

Battle of Neighborhood in Singapore

Which area should an expat choose for their first house

By ZHANG LIBO

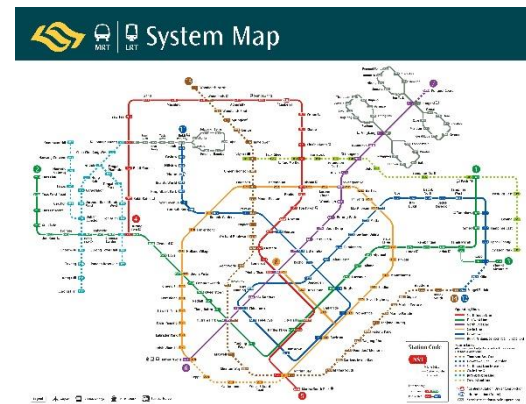
Problem Statement

Singapore is one of the top chosen destinations for relocation by expatriates.

When an expat decide to move to Singapore, the first and most intuitive question is:

where should I live?

I have a family, a *two bedrooms* unit could be suitable, I have a *budget* of 3000 SGD, I love *Chinese Food/Asia Food*, I love *shopping*...



Data

A Few Assumptions:

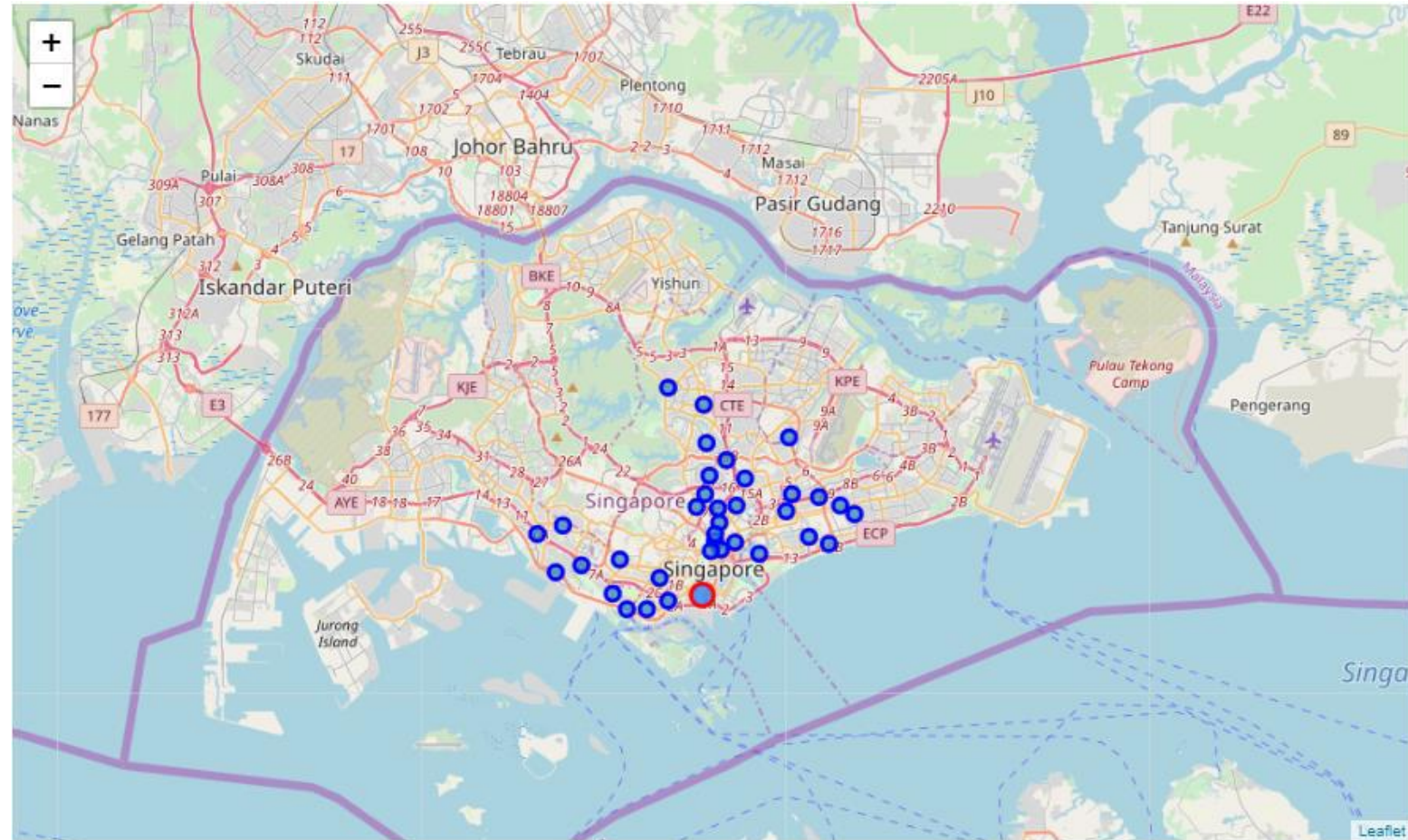
- Most Expatriates works in CBD area
- He/she would want a two bedroom units which could be suitable if there is a family member visiting
- Commuting time budget is about 30min.

With a budget of 3000SGD, an expatriate could get a one-bedroom or just a studio in CCR region, while in Rest of Central Region (RCR), he/she could rent a two-bedroom condo unit. The commute time from RCR to CBD is within 30min by public transport or less than 20min by car.

District		Area
1	3	Alexandra Road, Tiong Bahru, Queenstown
2	4	Keppel, Mount Faber, Telok Blangah
3	5	Buona Vista, Dover, Pasir Panjang, West Coast
4	7	Beach Road, Bencoolen Road, Bugis, Rochor
5	8	Little India, Farrer Park, Serangoon Road
6	12	Balestier, Moulmein, Novena, Toa Payoh
7	13	Potong Pasir, Macpherson
8	14	Eunos, Geylang, Kembangan, Paya Lebar
9	15	Katong, Marine Parade, Siglap, Tanjong Rhu
10	20	Ang Mo Kio, Bishan, Braddell Road, Thomson

Data

Map to see the areas spreading in the whole island. Noted that the downtown of Singapore is not at the centre but rather South of island. The downtown spot is highlighted using red circle.

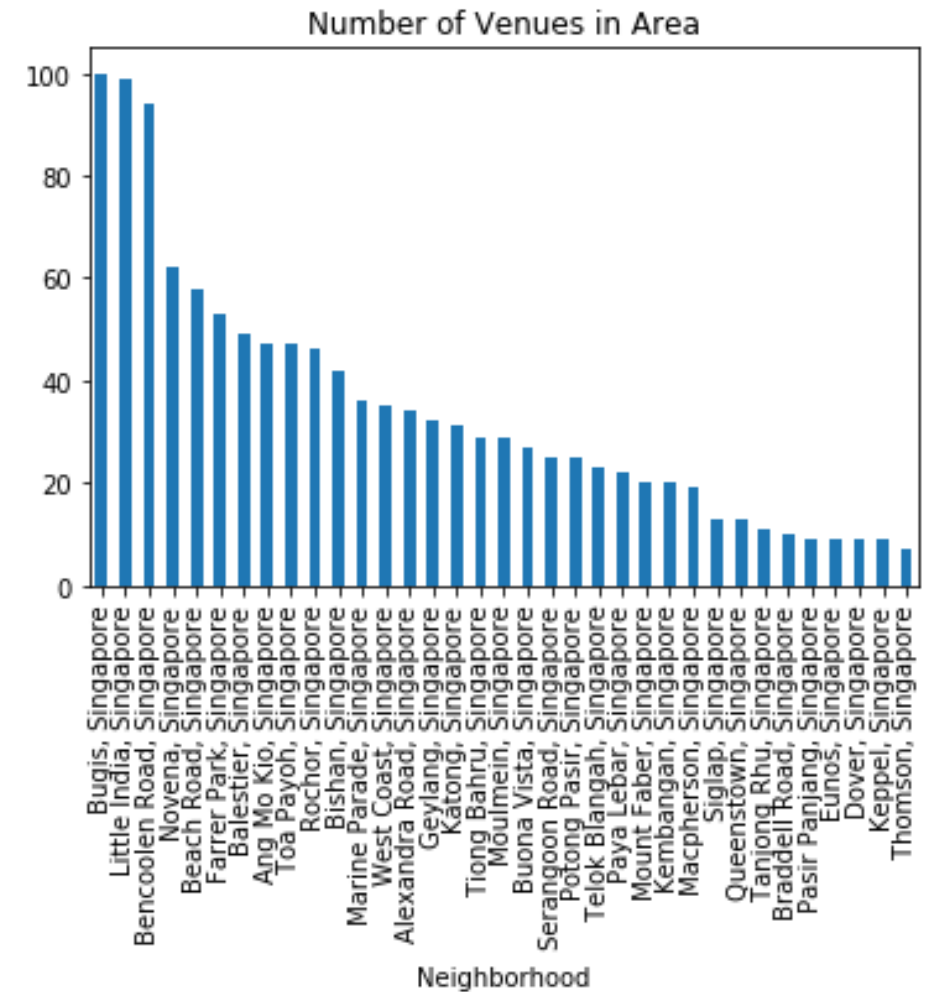


Data

- Use Foursquare API to explore the venues in RCR areas
- Number of Venues less than 20 are:

1. Siglap
2. Queenstown
3. Tanjong Rhu
4. Braddel Road

5. Pasir Panjang
6. Eunos
7. Dover
8. Keppel
9. Thomson



Data

TOP 5 areas with most of "Shops"

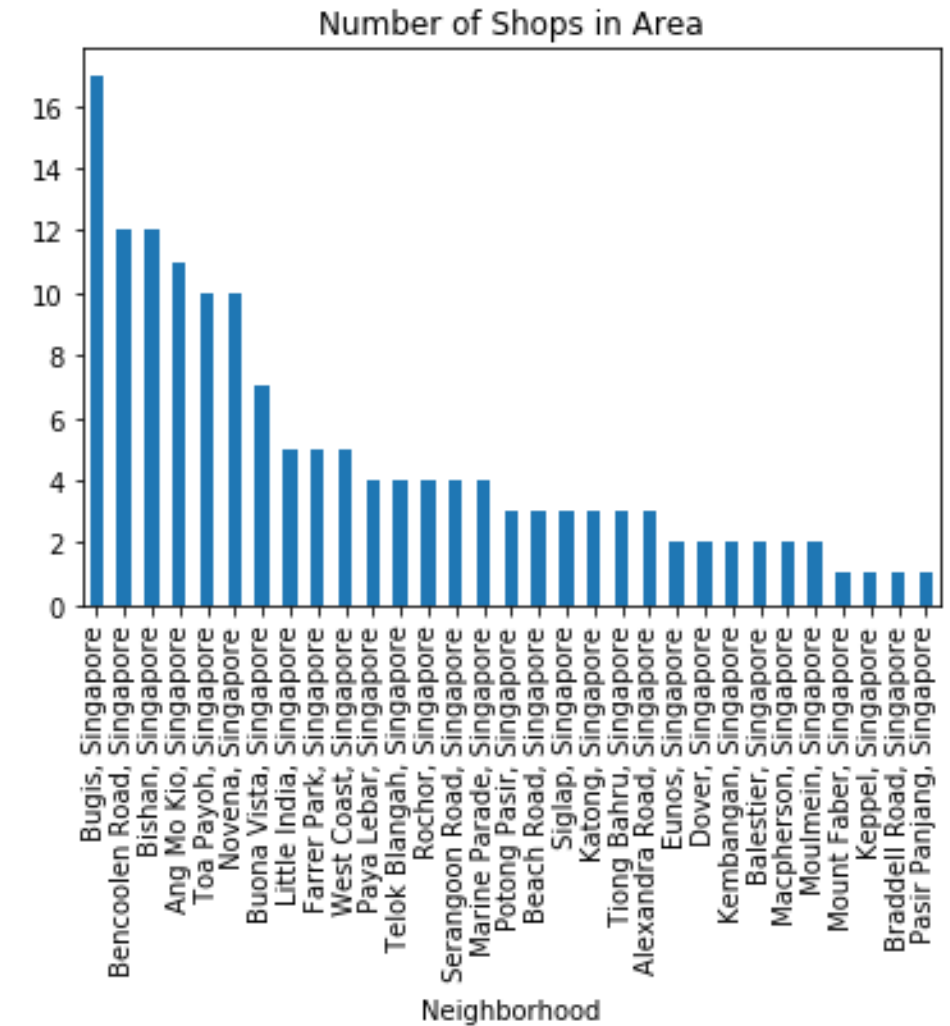
1. Bugis

2. Bencoolen

3. Bishan

4. Ang Mo Kio

5. Toa Payoh



Results

Elbow method to determine best K.

K-mean Clustering

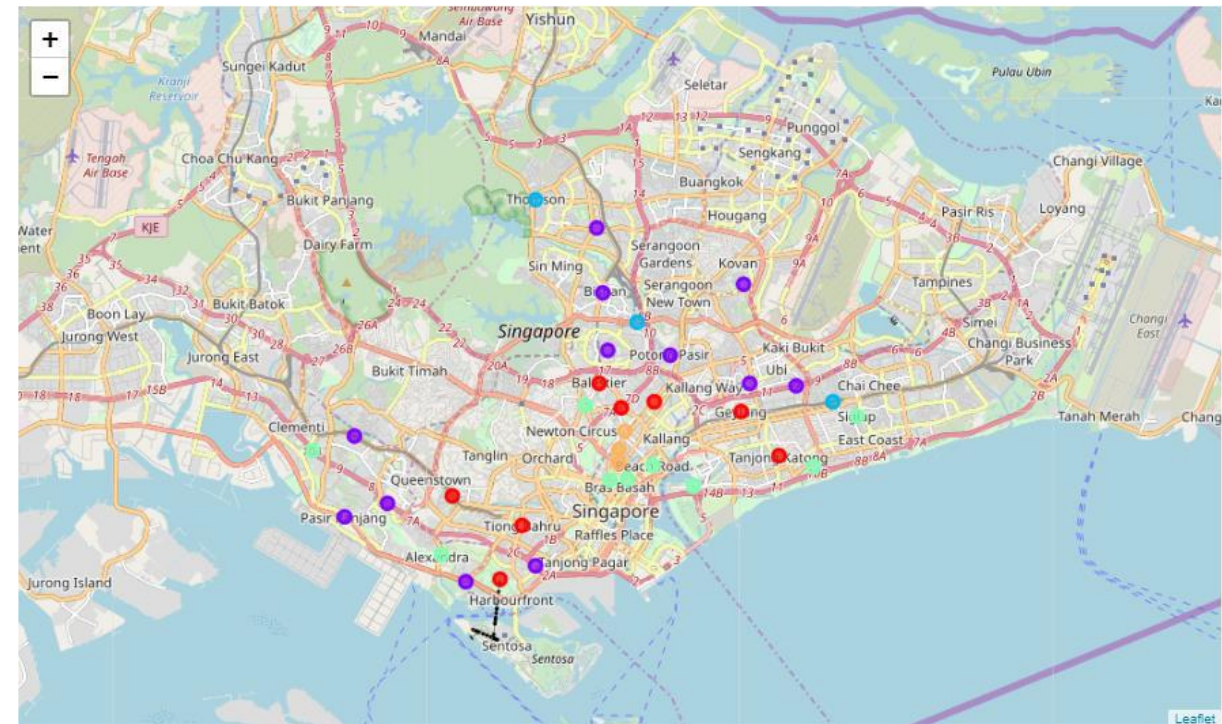
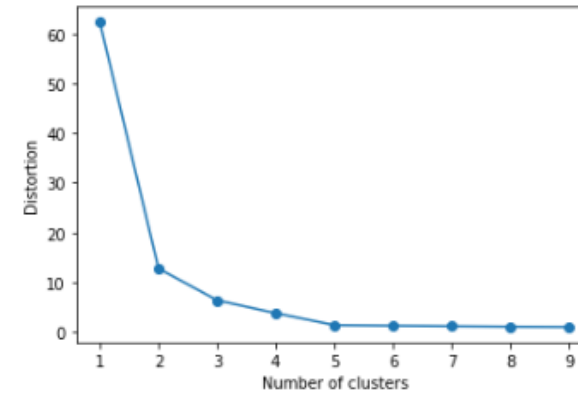
Cluster 0 → Mid-Class Chinese Zone

Cluster 1 → Classic Living Zone

Cluster 2 → Mixed Living Zone

Cluster 3 → Relax Zone

Cluster 4 → Little Indian Zone



Results

Elbow method to determine best K.

K-mean Clustering

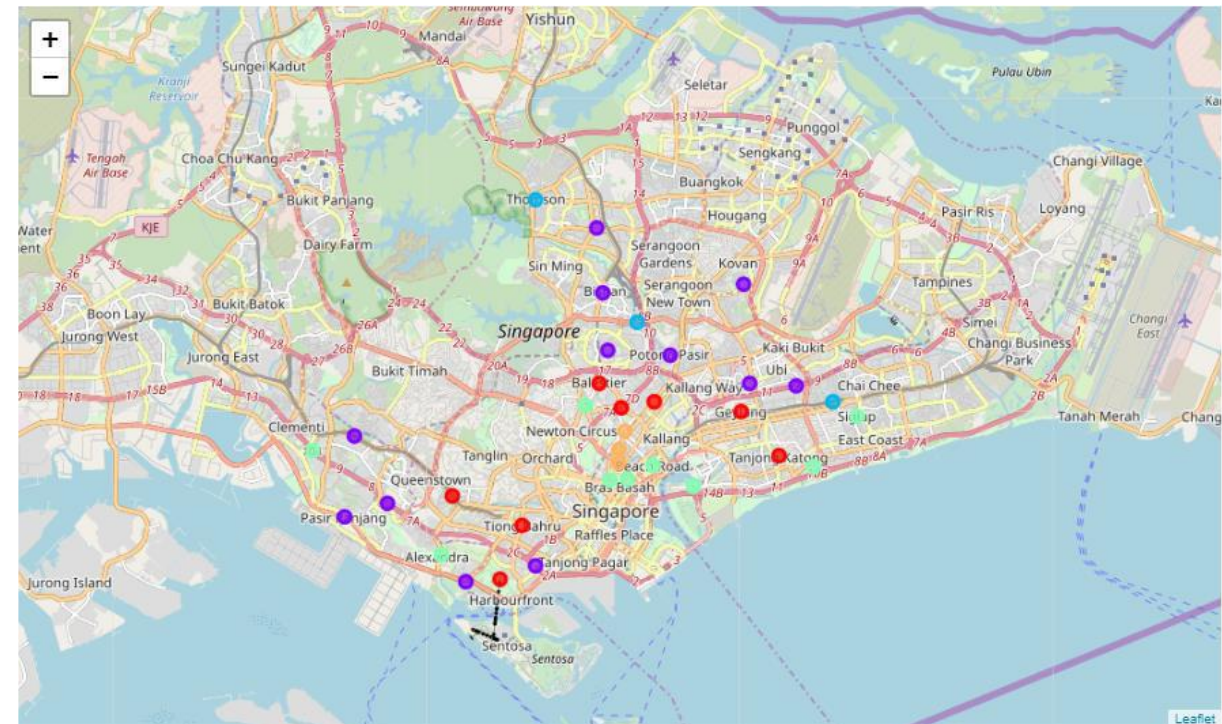
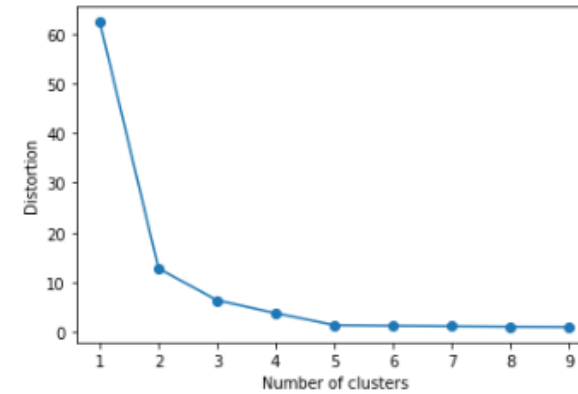
Cluster 0 → Mid-Class Chinese Zone

Cluster 1 → Classic Living Zone

Cluster 2 → Mixed Living Zone

Cluster 3 → Relax Zone

Cluster 4 → Little Indian Zone



Discussion

Let's go back to the top 5 areas that we draw from those with most shops, Bugis and Bencoolen is at Relax Zone. Bishan/Ang Mo Kio/Toh Payoh belongs to Classic Living Zone.

1. Bugis → Relax Zone

2. Bencoolen → Relax Zone

3. Bishan → Classic Living Zone

4. Ang Mo Kio → Classic Living Zone

5. Toa Payoh → Classic Living Zone

Based on above analysis and review, depends on the background of the expatriates, I would suggest different area for them to start with at the beginning their journey in Singapore. For example, a Chinese family with housewife and kids, I would suggest staying in Bishan/Ang Mo Kio/Toa Payoh, they could enjoy convenience brought by plenty of shops and amenities, with easy access of public transport, they can reach any part of island easily. Another example, an Indian single professional, I would suggest renting a place in Little India or Ferry Park, where he could enjoy most authentic Indian food and social with people having similar background or culture. A young couple both loving Chinese/Asian food could choose Mid-Class Chinese Zone as well since they have most Chinese restaurants and Asia food available.

Battle of Neighborhood in Singapore

Back up

K-mean Clustering

District		Area	Latitude	Longitude	Cluster Labels	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
14	8	Farrer Park, Singapore	1.312755	103.854374	4	Indian Restaurant	Café	Chinese Restaurant	Vegetarian / Vegan Restaurant	Hotel	Fried Chicken Joint	Asian Restaurant	Frozen Yogurt Shop
15	8	Little India, Singapore	1.307457	103.852572	4	Indian Restaurant	Vegetarian / Vegan Restaurant	Hotel	Café	Chinese Restaurant	Hostel	Asian Restaurant	Noodle House
10	7	Rochor, Singapore	1.303984	103.852612	4	Indian Restaurant	Vegetarian / Vegan Restaurant	Café	Chinese Restaurant	Dessert Shop	Art Gallery	Food	Shopping Plaza
0	3	Alexandra Road, Singapore	1.278088	103.802975	3	Café	Sushi Restaurant	Fast Food Restaurant	Art Gallery	Deli / Bodega	Bus Station	Sporting Goods Shop	Garden
29	15	Tanjong Rhu, Singapore	1.297343	103.873764	3	Bus Station	Golf Course	Gym / Fitness Center	Mexican Restaurant	Stadium	Café	Golf Driving Range	Thai Restaurant
28	15	Siglap, Singapore	1.316999	103.919587	3	Coffee Shop	Park	Dessert Shop	Bus Stop	Bakery	Spanish Restaurant	BBQ Joint	Café
27	15	Marine Parade, Singapore	1.302689	103.907395	3	Hotel	Multiplex	Japanese Restaurant	Chinese Restaurant	Massage Studio	Salad Place	Indian Restaurant	Bistro
7	5	West Coast, Singapore	1.307230	103.766728	3	Bus Station	Chinese Restaurant	Café	Market	Indian Restaurant	Pool	Japanese Restaurant	Sporting Goods Shop
19	12	Novena, Singapore	1.320084	103.843492	3	Café	Coffee Shop	Ramen Restaurant	Hotel	Chinese Restaurant	Italian Restaurant	Japanese Restaurant	Asian Restaurant
11	7	Bugis, Singapore	1.299476	103.855089	3	Café	Japanese Restaurant	Hotel	Bakery	Cocktail Bar	Chinese Restaurant	Dessert Shop	Bookstore
12	7	Bencoolen Road, Singapore	1.299016	103.850475	3	Café	Hotel	Japanese Restaurant	Chinese Restaurant	Food Court	Gift Shop	Ice Cream Shop	Sports Bar
13	7	Beach Road, Singapore	1.303052	103.862267	3	Thai Restaurant	Hotel	Restaurant	Café	Indian Restaurant	Coffee Shop	Indonesian Restaurant	Italian Restaurant
31	20	Braddell Road, Singapore	1.343236	103.857872	2	Seafood Restaurant	Bus Stop	Noodle House	Food Court	Coffee Shop	Trail	Chinese Restaurant	Yoga Studio
24	14	Kembangan, Singapore	1.321032	103.912927	2	Chinese Restaurant	Indian Restaurant	Bus Stop	BBQ Joint	Shopping Mall	Food Court	Bistro	Supermarket
34	20	Thomson, Singapore	1.377716	103.829524	2	Indian Restaurant	Seafood Restaurant	Italian Restaurant	Japanese Restaurant	Bus Stop	Chinese Restaurant	Snack Place	Yoga Studio
9	5	Buona Vista, Singapore	1.292460	103.787773	1	Coffee Shop	Café	Food Court	Bus Station	Hong Kong Restaurant	Kebab Restaurant	Pharmacy	Office
3	4	Keppel, Singapore	1.274836	103.829539	1	Asian Restaurant	Food Court	Hotel	Furniture / Home Store	Coffee Shop	Vegetarian / Vegan Restaurant	Paper / Office Supplies Store	Yoga Studio
33	20	Bishan, Singapore	1.351452	103.848250	1	Coffee Shop	Food Court	Bubble Tea Shop	Café	Supermarket	Cosmetics Shop	Pet Store	Japanese Restaurant
32	20	Ang Mo Kio, Singapore	1.369842	103.846609	1	Food Court	Coffee Shop	Snack Place	Sandwich Place	Japanese Restaurant	Supermarket	Dessert Shop	Bubble Tea Shop

8	5	Dover, Singapore	1.311421	103.778627	1	Lounge	Sandwich Place	Bubble Tea Shop	Bowling Alley	College Cafeteria	Coffee Shop	Pool Hall	Cafeteria
20	12	Toa Payoh, Singapore	1.335391	103.849741	1	Noodle House	Coffee Shop	Food Court	Asian Restaurant	Chinese Restaurant	Snack Place	Steakhouse	Café
21	13	Potong Pasir, Singapore	1.334189	103.867093	1	Convenience Store	Bus Station	Gym	Snack Place	Fast Food Restaurant	Food Court	Theater	Shopping Mall
22	13	Macpherson, Singapore	1.326207	103.889507	1	Bus Station	Noodle House	Food Court	Furniture / Home Store	Playground	Gym / Fitness Center	Coffee Shop	Office
23	14	Paya Lebar, Singapore	1.353899	103.887821	1	Noodle House	Coffee Shop	Bakery	Bus Station	Food Court	Breakfast Spot	Cafeteria	Café
6	5	Pasir Panjang, Singapore	1.288834	103.775657	1	Bus Station	Pier	Indian Restaurant	Asian Restaurant	Dog Run	Boat or Ferry	Food Court	Miscellaneous Shop
26	14	Eunos, Singapore	1.325406	103.902560	1	Coffee Shop	Grocery Store	Japanese Restaurant	Food Court	Bus Station	Martial Arts Dojo	Fujian Restaurant	Diner
4	4	Telok Blangah, Singapore	1.270586	103.809863	1	Food Court	Pool	Bus Station	Convenience Store	Shopping Mall	Metro Station	Market	Board Shop
2	3	Tiong Bahru, Singapore	1.286197	103.825765	0	Chinese Restaurant	Coffee Shop	Food Court	Bakery	Bar	Café	Fast Food Restaurant	Supermarket
30	15	Katong, Singapore	1.305789	103.897631	0	Chinese Restaurant	Italian Restaurant	Ice Cream Shop	Asian Restaurant	Noodle House	Café	Bakery	Malay Restaurant
25	14	Geylang, Singapore	1.318186	103.887056	0	Chinese Restaurant	Food Court	Noodle House	Vegetarian / Vegan Restaurant	Seafood Restaurant	Dim Sum Restaurant	Asian Restaurant	Grocery Store
5	4	Mount Faber, Singapore	1.271152	103.819459	0	Chinese Restaurant	Food Court	Café	Trail	Dessert Shop	Scenic Lookout	Bus Stop	Cable Car
16	8	Serangoon Road, Singapore	1.320970	103.862685	0	Chinese Restaurant	Noodle House	Coffee Shop	Asian Restaurant	Cafeteria	Bakery	Shopping Mall	Food Court
18	12	Balestier, Singapore	1.326226	103.847315	0	Chinese Restaurant	Hotel	Bakery	Food Court	Noodle House	Fast Food Restaurant	Modern European Restaurant	Sandwich Place
1	3	Queenstown, Singapore	1.294623	103.806045	0	Chinese Restaurant	Food Court	Seafood Restaurant	Spa	Café	Pool	Noodle House	Train Station
17	12	Moulmein, Singapore	1.319374	103.853540	0	Chinese Restaurant	Asian Restaurant	Seafood Restaurant	Dessert Shop	Noodle House	Hotel	Food	Soup Place