

# **Sector V Employee? Where to Rent Out???!!!**

A comprehensive study on various localities in Kolkata for average rent, categories of amenities available and distance from Sector V, Kolkata, the IT hub of West Bengal, India to provide encapsulate and comparative view of each locality to choose from!

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# Problem Description

Mr. X is coming to Kolkata for the first time to join his duty at an office at Sector V, Kolkata. He is supposed to rent out a flat in an apartment that will not be so far from his office. There must be certain amenities like restaurants, movie theatres etc nearby the apartment. Budget will also be another consideration compared to the facilities. He is absolutely new to Kolkata. So, he has no idea about the locality and its facilities, features, amenities, convenience etc. How will he decide, where to rent out?

In this project I shall try to demonstrate a comprehensive result of various localities in Kolkata with total number of Restaurants of different cuisines, Movie Theatres, Playgrounds, Gyms, Park, Shopping Mall, Market, Swimming Pool, Nightclub, ATM, Pub etc. along with average rent for 1 BHK, 2 BHK and 3 BHK flats in each locality and its distance from Sector V. This will help Mr. X to easily decide where to rent out to do his office more conveniently!

# Data Description

For this project I primarily I shall the data from two source:

1. `makaan.com` which a real estate property listing website to buy, sell and rent. I am going scrape one of its page (<https://www.makaan.com/price-trends/property-rates-for-rent-in-kolkata>) to get the average rent for 1 BHK, 2 BHK and 3 BHK flats in various localities in Kolkata.

2. The Foursquare API : basically the explore API will be used to get the venues of facilities within 2 KM radius of each locality. Total count of different types facilities will be calculated along with their Latitude and Longitude with another Pandas Library. Those count will be vital to choose a locality! I shall also calculate the distance from each locality to Sector V using these Latitude and Longitude. This distance is also another important factor when choosing a locality for rent out!

# Methodology

The methodology used to approach this problem includes some statistical exploration of the data. No visualization method or machine learning technique was required for this case! A huge amount of data cleaning and data wrangling was involved to prepare the usable dataset which could be used for decision making by the stake holders (In this case Mr. X who is searching appropriate locality to rent out for doing his job at Sector V, Kolkata).

The following steps were involved to get the final dataset :

1. Scraping the following URL of makaan.com (Property listing site for Buy, Sell and Rent) to get average rates for rent in apartment in various locality in kolkata :

<https://www.makaan.com/price-trends/property-rates-for-rent-in-kolkata>

2. Storing the table column values to different lists.
3. Making a Pandas Dataframe from the above lists.



4. Dropping those rows where BHK\_1\_Avg\_Rent, BHK\_2\_Avg\_Rent & BHK\_3\_Avg\_Rent all are blank
5. Dropping some other rows where the locality is absolutely out of Kolkata or seems irrelevant or Foursquare API does not provide results.
6. Rename some localities to make them compatible with Foursquare API.
7. Used Nominatim to get coordinates of the localities. Adding two columns Latitude and Longitude to the Dataframe and update them with corresponding values.

5. Used Foursquare API to retrieve and insert Kolkata's common top categories of facilities as column into the Dataframe and set initial count value to 0 for each category.
9. looped through the Localities and update the count of each facilities of that locality. Added new column if not already exists! Also adding and updating a column TotalFacilities which shows total number of facilities (from all categories) available for that locality.

10. looped through the Localities to calculate and update the corresponding distance of each locality from Sector V, Kolkata.
11. Looping through the Localities to calculate and update the corresponding distance of each locality from Sector V, Kolkata.

# Results

Yes, we have achieved our final Dataframe with 1 BHK Average Rent, 2 BHK Average Rent and 3 BHK Average Rent, total number of each facilities, total number of facilities (from all categories) and the distance to the Locality from Sector V. Please have look on the summarised results :

	Locality	BHK_1_Avg_Rent	BHK_2_Avg_Rent	BHK_3_Avg_Rent	Sector_V_Dist	TotalFacilities
0	New Town	10,140.63	14,666.67	22,000	3.80	18
1	Dum Dum	4,666.67	8,500	14,000	5.36	10
2	Tollygunge	9,000	22,808.7	33,000	12.68	50
3	Madhyamgram	7,500	10,250	12,33.33	12.83	11
4	Joka	-	14,000	18,333.33	19.87	4
5	Howrah	-	12,000	14,000	9.93	13
6	Garia	12,000	7,500	24,631.58	13.03	5
7	Salt Lake City	4,900	16,500	23,500	2.61	75
8	Sodepur	-	6,000	14,250	14.36	6
9	Keshtopur	6,250	7,000	35,000	3.92	2
10	Lake Town	8,333.33	14,375	18,000	4.58	20
11	Tangra	13,000	29,987.18	36,55.56	6.51	16
12	Dum Dum Cantonment	5,250	9,250	-	6.80	4
13	Behala	-	8,250	19,385.71	15.11	14
14	Belghoria	-	15,000	25,666.67	8.12	19
15	Narendrapur	-	13,62.5	23,125	14.00	5

16	Kaikhali	-	11,766.67	19,476.19	6.05	25
17	EM Bypass	15,000	16,800	38,522.97	13.40	8
18	Baguihati	5,550	10,000	13,000	3.51	20
19	Jessore Road	-	10,500	42,700	11.18	4
20	Picnic Garden	5,928.57	9,861.29	18,666.67	44.60	4
21	Durga Nagar	-	8,500	-	12.71	6
22	Barasat	-	8,500	10,000	39.31	2
23	Kasba	9,250	11,29.41	15,000	7.97	19
24	Beliaghata	45,666.67	16,468.75	24,285.71	4.74	19
25	Sonarpur	-	-	13,500	15.15	5
26	Mukundapur	6,000	18,347.22	27,433.33	10.16	8
27	Chinar Park	-	13,000	18,000	4.86	20
28	Tiljala	-	8,750	-	8.60	84
29	Phoolbagan	-	9,000	28,770.27	5.03	28
30	Park Circus	12,000	24,117.65	22,000	8.44	100
31	Thakurpukur	5,000	11,428.57	20,000	18.51	4
32	Bangur	-	15,833.33	22,000	4.54	22

33	BT Road	6,500	6,000	16,333.33	17.29	6
34	Kankurgachi	12,000	18,400	28,000	4.75	40
35	New Alipore	-	14,625	32,500	13.00	41
36	Ballygunge	12,000	28,888.89	64,533.33	9.51	52
37	Baguiati	5,600	9,233.33	13,250	3.51	20
38	Jadavpur	5,600	5,600	24,955.56	11.39	29
39	Diamond Harbour Road	-	-	30,000	14.18	16
40	Dum Dum Park	6,166.67	12,000	18,666.67	3.01	24
41	New Town AA1	-	15,000	17,625	3.80	18
42	Santoshpur	-	9,000	31,500	10.89	13
43	Sector 1	10,000	18,925.93	25,000	9.36	90
44	Dunlop	6,000	7,800	6,000	11.53	8

# Discussion

The summarized result is quite enough to decide to choose the locality by considering 1 BHK Average Rent, 2 BHK Average Rent and 3 BHK Average Rent, total number of facilities (from all categories) and the distance to the Locality from Sector V.

The interested person is also further equipped with total number of each facilities like total number of Restaurants



of different cuisines, Movie Theatres, Playgrounds, Gyms, Park, Shopping Mall, Market, Swimming Pool, Nightclub, ATM, Pub etc. into detailed results.

# Conclusion

So, the person is absolutely free to consider the locality as per his / her requirement, personal choice of cuisines, leisure spending manner, budget and willingness for amount of travel for daily commute!

**Thank You!!!**