Where should David open his mobile shop in Bogota ?

Capstone Project – Final

Ghulam Hussain

Introduction to problem

- A customer, David, wants to open a new mobile shop in Bogotá, Colombia.
- Due to Bogota's high diversity and size he is confused where to open his shop
- Bogota has about 20 localities and he aims to find the best one
- ideally we should have a locatlity with high customers and lower competition

Data

To help David in his search we will need to access following data:

- The Localities of Bogotá, Colombia from Wikipedia:
https://es.wikipedia.org
/wiki/Anexo:Localidades_de_Bogot%C3%A1
- The coordinates (latitude, longitude) ot these Localities of Bogotá from
Open Street Map APIs
- From Foursquare we will need following venues data:
- the burger joint venues of the Localities
- the offices venues of the Localities
- the high schools venues of the Localities
- the universities venues of the Localities
- We will then leverage the data in order to determine which locality is
the most appropriate in order to locate the burger joint.

Methodology

- For each locality, all office, school, university and shops data
have been collected from Foursquare.
- Then for each locality, the sums of the office, school, university and shops were computed.
- For each of this 4 categories, a weight (or penalty) has been defined
according to what David considers the most important.
- Mobile Shops have been weighted with –1, since Paolo wants to avoid concurrence.
- Schools have been weighted with 1, since student are good customers.
- Universities have been weighted with 1.5, since students are good customers.
- Offices have been weighted with 2, since employees are even better customers.
- Note that the weights can be modified according to the importance of each
category.
- Lastly, a score was computed for each locality as the weighted sum of the
number of venues in each of the 4 categories (school, university, office, mobile shops).

Localities of Bogotá, Colombia
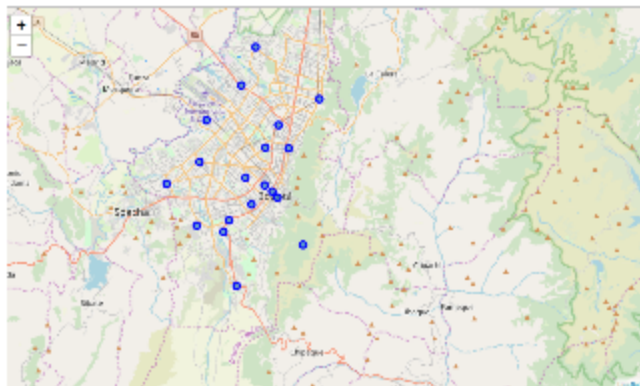
	Division	Latitude	Longitude
0	Usaquén	4.694969	-74.031093
1	Chapinero	4.645377	-74.061943
2	Santa Fe (Bogotá)	4.602204	-74.078837
3	San Cristóbal (Bogotá)	4.549094	-74.047819
4	Usme	4.508155	-74.114328
5	Tunjuelito	4.562204	-74.127647
6	Bosa (Bogotá)	4.609913	-74.184710
7	Kennedy (Bogotá)	4.631582	-74.151319
8	Fontibón	4.673327	-74.144732
9	Engativá	4.700695	-74.109643
10	Suba	4.746565	-74.095228
11	Barrios Unidos (Bogotá)	4.669091	-74.072251
12	Teusaquillo	4.646410	-74.085441
13	Los Mártires	4.608375	-74.086538
14	Antonio Nariño (Bogotá)	4.589429	-74.099568
15	Puente Aranda	4.616071	-74.105433
16	La Candelaria	4.596515	-74.073492
17	Rafael Uribe Uribe (Bogotá)	4.573354	-74.122064
18	Ciudad Bolívar (Bogotá)	4.560230	-74.154055
19	Sumapaz (Bogotá)	4.219417	-74.159705

Mobile shops in Bogota
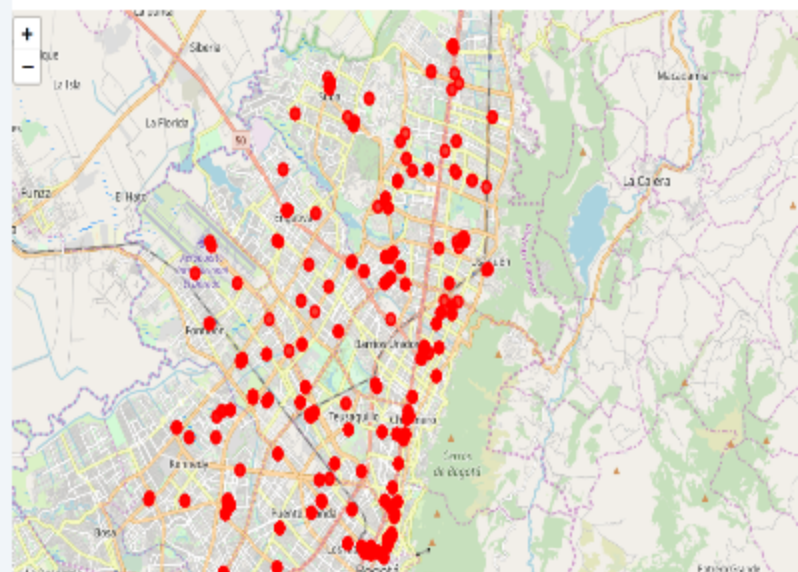
Different Categories plotted out including mobile shops in Bogots
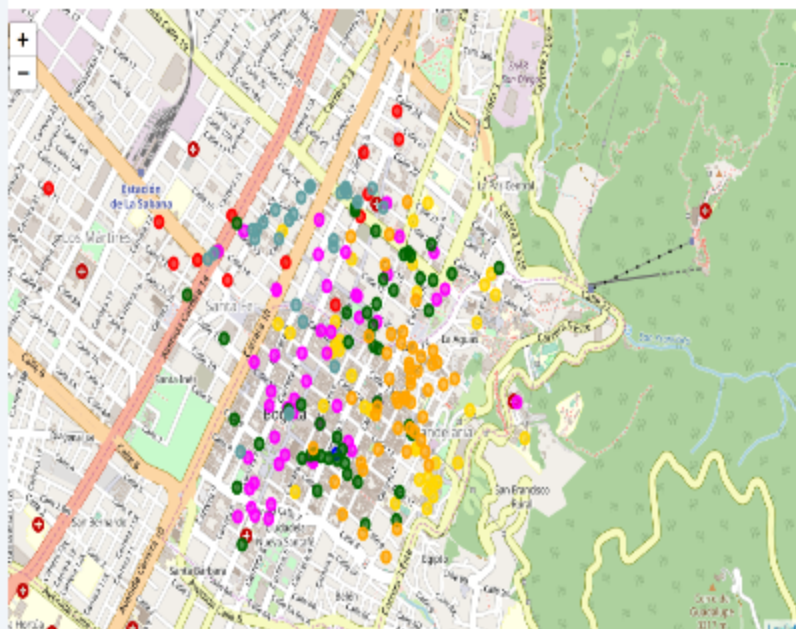
Score Sheet for All localities

	Division	Score
16	La Candelaria	355.5
2	Santa Fe (Bogotá)	348.0
1	Chapinero	337.5
0	Usaquén	253.5
12	Teusaquillo	184.0
11	Barrios Unidos (Bogotá)	169.0
13	Los Mártires	129.0
9	Engativá	110.0
8	Fontibón	108.0
14	Antonio Nariño (Bogotá)	105.5
15	Puente Aranda	92.0
17	Rafael Uribe Uribe (Bogotá)	85.0
10	Suba	84.5
5	Tunjuelito	84.5
6	Bosa (Bogotá)	77.0
4	Usme	69.0
7	Kennedy (Bogotá)	62.5
18	Ciudad Bolívar (Bogotá)	40.0
19	Sumapaz (Bogotá)	0.0
3	San Cristóbal (Bogotá)	-6.0

Conclusion

As it can be clearly seen through the score sheet that La Candelaria is leading the locatily map with more customers and lower competition
This can be made much more accurate if more and more categories are added for point scoring as in this project only 6 have been identified