Battle of Neighbourhoods

Introduction

Investors are looking for an opportunity to open a sushi bar in Santiago de Chile and have engaged the help of our consultants to find a profitable location.

Business Problem

First, we must use the Foursquare to obtain information on the communes or localities of Singapore. The target audience are students and office workers.

To ensure profitability, the sushi bar has to be located in a place with a good customer flow and with close proximity to schools, universities and offices. Additionally, it should not be near to other sushi bar.

Data

To find the best location for our sushi bar, we will use the below information:

From Wikipedia (tables)

Locations - https://es.wikipedia.org/wiki/Anexo:Comunas_de_Chile_por_poblaci%C3%B3n

Post Codes- https://es.wikipedia.org/wiki/Anexo:C%C3%B3digos_postales_de_Chile

From Files

Geo Location - https://raw.githubusercontent.com/ssikam/My-Capstone-Project/master/chile%20geo%20public.csv

From Foursquare

Venues Categories - https://developer.foursquare.com/docs/resources/categories

Sushi - 4bf58dd8d48988d1d2941735

Highschool - 4bf58dd8d48988d13d941735

University - 4bf58dd8d48988d1ae941735

Office - 4d4b7105d754a06375d81259

Methodology

- We extract the various sources of information including Locations, postal codes, geographical locations. In total, there are 346 locations in Chile.
- Using "Metropolitan of Santiago" filter, we will only select the metropolitan region leaving a total of 52 localities.
- Join all the bases leaving a size of 52.4
- We keep track of information of sushi bars, schools, universities and offices from Foursquare based on the venues.
- For each locality, we tabulate each of the 4 categories.
- We implement a scoring system for each category based on the table below:

Category	Description	Points
Sushi Bar	Close proximity to other similar bars will mean less business	-1
Schools	Students usually have a smaller allowance	+1
Universities	Universities students have a higher allowance than school students but lower income than Office Workers	+2
Offices	Office Workers have the highest income which means higher profitability	+3

For each category, we tabulate a final score and sort the results in descending order. The location with the highest score shall the best location to set up our sushi bar.
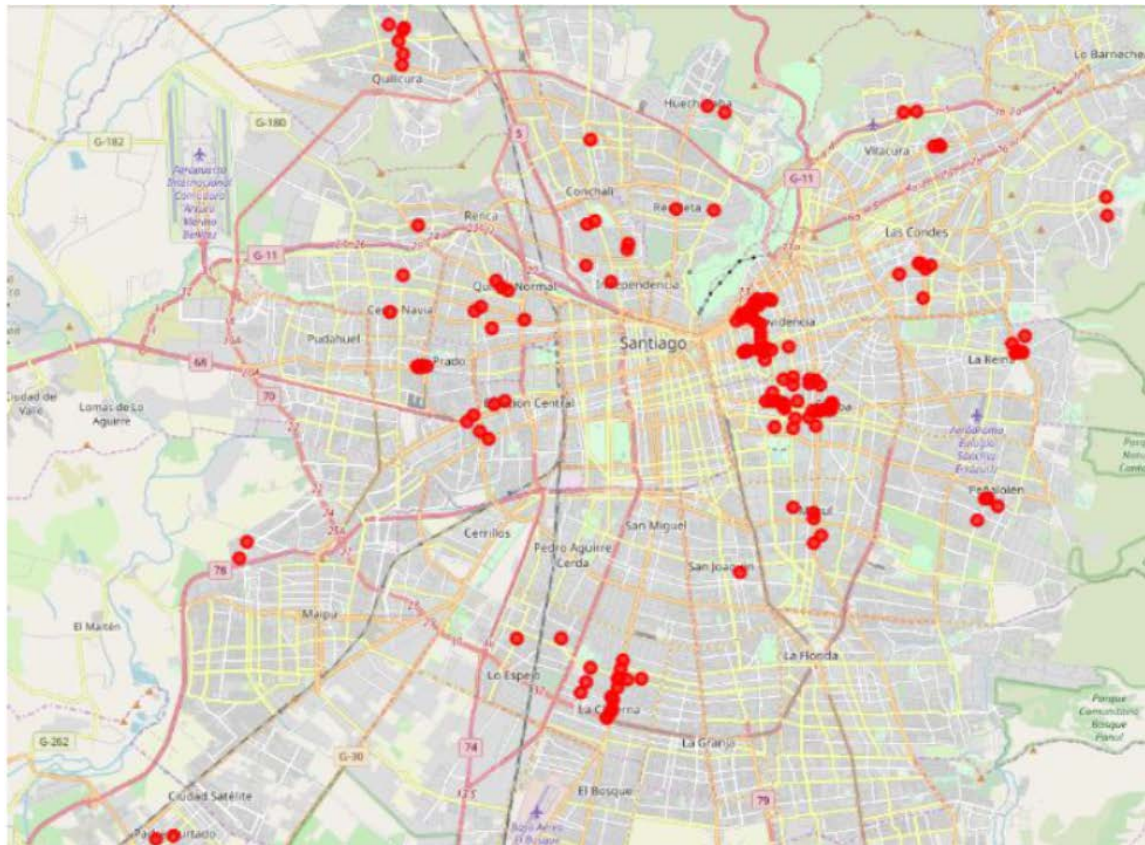
4. Results

Map of "Metropolitana de Santiago" Localities
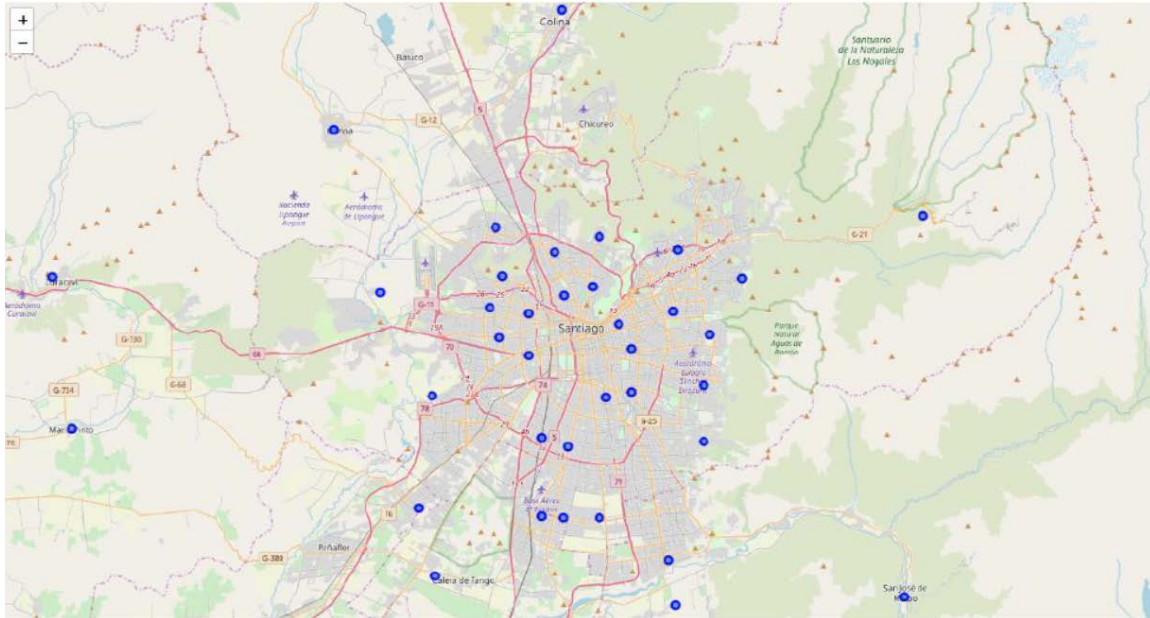
Geo Locations of "Metropolitana de Santiago" Localities

	Borough	Neighborhood	Lat	Lon
0	Metropolitana de Santiago	Puente Alto	-33.616	-70.570
1	Metropolitana de Santiago	Maipú	-33.490	-70.788
2	Metropolitana de Santiago	Santiago	-33.425	-70.566
3	Metropolitana de Santiago	La Florida	-33.525	-70.538
4	Metropolitana de Santiago	San Bernardo	-33.582	-70.687
5	Metropolitana de Santiago	Las Condes	-33.400	-70.503
6	Metropolitana de Santiago	Peñalolén	-33.482	-70.538
7	Metropolitana de Santiago	Pudahuel	-33.411	-70.836
8	Metropolitana de Santiago	Quilicura	-33.361	-70.729
9	Metropolitana de Santiago	Ñuñoa	-33.454	-70.604
10	Metropolitana de Santiago	La Pintana	-33.583	-70.634
11	Metropolitana de Santiago	El Bosque	-41.667	-73.317
12	Metropolitana de Santiago	Recoleta	-33.406	-70.640
13	Metropolitana de Santiago	Renca	-33.398	-70.723
14	Metropolitana de Santiago	Estación Central	-33.459	-70.699
15	Metropolitana de Santiago	Colina	-33.194	-70.668
16	Metropolitana de Santiago	Providencia	-33.435	-70.616
17	Metropolitana de Santiago	Cerro Navia	-33.422	-70.735
18	Metropolitana de Santiago	Conchalí	-33.380	-70.675
19	Metropolitana de Santiago	Melipilla	-33.689	-71.208
20	Metropolitana de Santiago	La Granja	-20.900	-69.617
21	Metropolitana de Santiago	Macul	-33.487	-70.604
22	Metropolitana de Santiago	Quinta Normal	-33.427	-70.699
23	Metropolitana de Santiago	San Miguel	-36.818	-71.966
24	Metropolitana de Santiago	Lo Barnechea	-33.352	-70.336
25	Metropolitana de Santiago	Lampa	-33.286	-70.878

Locations of Sushi Bars in Santiago

Statistics in Santiago as follows:

- Sushi Bars: 184
- High Schools: 137
- Univerisities:138
- Offices: 1654

Grouping by Category (showing the first 5 results)

	Borough	Localidad	Lat	Lon	Sushi	High Schools	Universities	Offices
0	Metropolitana de Santiago	Puente Alto	-33.616	-70.570	6.0	4.0	0.0	44.0
1	Metropolitana de Santiago	Maipú	-33.490	-70.788	2.0	1.0	0.0	16.0
2	Metropolitana de Santiago	Santiago	-33.425	-70.566	6.0	9.0	4.0	49.0
3	Metropolitana de Santiago	La Florida	-33.525	-70.538	0.0	0.0	0.0	19.0
4	Metropolitana de Santiago	San Bernardo	-33.582	-70.687	3.0	6.0	0.0	48.0

Tabulation of Final Score

	Localidad	Score
16	Providencia	234.0
5	Las Condes	218.0
32	San Joaquín	179.0
2	Santiago	158.0
21	Macul	154.0
9	Ñuñoa	154.0
12	Recoleta	153.0
44	Curacaví	152.0
33	La Reina	152.0
25	Lampa	152.0

The locality with the highest score is 'Providencia" with 234 points which shows that this is the best location to setup our sushi bar to have the highest profitability.
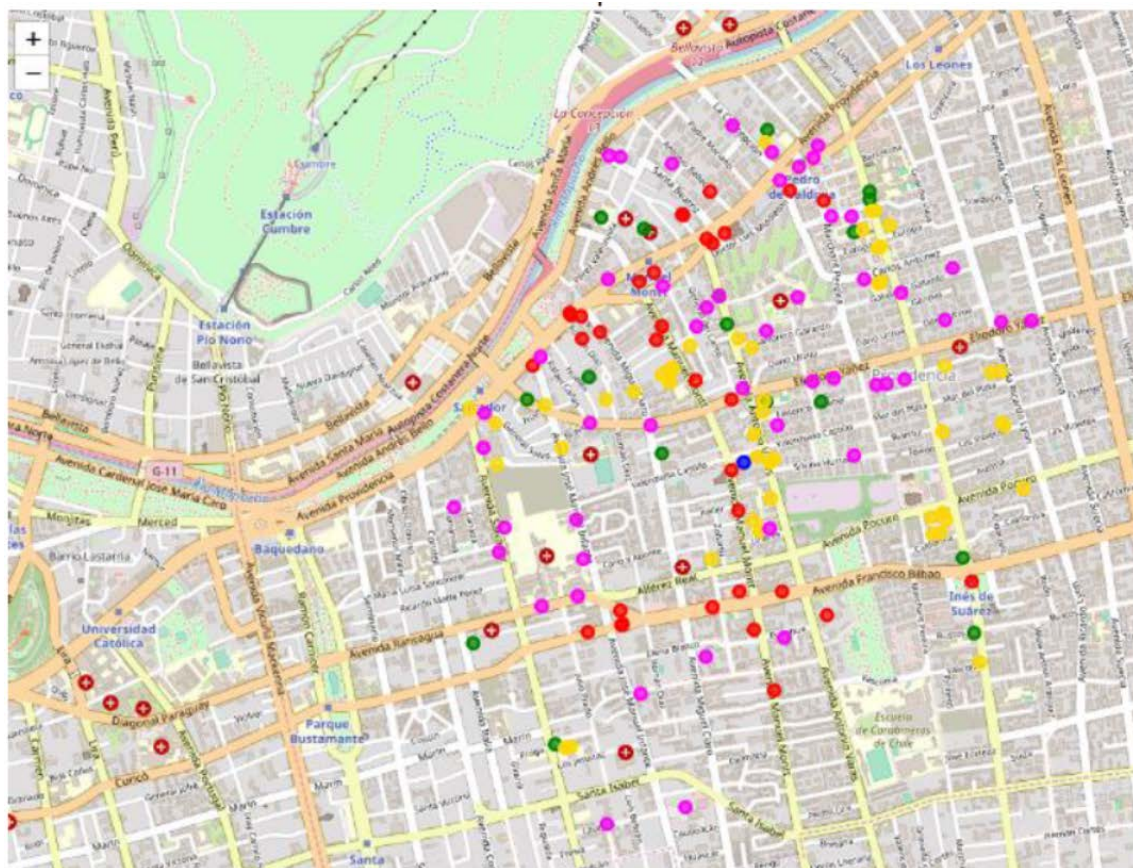
5. Discussion
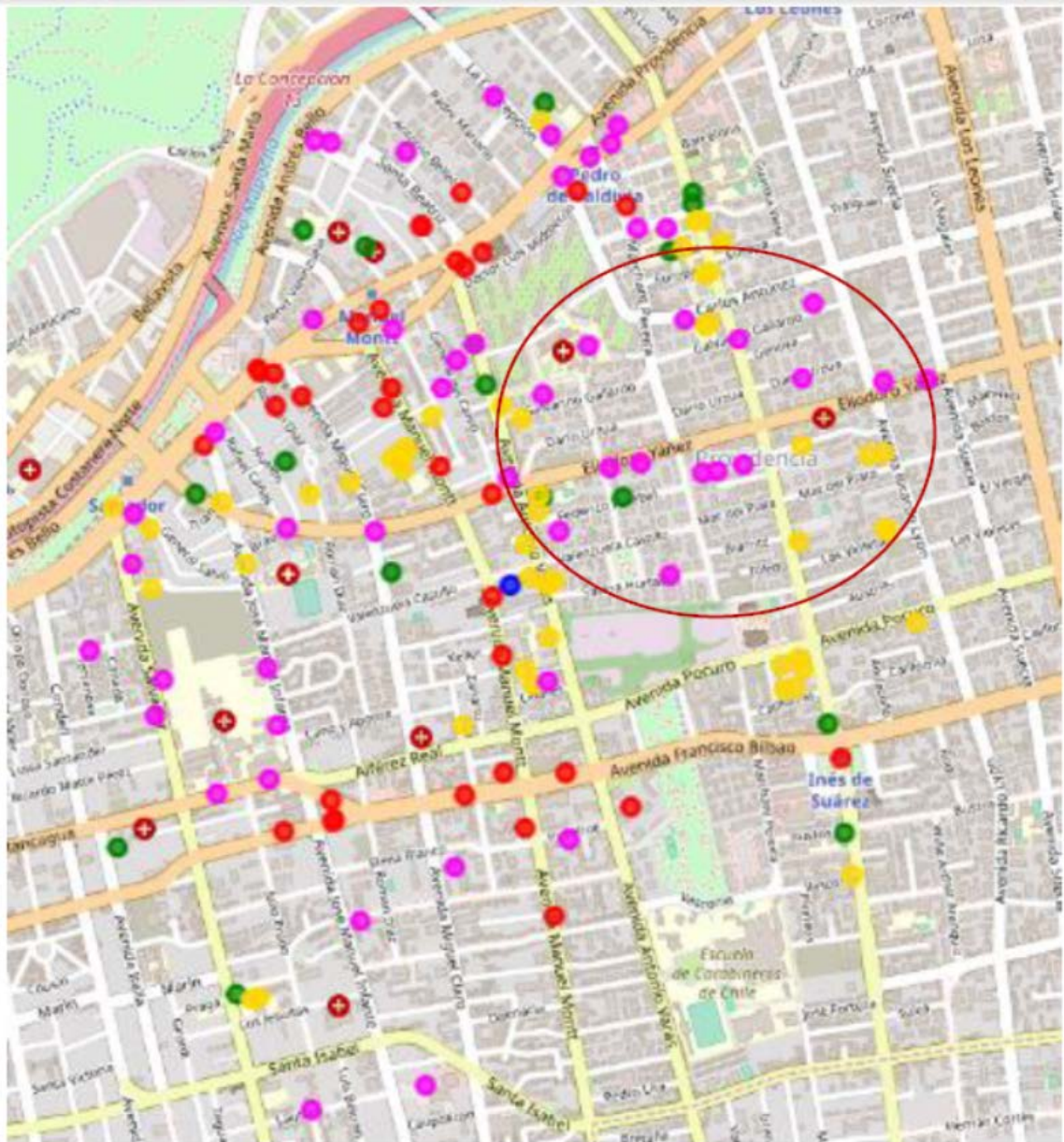
- The red dots show the locations of our competitors. The green, gold and fuchsia dots show the locations of the high schools, universities and offices respectively.
- Based on the above map, our recommendation shall be to setup our sushi bar in the circled area where the gold, green and fuchsia dots are concentrated and also away from the red dots. This shall ensure that the chosen location has high customer flow with low competition.
- The chosen location is on Eliodoro Yáñez street.

Conclusion

- In this study, I learnt how to choose a profitable location to set up a new business using data analysis.
- To improve our analysis, more competitors can be added. For example, all types of Japanese restaurants including Ramen.