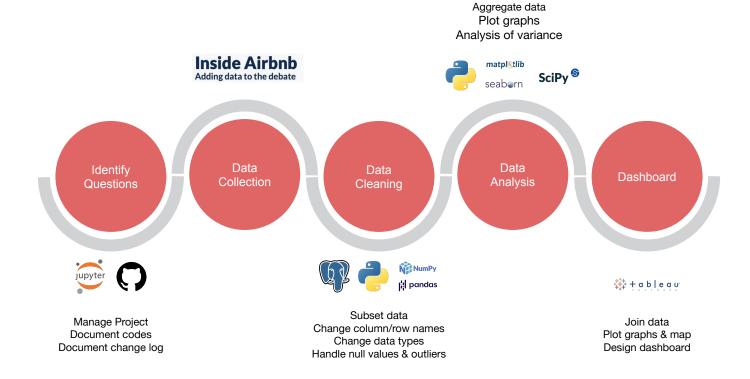
Goal

- To find out what factors impact airbnb rent price
- To build a rent price recommendation model for hosts to optimize their pricing strategy

Data Source

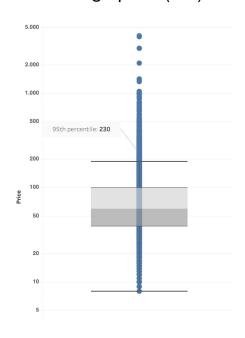
- Inside Airbnb (web content scrapped from Airbnb in June 2022)
- Berlin Bezirke (spatial file) from ODIS berlin

Solution Process



Dataset Overview

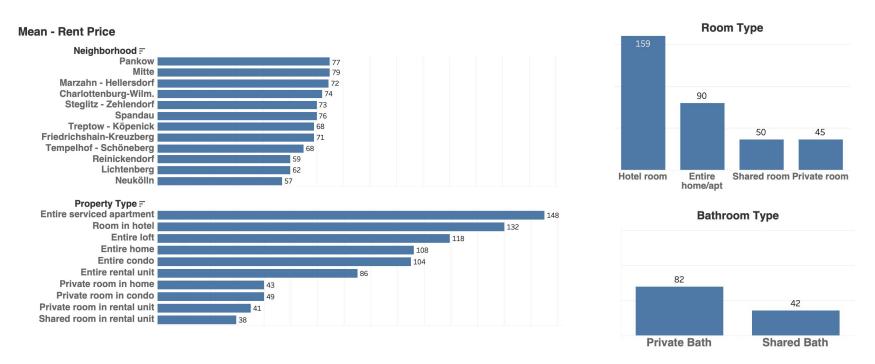
• Extreme high price (5%) excluded



- Property features that could influence the price to examine:
 - Neighborhood
 - Property type
 - Room type
 - Bathroom type
 - Number of accommodates
 - Number of bathrooms
 - Number of beds

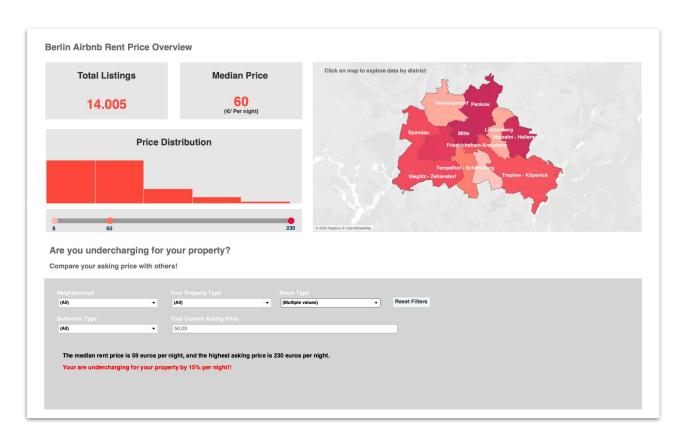
Results

Rent price is influenced by neighborhood, property type, room type and bathroom type



The difference of rent price between groups is statistically significant (ANOVA test) in these factors

Live demo: View Dashboard





Thank you for your attention!

If you have any questions, let's have a chat!

Contact Info

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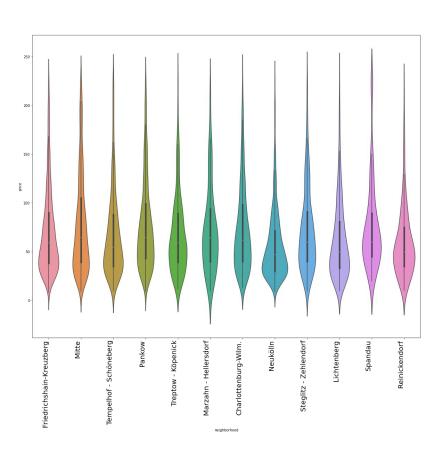
Reference

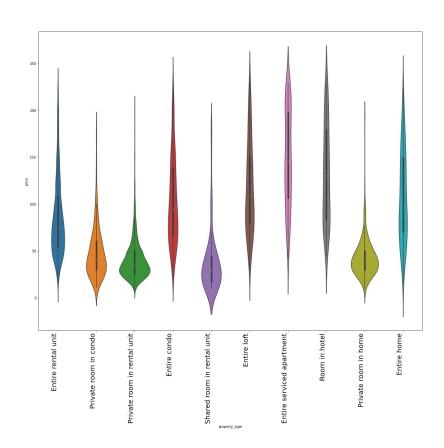
Final Dataset

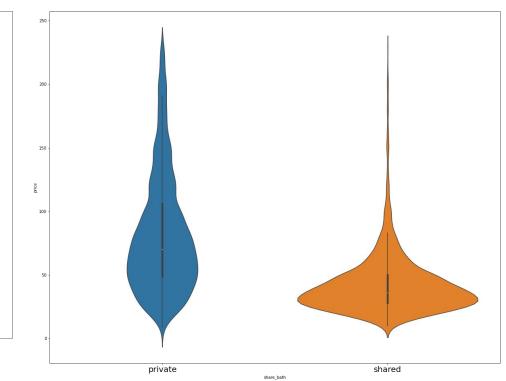
Int64Index: 14741 entries, 0 to 16413
Data columns (total 21 columns):

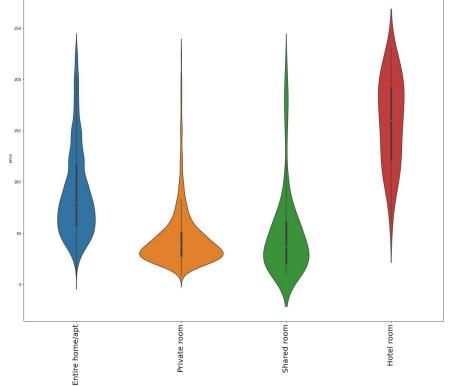
#	Column	Non-Null Count	Dtype		
0	id	14741 non-null	object		
1	name	14719 non-null	object		
2	description	14487 non-null	object		
3	neighborhood_overview	7915 non-null	object		
4	neighborhood	14741 non-null	object		
5	latitude	14741 non-null	float64		
6	longitude	14741 non-null	float64		
7	property_type	14741 non-null	object		
8	room_type	14741 non-null	object		
9	accommodates	14741 non-null	int64		
10	bathrooms_text	14741 non-null	object		
11	share_bath	14741 non-null	object		
12	bedrooms	14741 non-null	float64		
13	beds	14741 non-null	float64		
14	amenities	14741 non-null	object		
15	price	14741 non-null	float64		
16	minimum_minimum_nights	14741 non-null	int64		
17	minimum_maximum_nights	14741 non-null	int64		
18	availability_365	14741 non-null	int64		
19	host_id	14741 non-null	object		
20	review_scores_rating	12228 non-null	float64		
dtypes: float64(6), int64(4), object(11)					
memory usage: 2.5+ MB					

Price Distribution



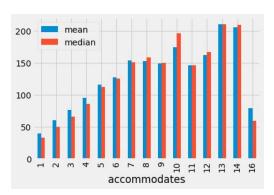


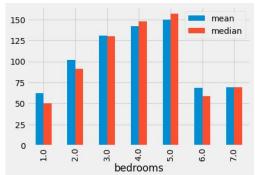


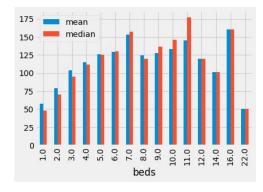


room_type

A weak correlation found between price & number of accommodates, number of bedrooms, and number of beds respectively (r < 0.6).







	accommodates	bedrooms	price	beds
accommodates	1.000000	0.674567	0.527939	0.764675
bedrooms	0.674567	1.000000	0.410229	0.627055
price	0.527939	0.410229	1.000000 (0.412421
beds	0.764675	0.627055	0.412421	1.000000