DQLab

live Class

Airbnb Data Analysis

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Project Overview

Listing properties in Singapore from Airbnb marketplace

The right properties will affect the number of rented rooms and profits that are earned

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Business Problem

- Renting the right properties in Singapore by implementing the best strategy that gives the maximum profits

Business Task

- Analyze Singapore Airbnb datasets to identify the qualifications of the right properties to rent

Data Sources

- Airbnb Listings Properties Dataset
- Neighborhood Mapping Dataset
- Airbnb Listings Reviews History Dataset

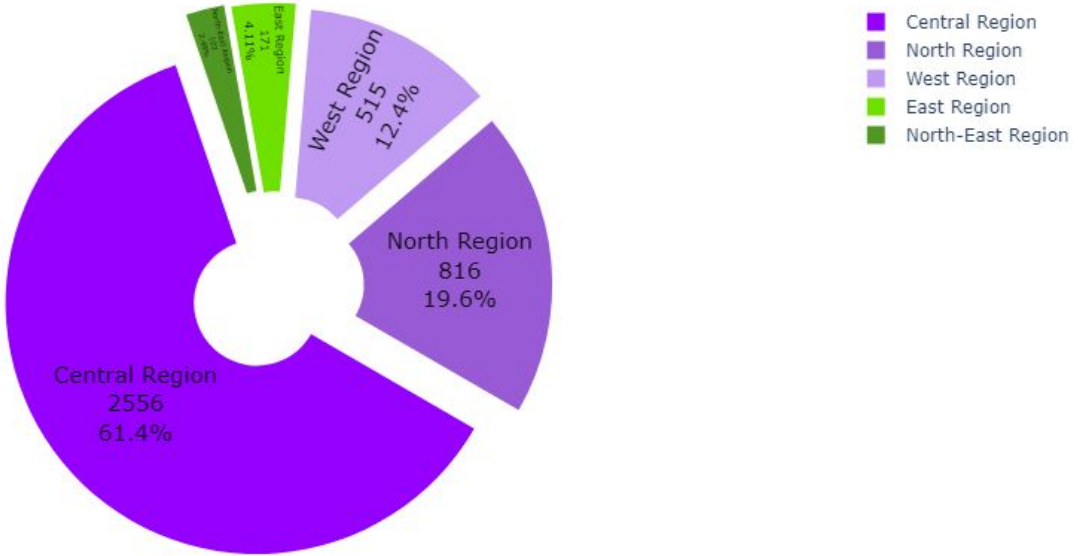
2018
January

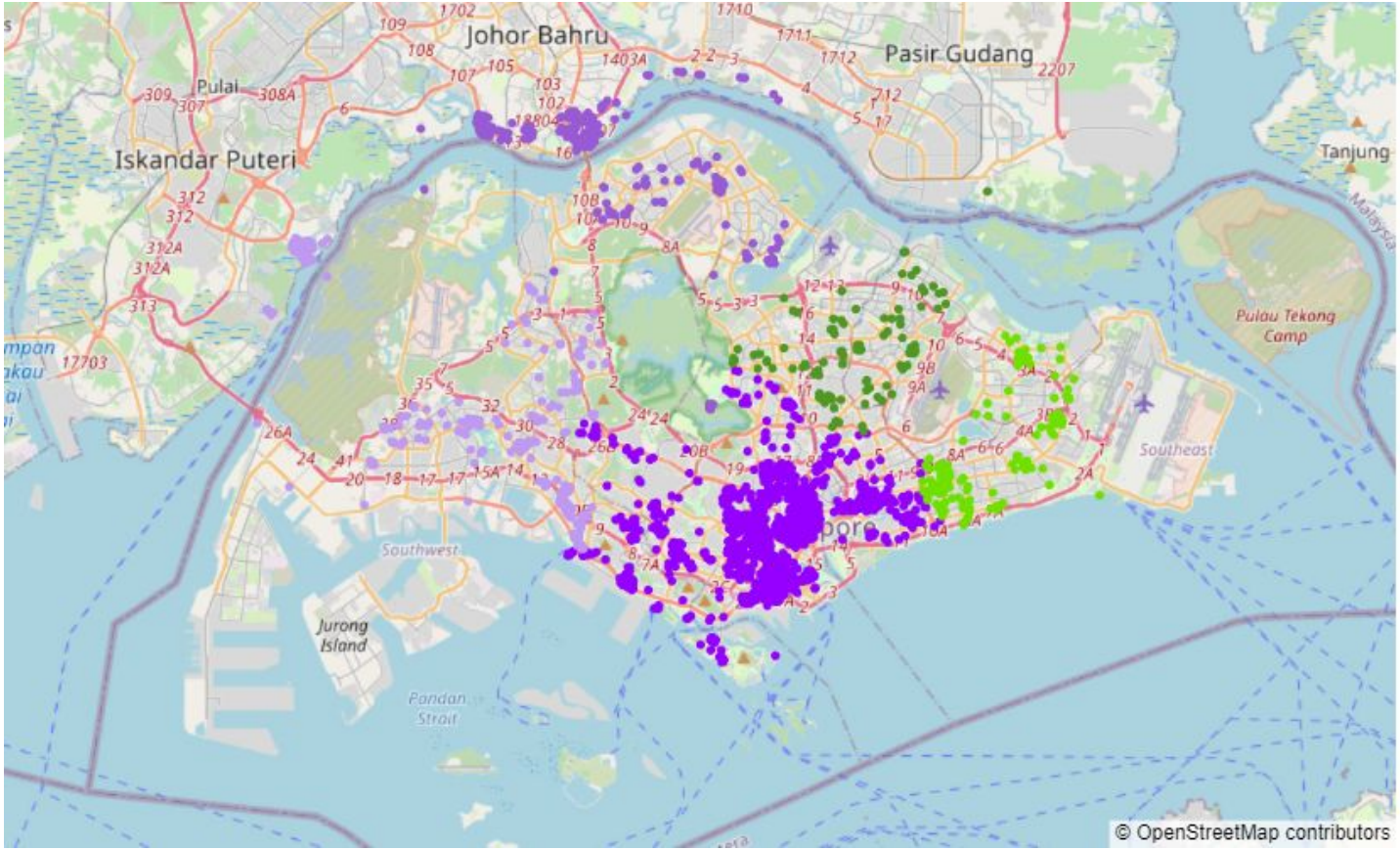
2022
September

Analysis Results

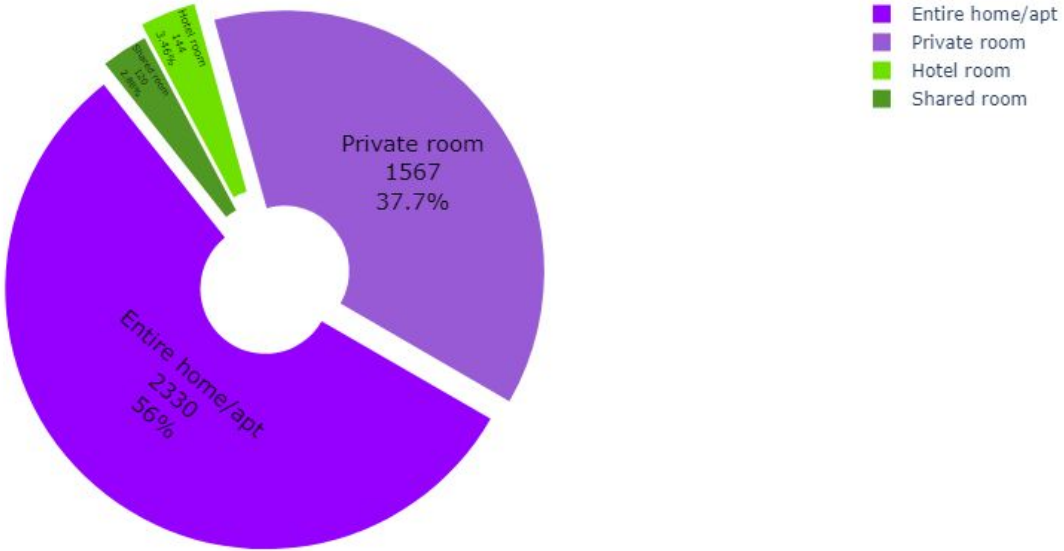
Listing Properties

Listing Distribution by Neighborhood Group




Johor Bahru
Pasir Gudang
Iskandar Puteri
Pulai
Tanjung
Pulau Tekong
Camp
Southeast
Southwest
Jurong
Island
Pandan
Strait
© OpenStreetMap contributors
neighbourhood_group
Central Region
East Region
North-East Region
North Region
West Region

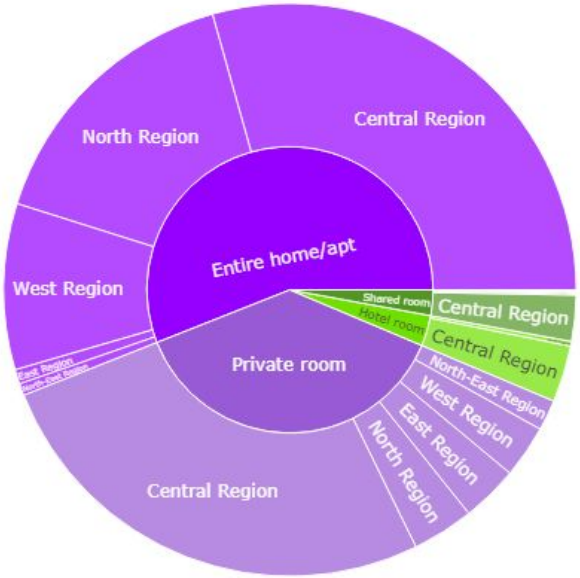
Listing Distribution by Room Type



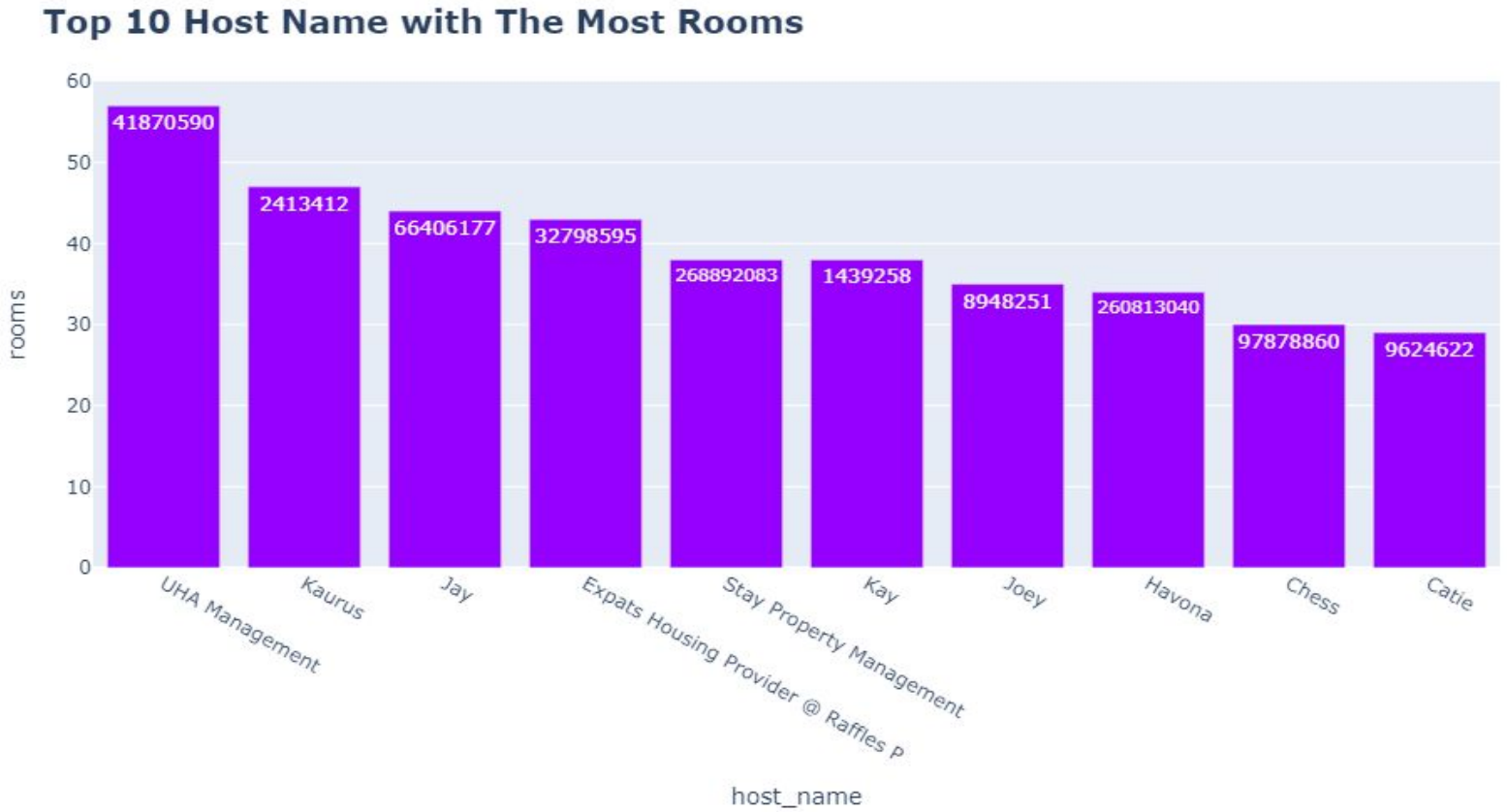
Analysis Results

Most Rooms & Hosts

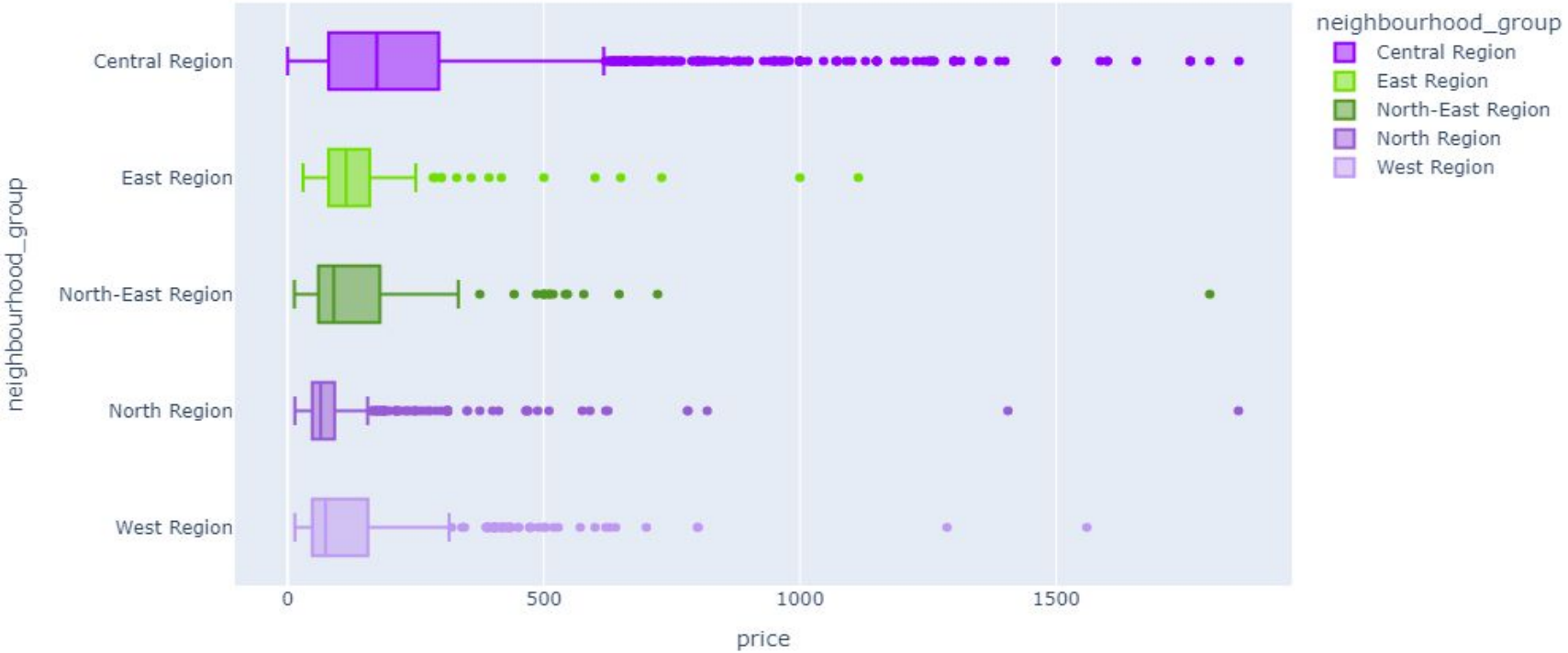
Neighborhood Group with The Most Room Type Available



Mean of Minimum Nights for Each Neighborhood Group
nights_mean
0
20
40
60
80
100
12.689950980392156
44.27378640776699
69.42097026604068
102.74853801169591
110.3883495145631
North Region
West Region
Central Region
East Region
North-East Region
neighbourhood_group
neighbourhood_group
North Region
West Region
Central Region
East Region
North-East Region

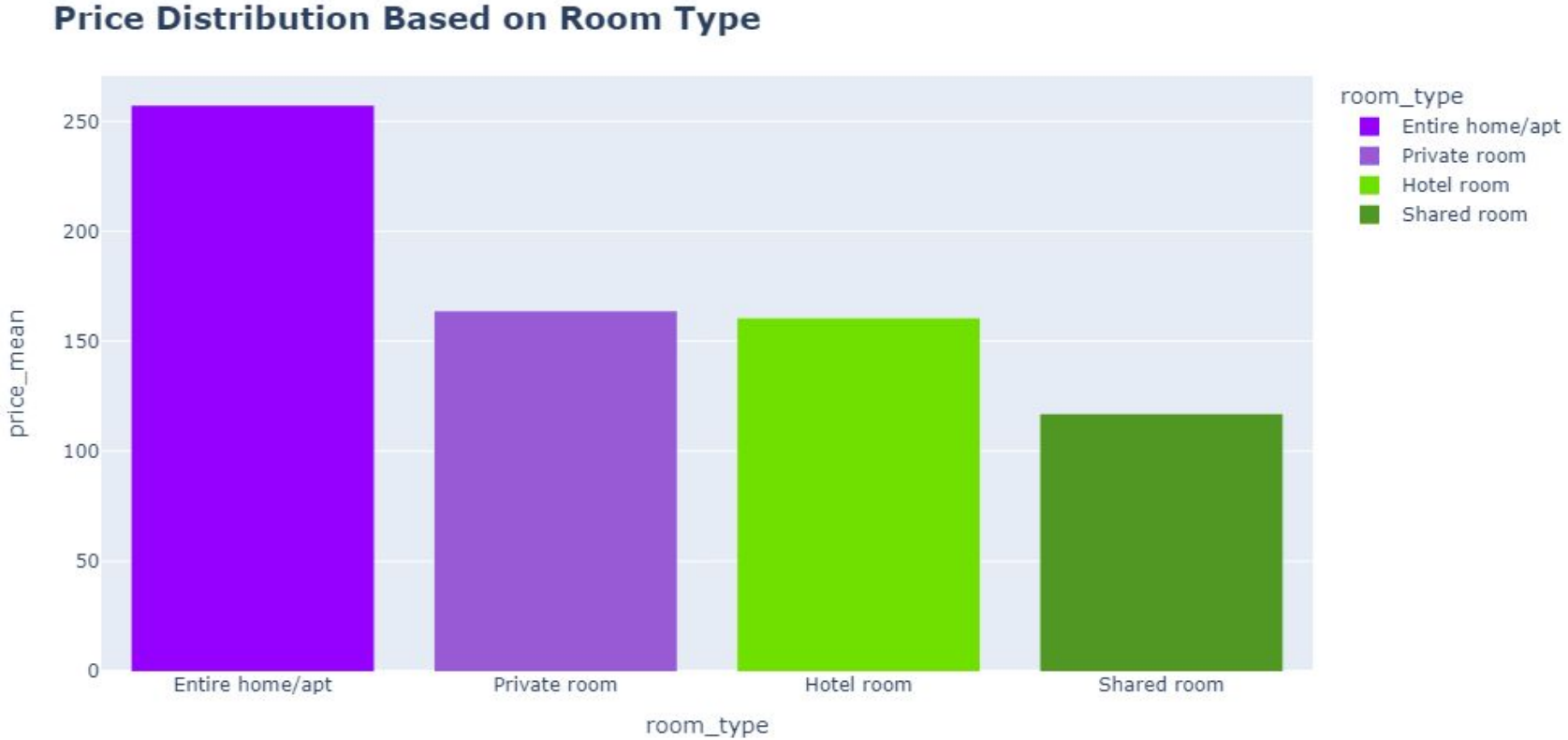

Top 10 Host Name with The Most Rooms
rooms
host_name
60
50
40
30
20
10
0
41870590
2413412
66406177
32798595
268892083
1439258
8948251
260813040
97878860
9624622
UHA Management
Kaurus
Jay
Expats Housing Provider @ Raffles P
Stay Property Management
Kay
Joey
Havona
Chess
Catie

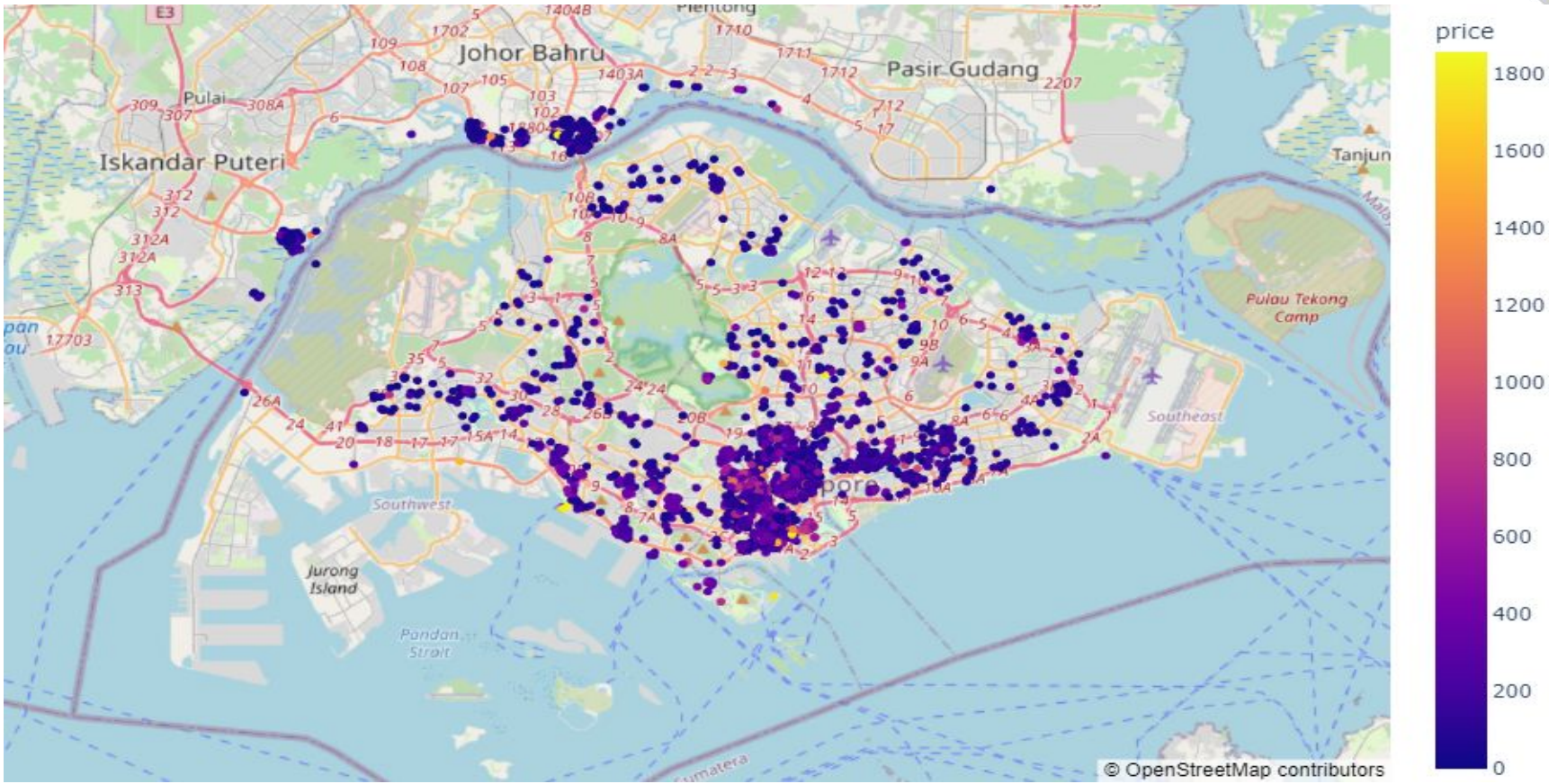
Price Distribution of Listing Based on Neighborhood Group (~$2,000SGD)



Analysis Results

Price


Price Distribution Based on Room Type
price_mean
250
200
150
100
50
0
Entire home/apt
Private room
Hotel room
Shared room
room_type
room_type
Entire home/apt
Private room
Hotel room
Shared room


price
1800
1600
1400
1200
1000
800
600
400
200
0
Johor Bahru
Pasir Gudang
Iskandar Puteri
Pulai
Tanjun
Pulau Tekong
Camp
Southeast
Southwest
Jurong
Island
Pandan
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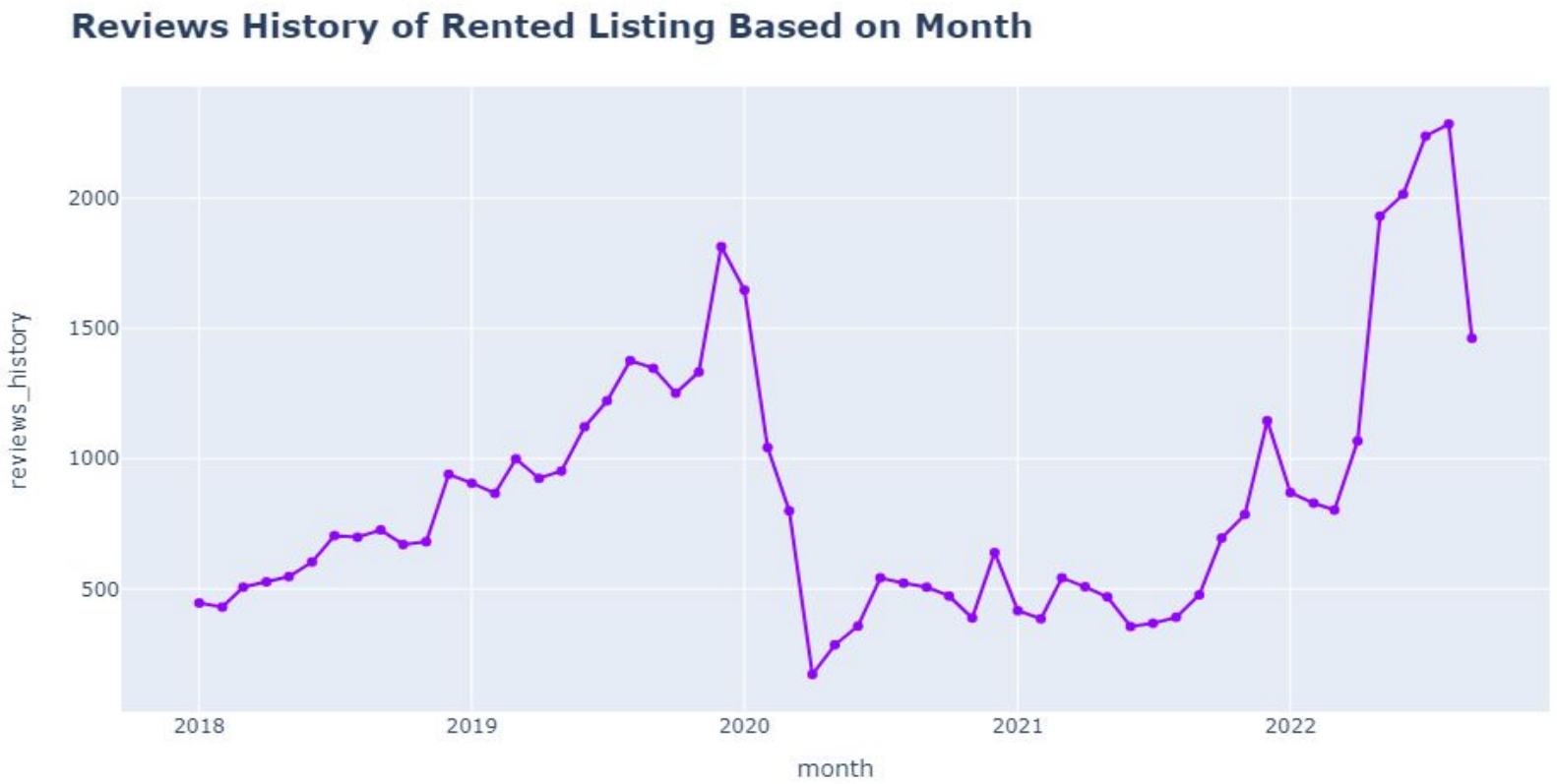
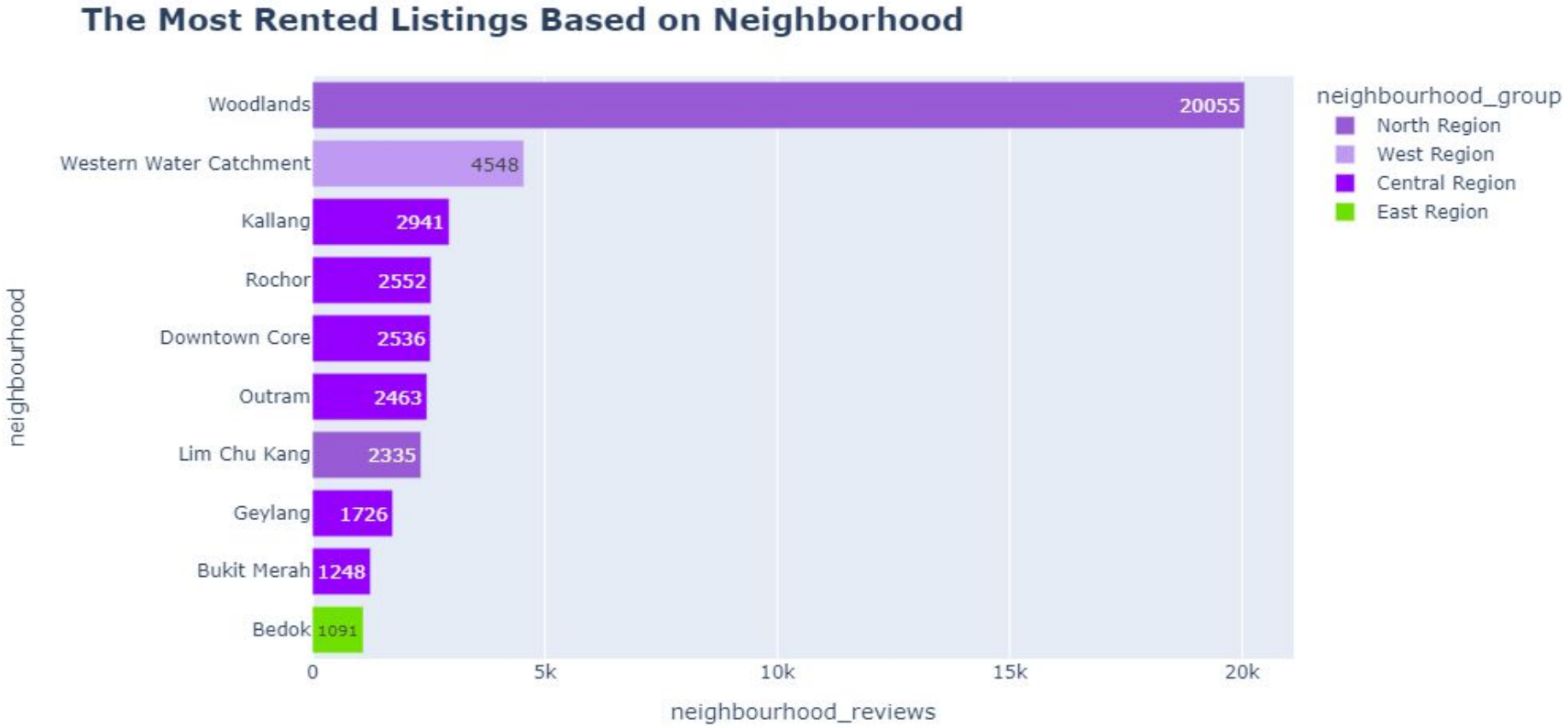
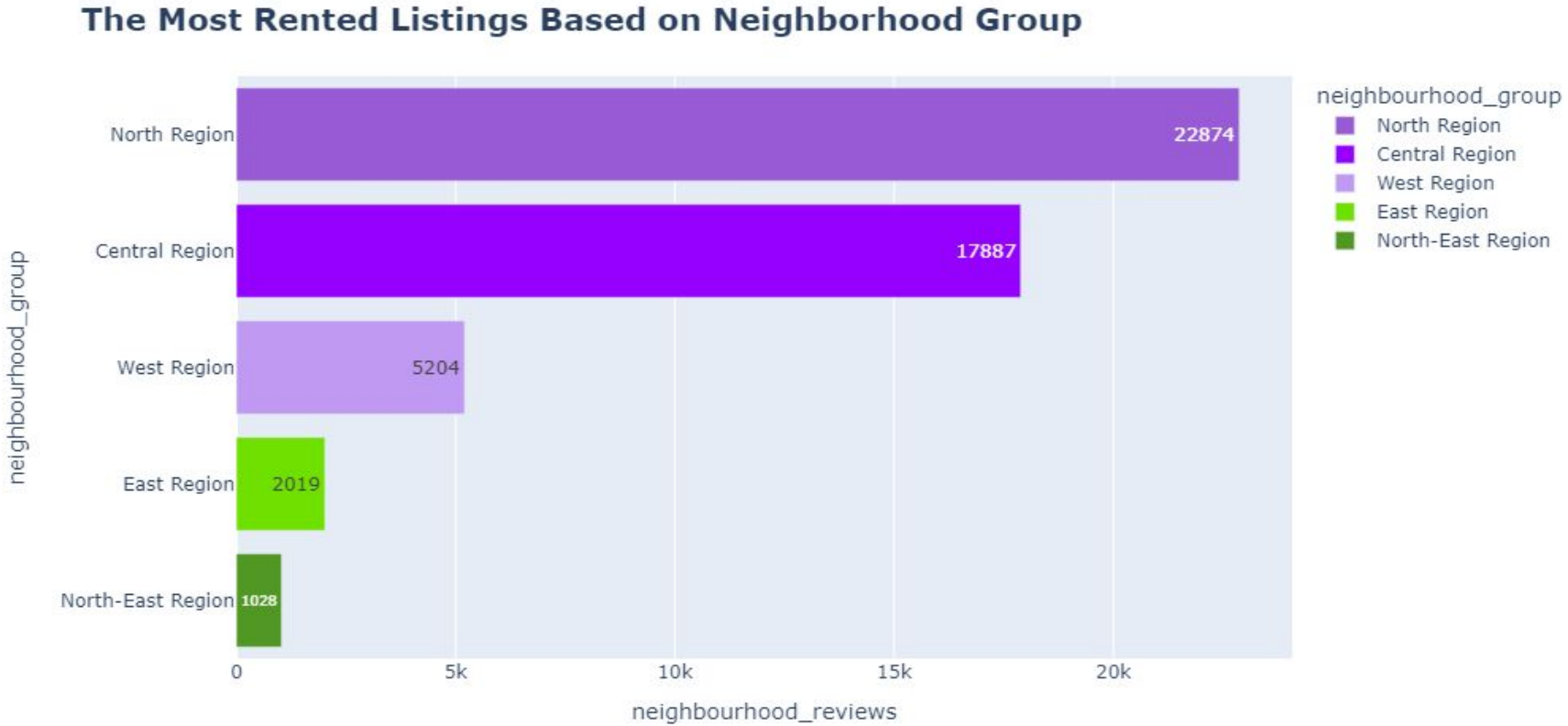
Analysis Results

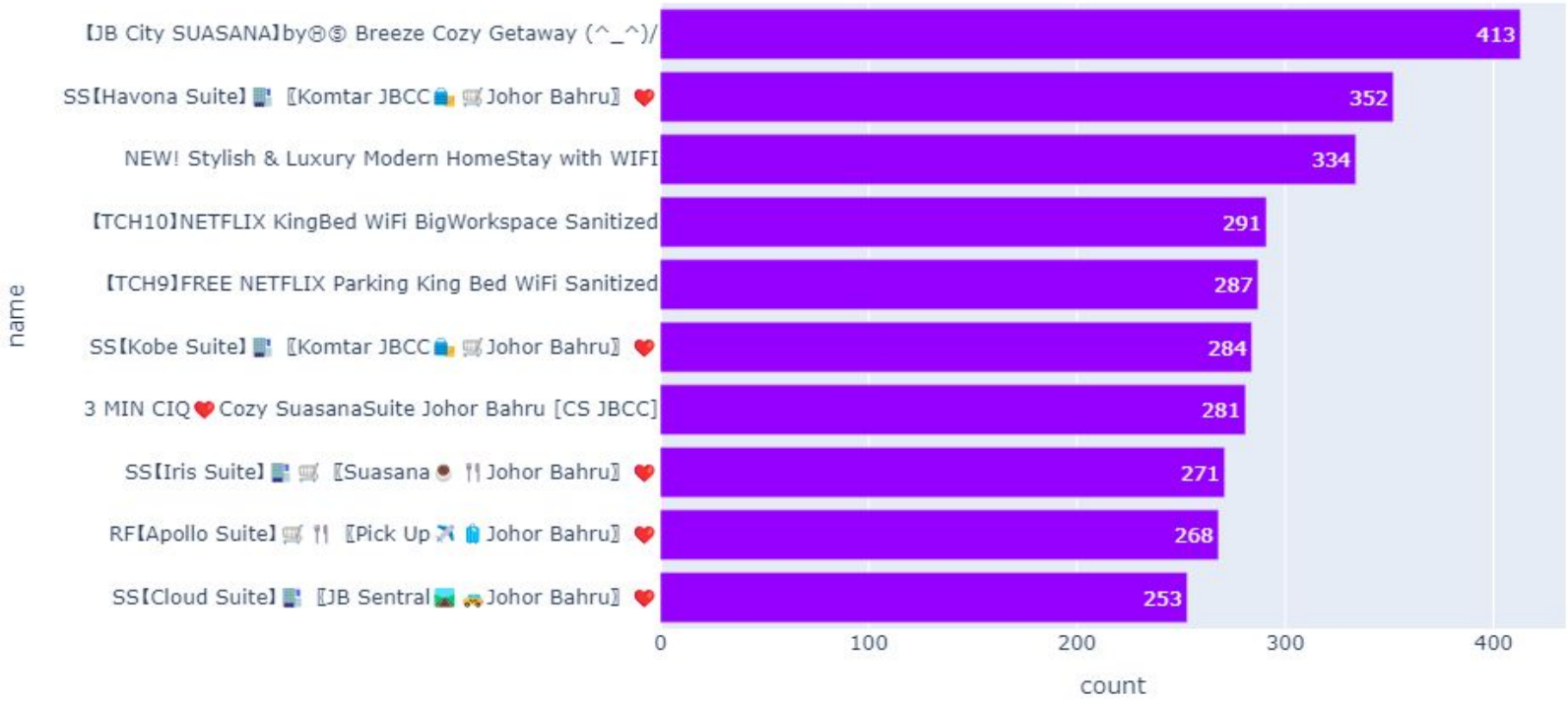
Reviews History


Reviews History of Rented Listing Based on Month
reviews_history
2000
1500
1000
500
2018
2019
2020
2021
2022
month


The Most Rented Listings Based on Neighborhood
Woodlands
Western Water Catchment
Kallang
Rochor
Downtown Core
Outram
Lim Chu Kang
Geylang
Bukit Merah
Bedok
20055
4548
2941
2552
2536
2463
2335
1726
1248
1091
neighbourhood
0
5k
10k
15k
20k
neighbourhood_reviews
neighbourhood_group
North Region
West Region
Central Region
East Region


The Most Rented Listings Based on Neighborhood Group
North Region
Central Region
West Region
East Region
North-East Region
22874
17887
5204
2019
1028
neighbourhood_group
0
5k
10k
15k
20k
neighbourhood_reviews
neighbourhood_group
North Region
Central Region
West Region
East Region
North-East Region

Top 10 Rented Listings Based on Reviews History



Conclusion

- Airbnb listing properties in Singapore distributed mainly in Central Region, the metropolitan area in Singapore followed by North Region which borders directly with neighbor country
- The most popular room type in Singapore is the entire home/apt which also has the highest price considering the difference in facilities provided
- North region gives more flexible periods of rent by having the lowest mean of minimum nights of about 12 days
- North Region specifically Woodlands neighborhood also has the most rooms of listing properties available in Singapore, mostly provided by the host named UHA Management

Conclusion

- Most of listing properties having prices under 2,000 with mean price only around 214.505 Singapore dollars, yet Central Region has more varied and higher price than other regions
- Reviews history of listings properties was having its peak until late 2019 and decreased because of Covid-19 pandemic, the sector started going up again in 2022, April
- North Region has the highest number of reviews history with less price and minimum nights for rent than the other neighborhood groups

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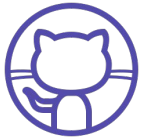
Recommendations

Consider Airbnb listing properties in North Region, especially Woodlands with qualifications as follows:

- Offering lower prices which reflecting lower cost and maintenance
- Having less minimum nights to rent
- Serving lots of rooms available with high reviews history
- Focusing with entire home/apt as the most popular room type

Further analysis may be needed especially the correlation of price and facilities provided that will help to make even more beneficial decision

References



Github

Linkedin

Slides