Analysis for the opening of a Gastropub in Quito, Ecuador

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Introduction/Business Problem

In order to discover the best location for a Gastropub in the city of Quito in Ecuador, an analysis of the existing pubs, bars, etc. is necessary. With the help of the Foursquare API, I'm going to find out the neighbourhoods with the highest presence of similar venues and detect possible locations which can synergize the success of the business.

Target group

This work can be interesting for persons looking to identify a good location for a new business, especially in the gastronomy industry. This work can particularly be interesting if a person wants to present the project to stakeholders or if they are applying for a loan and they have to justify their decisions based in solid data .

Data

For this analysis, I'm going to be using the API of Foursquare in order to extract the venues in the city.

For the data frame of the neighborhoods I'm going to use a table that can be found in the following URL:

http://www.codigopostalecuador.com/quito-1896

Methodology

For the analysis of the city of Quito and its venues I used a similar model as the one used for the analysis of New York and Toronto. My goal was to find a spot in the city with high presence of similar venues to a gastropub, but not overcrowded with these kinds of businesses.

First, I scraped the table with the neighborhoods, postal codes, latitudes and longitudes of the city. Then I displayed the data into map with the help of the folium-library in order to clean it. After cleaning this data, I used the Foursquare-API to extract venues in a radius of 500 meters of each neighborhood.

In the next step I had to locate all the hotspots in the city with high presence of venues like a gastropub. I filtered all the locations with the following descriptions:

- Bar

- Gastropub
- Brewery
- Hotel Bar
- Lounge
- Pub
- Cocktail

Then, with the help of one hot encoding, I found the top 3 neighborhoods. Then I proceeded to analyze the location of these businesses with the help of a folium map and finally I checked for other venues in the proximities which could synergize the success of the gastropub.

Results

The following table shows the 75 Neighborhoods considered in this analysis and a map with a marker for each of them.

Neighborhood	*Postal Code*	*Latitude*	*Longitude*
Alangasi	170151	-0,30505	-78,4134
Alfaro (Chimbacalle)	170101	-0,23333	-78,5167
Amaguaña	170152	-0,38084	-78,5154
Atahualpa (Chabaspamba)	170153	-0,18439	-78,4917
Belisario Quevedo	170129	-0,16563	-78,5105
Benalcazar	170102	-0,18262	-78,4812
Calacali	170154	-0,00114	-78,5136
Calderon (Carapungo)	170155	-0,09749	-78,4225
Carcelen	170120	-0,08971	-78,4699
Centro Historico	170130	-0,27874	-78,5548
Chaupicruz (La Concepcion)	170104	-0,15749	-78,487
Checa (Chilpa)	170159	-0,12664	-78,3117
Chilibulo	170131	-0,244	-78,54
Chillogallo	170105	-0,31887	-78,5731
Chimbacalle	170121	-0,2482	-78,5157
Cochapamba	170132	-0,15858	-78,501
Comite Del Pueblo	170133	-0,12176	-78,4659
Condado	170134	-0,10434	-78,5054
Conocoto	170156	-0,29239	-78,4766
Cotocollao	170103	-0,11757	-78,4973
Cumbaya	170157	-0,20006	-78,4289
El Batan	170122	-0,16735	-78,473
El Beaterio	170123	-0,31814	-78,5439
El Inca	170124	-0,15803	-78,4818
El Quinche	170160	-0,11002	-78,2962

El Salvador	170106	-0,16563	-78,5105
Eloy Alfaro	170125	-0,16563	-78,5105
Gonzalez Suarez	170107	-0,22197	-78,5124
Guamani	170126	-0,33368	-78,5549
Guangopolo	170162	-0,26735	-78,4462
Guapulo	170108	-0,20474	-78,4784
Guayllabamba	170163	-0,05862	-78,3419
Iñaquito	170135	-0,16667	-78,5
Itchimbia	170136	-0,22179	-78,5006
Jipijapa	170137	-0,1654	-78,4824
Kennedy	170138	-0,14037	-78,4781
La Argelia	170139	-0,16563	-78,5105
La Concepción	170127	-0,22513	-78,529
La Ecuatoriana	170140	-0,30929	-78,5615
La Ferroviaria	170141	-0,16563	-78,5105
La Floresta	170109	-0,20909	-78,4835
La Libertad	170110	-0,27739	-78,5799
La Magdalena	170111	-0,2436	-78,5299
La Mena	170142	-0,26431	-78,5501
La Merced	170164	-0,29261	-78,3992
La Vicentina	170112	-0,21951	-78,49
Las Cuadras	170128	-0,27948	-78,549
Llano Chico	170165	-0,13333	-78,4333
Lloa	170166	-0,2449	-78,589
Mariscal Sucre	170143	-0,20549	-78,4951
Nayón	170170	-0,16434	-78,4578
Nono	170171	-0,06481	-78,5775
Pifo	170175	-0,22593	-78,3431
Pomasqui	170177	-0,0583	-78,4598
Ponceano	170144	-0,16563	-78,5105
Puembo	170179	-0,1793	-78,3659
Puengasi	170145	-0,22662	-78,5065
Quito	170150	-0,2295	-78,5243
Quitumbe	170146	-0,12336	-78,4922
Rumipamba	170147	-0,1827	-78,4937
San Antonio	170180	-0,008	-78,4454
San Bartolo	170148	-0,27779	-78,5333
San Blas	170113	-0,22157	-78,5068
San Isidro Del Inca	170149	-0,14956	-78,4713
San Jose De Minas	170181	-0,15101	-78,4644
San Marcos	170114	-0,22525	-78,5082
San Roque	170115	-0,22092	-78,5166
San Sebastian	170116	-0,22789	-78,5156

Santa Barbara	170117	-0,27121	-78,5616
Santa Prisca	170118	-0,21477	-78,5047
Tababela	170183	-0,18974	-78,3471
Tumbaco	170184	-0,21293	-78,4071
Villaflora	170119	-0,24461	-78,5186
Yaruquì	170185	-0,1613	-78,3202
Zàmbiza	170186	-0,15424	-78,4578

Table 1

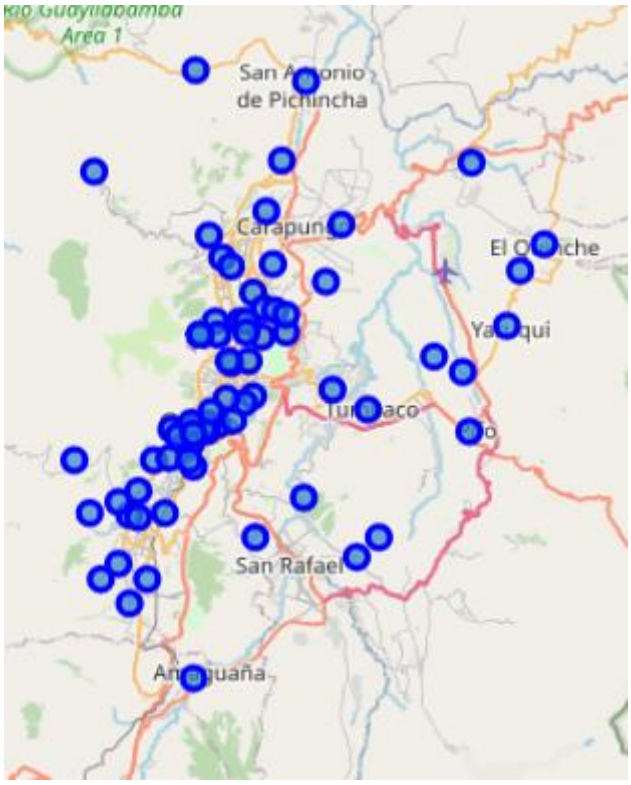

Figure 1

With the help of the Foursquare-API I was able to find 1191 venues around Quito. After filtering the data for similar businesses, I was able to find 40 locations like a gastropub. With the help of one hot encoding I found the 3 neighborhoods with the highest presence of similar venues. The top 3 are:

Neighborhood	***Bar***	***Brewery***	***Gastropub***	***Hotel Bar***	***Lounge***	***Pub***	***Total***
La Floresta	1	3	0	0	0	2	6
Guapulo	2	1	0	0	1	1	5
Mariscal Sucre	2	1	1	0	1	0	5

Table 2

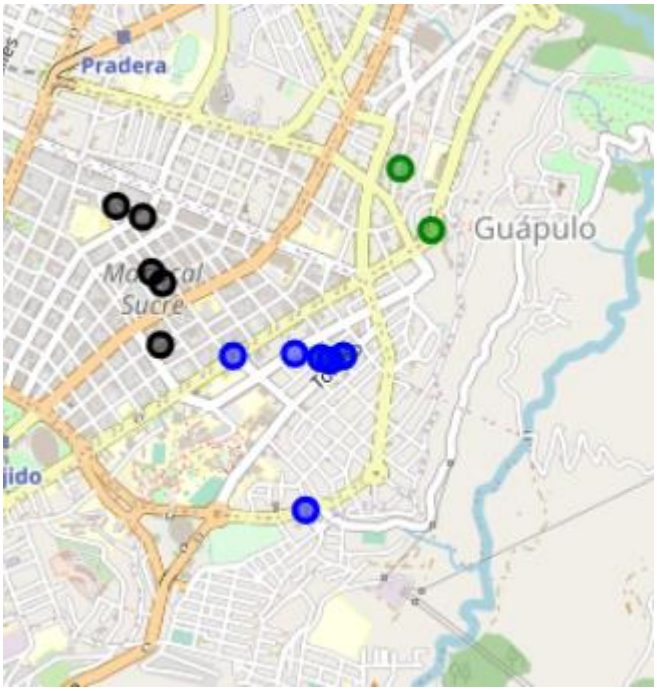

Figure 2

After locating these neighborhoods, I proceeded to analyze the other venues in order to locate possible locations which could act in synergy with the gastropub. The results are presented in the following table:

NEIGHBORHOOD	1ST MOST COMMON VENUE	2ND MOST COMMON VENUE	3RD MOST COMMON VENUE	4TH MOST COMMON VENUE	5TH MOST COMMON VENUE
GUAPULO	Hotel	Restaurant	Burger Joint	Café	Sushi Restaurant
LA FLORESTA	Italian Restaurant	Brewery	Sushi Restaurant	Wings Joint	Pub
MARISCAL SUCRE	Hotel	Café	Middle Eastern Restaurant	Coffee Shop	Asian Restaurant

Table 3

Discussion and analysis

As seen in table 2, although these are the top 3 neighborhoods, the existence of similar venues is still not that high, which could indicate that these areas are in development and not overcrowded with these kinds of businesses.

Although these 3 neighborhoods have the most bars and pubs, the data in this analysis is not enough to conclude if that the existing venues are successful or not. More data about these locations should be considered to predict the success of the gastro pub in case it is opened in any of these 3 Neighborhoods.

By analizing Figure 2, it is obvious that the top 3 neighborhoods are located very close to each other and the venues in them are only a few streets apart. Also, apart from Hotels, there are no other businesses or touristic hotspots which could attract people to the gastropub.

Conclusion

Based on the data, we can assume the following:

- The top 3 neighborhoods with the highest presence of bars, pubs, etc., are "Guapulo", "La floresta" and "Mariscal Sucre".
- The top 3 neighborhoods are close to each other and they are situated in the center of the city.
- All three locations appear to be very commercial and have many venues for leisure and not be overcrowded with similar businesses.
- There is no clear winner. The gastro pub can be opened in any of the three neighbourhoods, given the proximity between them and their similarities.