# Rental Analysis in Singapore

Introduction

According to Wikipedia, as of June 2019, Singapore's population stood at 5.70 million. A large percentage of its population are not permanent residents; of its total population of 5.70 million in 2019, 4.03 million were residents (citizens & permanent residents), and 1.68 million were non-residents. It is the second-densest sovereign state in the world, after the microstate Monaco. Not only is that Singapore is one of the top financial hubs in the world, it also aims to become region's tech and innovation hub to attract more foreign talent in such a tiny island. With high influx of foreign workers and land scarcity in Singapore, all these have helped to boost rental volume in the including rental housing - in very prime locations, like the city center. Singapore is divided into districts as shown below:

Singapore District Map: CCR, RCR and OCR
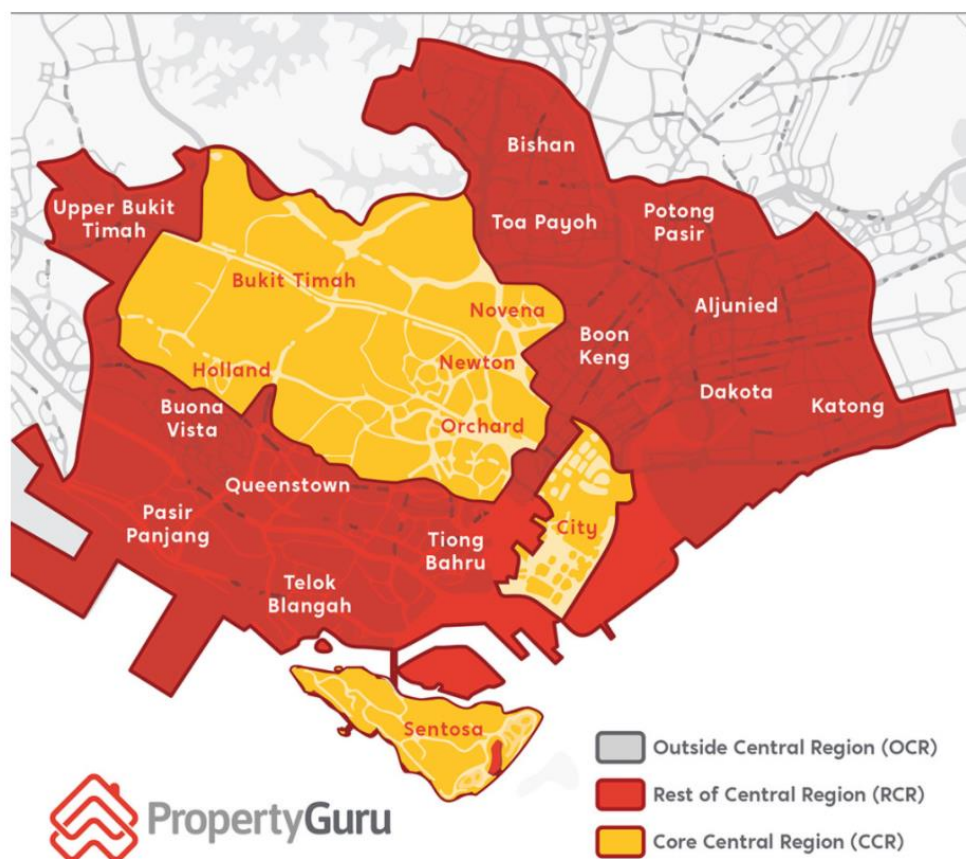
1. Core Central Region (CCR): City, Downtown Core and Sentosa - The Core Central Region, also known as the CCR, includes the traditional prime areas of Singapore, the Downtown Core (including parts of Bugis south of Ophir Road), as well as Sentosa. **Postal Districts: 9, 10, 11, 1(part), 2(part), 4(part), 6(part), 7(part)**

2. Rest of Central Region (RCR) is regarded as the intermediate, or mid-tier, region in terms of pricing, between the mass market condos in the OCR region and the high-value properties in the CCR. **Postal**

Districts: 1(part), 2(part), 3, 4(part), 5(part), 6(part), 7(part), 8, 12(part), 13(part), 14(part), 15(part), 20(part).

3. Outside Central Region (OCR) is about three-quarters the size of Singapore, and basically refers to areas where mass-market condos at the lower range of price points are located. **Postal Districts: 5(part), 14(part), 15(part), 16, 17, 18, 19, 20(part), 22, 23, 25, 26, 27, 28.**

Problem and Target Audience

Hence, I would like to take this opportunity to explore and analyze the rental markets across Singapore in terms of locations, amenities nearby and etc. This would be best suit for foreigners who are seeking for rental housing in Singapore or investors who are interested in the rental business.

Data

Data 1: Median rentals of private non-landed residential properties by name
Source: https://www.ura.gov.sg/
Converted pdf file into excel file namely '*Rental_2021Q1.xlsx*'
Data: Name of Properties, postal districts and median ($spm)
Description: This data is used to retrieve the latitude and longitude of the properties using geopy

Data 2: Postal codes in Singapore
Source: https://en.wikipedia.org/wiki/Postal_codes_in_Singapore
Data: General locations correspond to their respective postal codes/postal districts
Description: This is used to identify the locations with respect to their postal districts.

Data 3:
All data related to locations and amenities will be obtained via the FourSquare API

Methodology

In this section, we will describe the main components of our analysis and predication system. We will first extract the relevant data, like rental data, and latitude/longitude corresponds to the properties. We will then investigate the median rental value in the neighbourhoods by postal districts plot a map to visualise the distribution of rental properties across Singapore.

Analysis

According to Table 1, we could identify the locations of the neighbourhood correspond to their respective postal district. From this, we would be able to learn which locations are part of CCR, RCR or OCR (as explained briefly in the introduction section).
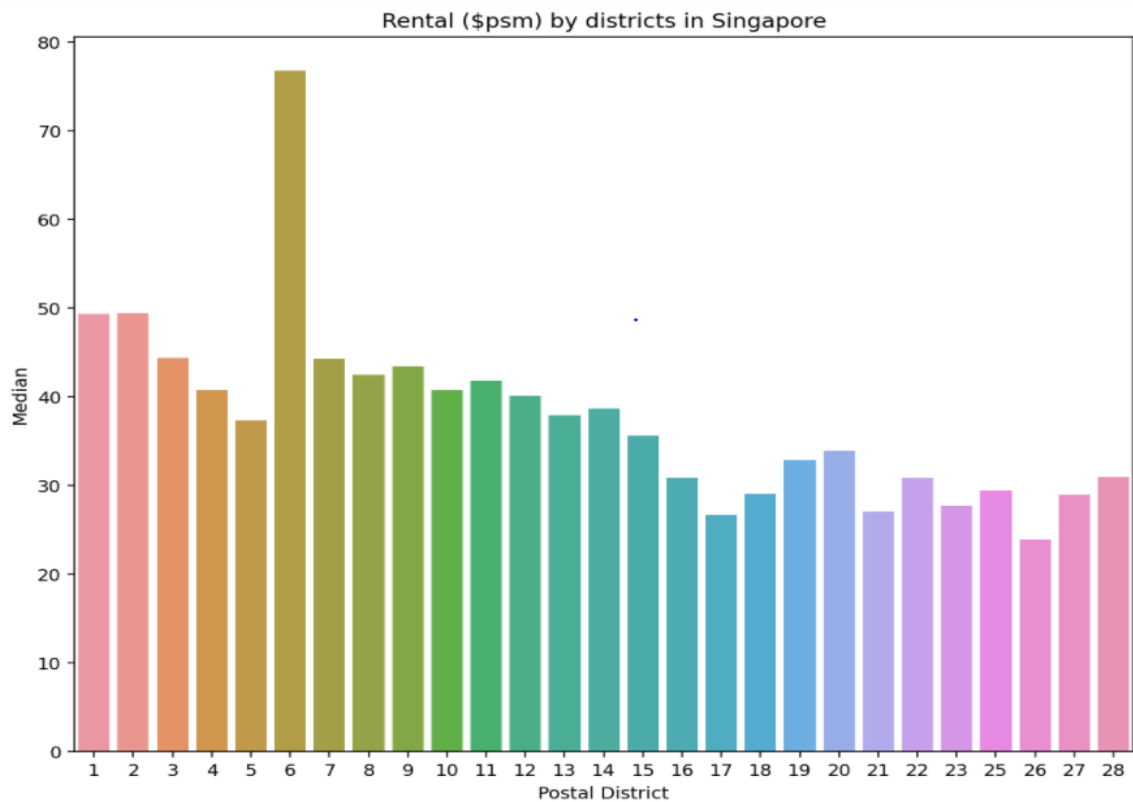
Table 1

	Postal District	General Location
0	01	Raffles Place, Cecil, Marina, People's Park
1	02	Anson, Tanjong Pagar
2	03	Bukit Merah, Queenstown, Tiong Bahru
3	04	Telok Blangah, Harbourfront
4	05	Pasir Panjang, Hong Leong Garden, Clementi New...
5	06	High Street, Beach Road (part)
6	07	Middle Road, Golden Mile
7	08	Little India, Farrer Park, Jalan Besar, Lavender
8	09	Orchard, Cairnhill, River Valley
9	10	Ardmore, Bukit Timah, Holland Road, Tanglin
10	11	Watten Estate, Novena, Thomson
11	12	Balestier, Toa Payoh, Serangoon
12	13	Macpherson, Braddell, Potong Pasir, Bidadari
13	14	Geylang, Eunos, Aljunied
14	15	Katong, Joo Chiat, Amber Road
15	16	Bedok, Upper East Coast, Eastwood, Kew Drive
16	17	Loyang, Changi
17	18	Simei, Tampines, Pasir Ris
18	19	Serangoon Garden, Hougang, Punggol
19	20	Bishan, Ang Mo Kio
20	21	Upper Bukit Timah, Clementi Park, Ulu Pandan
21	22	Penjuru, Jurong, Pioneer, Tuas
22	23	Hillview, Dairy Farm, Bukit Panjang, Choa Chu ...
23	24	Lim Chu Kang, Tengah
24	25	Kranji, Woodgrove, Woodlands
25	26	Upper Thomson, Springleaf
26	27	Yishun, Sembawang, Senoko, Canberra
27	28	Seletar

From Table 2, we would be able to learn the median rental prices corresponds to their respective properties and in which postal districts are they located at.
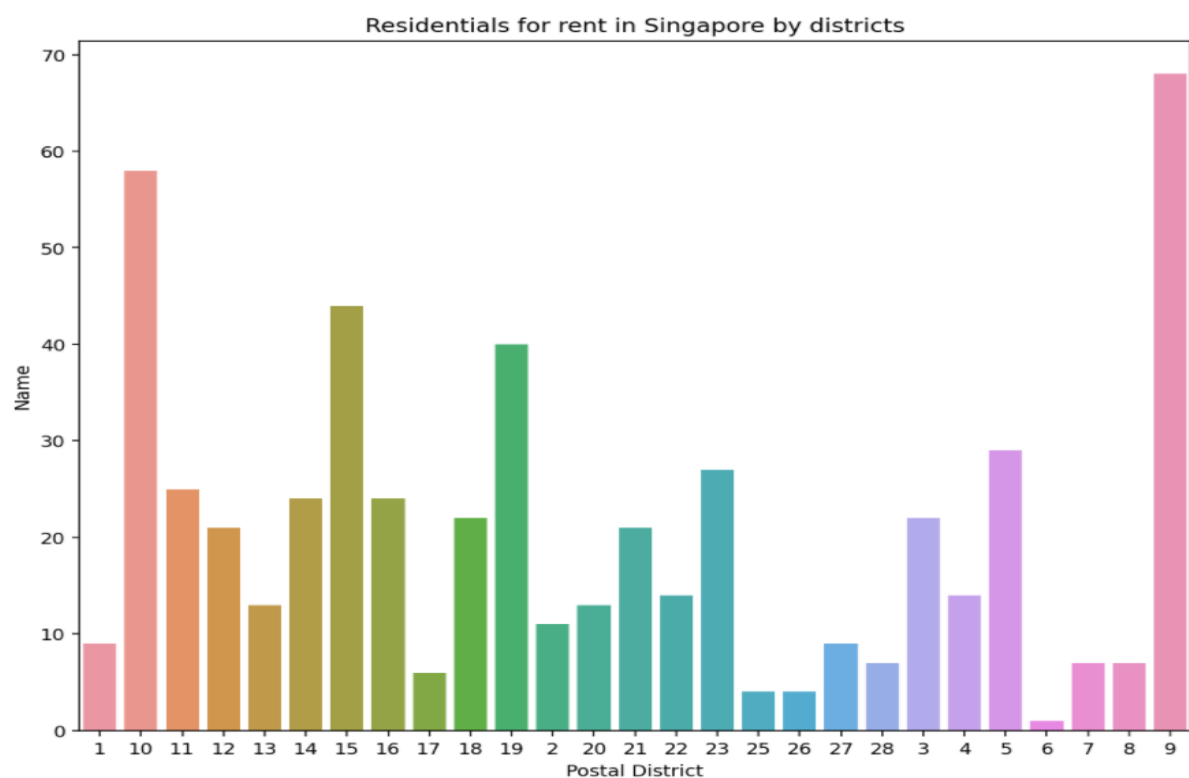
Table 2:

	Name	Postal District	Median	Latitude	Longitude
0	18 WOODSVILLE	13	38.24	1.329565	103.868241
1	1919	9	51.92	1.302757	103.846634
2	26 NEWTON	11	51.92	1.315721	103.841609
3	368 THOMSON	11	35.80	1.327169	103.841945
4	38 I SUITES	15	42.39	1.293817	103.837338
...	...	...	...	...	...
539	WOODHAVEN	25	32.73	1.430196	103.784105
540	YISHUN EMERALD	27	23.58	1.439292	103.830730
541	YONG AN PARK	9	31.14	1.295146	103.834462
542	ZEDGE	11	38.82	1.322402	103.848192
543	ZENITH	10	48.99	1.292621	103.830516

Graph 1:

Rental ($psm) by districts in Singapore

Graph 2:

Residentials for rent in Singapore by districts

Result and Discussions

From graph 1, we could see that the median price is highest for district 6 and is also generally higher for district 1, 2, 3, 7, 9, 11. If we refer them back to Table 1, clearly could see that they are all parts of

CCR. However, we clearly observe that even those locations which are outside of CCR, although they are comparatively lower but not low enough to be considered cheap. However, from graph 2, there are distinct differences among the number of residential for rent in Singapore notably, district 9 and 10. Both these are situated in the heart of the CBD area, and we could deduce that the demand for foreign talents is relatively high, thus the huge increase in numbers.

Table 3:

	Name	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	76 SHENTON	Japanese Restaurant	Coffee Shop	Bakery	Salad Place	Gym / Fitness Center	Restaurant	Spanish Restaurant	Mosque	Cocktail Bar	Ramen Restaurant
1	ALTEZ	Japanese Restaurant	Coffee Shop	Bakery	Dessert Shop	Salad Place	Spanish Restaurant	Gym / Fitness Center	Kebab Restaurant	Noodle House	Cocktail Bar
2	EMERALD GARDEN	Japanese Restaurant	Tea Room	Bakery	Bar	Clothing Store	Yoga Studio	Thai Restaurant	Pool	Bistro	Boutique
3	EON SHENTON	Japanese Restaurant	Coffee Shop	Bakery	Salad Place	Restaurant	Spanish Restaurant	Gym / Fitness Center	Kebab Restaurant	Mosque	Dessert Shop
4	HIGH STREET CENTRE	Yoga Studio	Cocktail Bar	French Restaurant	Hotel	Park	Music Store	Massage Studio	Lighthouse	Italian Restaurant	Indian Restaurant

Table 4:

	Name	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	BUKIT REGENCY	Convenience Store	Gym	Gas Station	Bus Stop	Electronics Store	Fast Food Restaurant	Dance Studio	Department Store	Dessert Shop	Diner
1	BULLION PARK	Bus Stop	Playground	Basketball Court	Gym	Bus Station	BBQ Joint	Garden	Pool	Bus Line	Department Store
2	CASTLE GREEN	Gym	Office	Basketball Court	Fast Food Restaurant	Dance Studio	Department Store	Dessert Shop	Diner	Electronics Store	Food Court
3	CAVENDISH PARK	Bus Station	Café	Thai Restaurant	Gym	Playground	Basketball Court	Pool	Restaurant	Video Store	Dessert Shop
4	CLEMENTI PARK	Bus Line	Asian Restaurant	Gym / Fitness Center	Bar	Playground	Plaza	Cafeteria	Bus Stop	Video Store	Dessert Shop

I drilled down to analyze the most common venues in both the district clusters with most expensive (Table 3) and least expensive (Table 4) rentals. We could see a vast difference in the amenities. From Table 3, they are very close to local amenities and it's convenient to get basically whatever one's need. However, for the least expensive one, it's more connected to bus stop, which I would assume bus is the main transportation mode, and make it less convenient.

Conclusion

Although the amenities in those districts with least expensive rents are lackluster in comparison, like what I've mentioned before, the rentals in these areas are relatively lower but not dirt cheap. Why it is so?

Singapore is a tiny island, and it's well equipped with metro trains. We could practically travel one end to another end just by taking public transports, metro trains or buses. Other than this, due to the limited space in Singapore, Government is actively in developing less prime areas as well.

In conclusion, this is just a general guide for foreign talents who are seeking for a place to rent in particular district in Singapore. It does not reflect the individual rental of a particular place. As besides locations, there are other factors affecting the rental too, like, transport links, location of workplace, schools, proximity to business or entertainment hubs, mature or non-mature estates and etc. Also, due to limitations on Foursquare API's free account, we could only account to limited number of searches. There are definitely more room for improvement for detailed reporting.