



Italian Restaurant in São Paulo, Brasil

ANALYSIS ABOUT WHERE TO OPEN A SECOND UNIT OF AN ITALIAN RESTAURANT

AUTHOR: MATHEUS CAMMAROSANO HIDALGO

Introduction

- ▶ A client owns an Italian restaurant in the district of Pinheiros, São Paulo, Brasil and wants to open a second unit of the restaurant in the same city
- ▶ São Paulo is the most populous city of Brasil and 9th in the world
 - ▶ Huge socioeconomics differences between districts
 - ▶ District choice is vital to the restaurant success
 - ▶ Use of socioeconomics indexes to choose place
- ▶ Use of FourSquare API to obtain the amount of competition in each district

Data

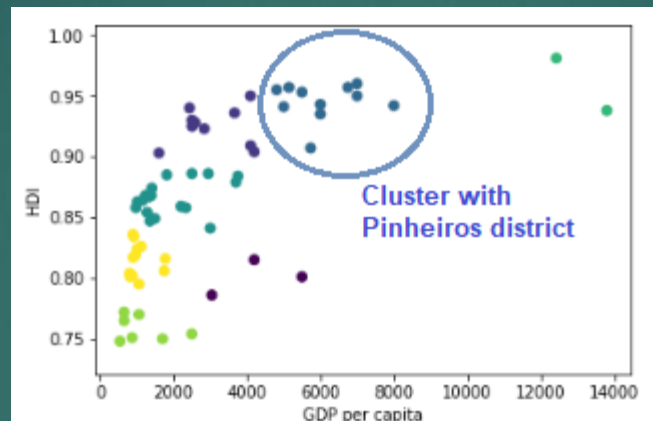
- ▶ Socioeconomics data of the district
 - ▶ GDP per capita (in Brazilian currency – real – US\$1.00 = R\$3.80)
 - ▶ HDI
 - ▶ Population
- ▶ Geographic data
 - ▶ Latitude
 - ▶ Longitude
 - ▶ Distance from the first unit of the restaurant
- ▶ FourSquare API
 - ▶ Amount of Italian restaurants and pizza places
 - ▶ Ratings of restaurants
 - ▶ Price tier of restaurants

Methodology

- ▶ Obtain district names, GDP per capita and HDI of each district
- ▶ Cluster districts according to the features above
- ▶ Create a dataframe with the district data in the same cluster as Pinheiros
- ▶ Get geospatial data and distance from Pinheiros
- ▶ Get venues data from FourSquare
- ▶ Choose the district with less competition and in case of more than one tied, choose the one with the highest population

Results

- Districts clustered by GDP per capita and HDI



- Resulting dataframe with geospatial data included

	District	GDP per capita	HDI	Latitude	Longitude	Distance
0	Vila Mariana (distrito de São Paulo)	7000.00	0.950	-23.5895	-46.6346	7.423629
1	Saúde (distrito de São Paulo)	8000.00	0.942	-23.6184	-46.6394	8.673263
2	Perdizes (distrito de São Paulo)	6746.86	0.957	-23.5358	-46.6678	4.961725
3	Itaim Bibi	5500.23	0.953	-23.5846	-46.6878	2.531746
4	Jardim Paulista (distrito de São Paulo)	5144.03	0.957	-23.5693	-46.6565	4.750260
5	Campo Belo (distrito de São Paulo)	6000.00	0.935	-23.6264	-46.6855	6.886571
6	Pinheiros (distrito de São Paulo)	7000.00	0.960	-23.5666	-46.7030	0.000000
7	Santo Amaro (distrito de São Paulo)	6000.00	0.943	-23.6537	-46.7067	9.695455
8	Lapa (distrito de São Paulo)	5000.00	0.941	-23.5227	-46.7104	4.940949
9	Alto de Pinheiros	4809.46	0.955	-23.5544	-46.7084	1.464441
10	Vila Leopoldina	5737.79	0.907	-23.5381	-46.7311	4.272997

Results

- Dataframe with FourSquare price tier and quantity of restaurants

	District	GDP per capita	HDI	Latitude	Longitude	Distance	Qty Italians	Price Tier
0	Vila Mariana (distrito de São Paulo)	7000.00	0.950	-23.5895	-46.6346	7.423629	2	2, 1
1	Saúde (distrito de São Paulo)	8000.00	0.942	-23.6184	-46.6394	8.673263	0	0
2	Perdizes (distrito de São Paulo)	6746.86	0.957	-23.5358	-46.6678	4.961725	2	2, 1
3	Itaim Bibi	5500.23	0.953	-23.5846	-46.6878	2.531746	2	3, 2
4	Jardim Paulista (distrito de São Paulo)	5144.03	0.957	-23.5693	-46.6565	4.750260	8	3, 3, 2, 2, 2, 2, 1, 3
5	Campo Belo (distrito de São Paulo)	6000.00	0.935	-23.6264	-46.6855	6.886571	1	4
6	Pinheiros (distrito de São Paulo)	7000.00	0.960	-23.5666	-46.7030	0.000000	1	1
7	Santo Amaro (distrito de São Paulo)	6000.00	0.943	-23.6537	-46.7067	9.695455	0	0
8	Lapa (distrito de São Paulo)	5000.00	0.941	-23.5227	-46.7104	4.940949	3	3, 2, 1
9	Alto de Pinheiros	4809.46	0.955	-23.5544	-46.7084	1.464441	2	3, 1
10	Vila Leopoldina	5737.79	0.907	-23.5381	-46.7311	4.272997	0	0

- Saúde, Santo Amaro and Vila Leopoldina have no competition. The first two are farther from Pinheiros

Results

► Dataframe with population

	District	GDP per capita	HDI	Latitude	Longitude	Distance	Qty Italians	Price Tier	Population
0	Vila Mariana	7000.00	0.950	-23.5895	-46.6346	7.423629	2	2, 1	112952
1	Saúde	8000.00	0.942	-23.6184	-46.6394	8.673263	0	0	111308
2	Perdizes	6746.86	0.957	-23.5358	-46.6678	4.961725	2	2, 1	97706
3	Itaim Bibi	5500.23	0.953	-23.5846	-46.6878	2.531746	2	3, 2	80501
4	Jardim Paulista	5144.03	0.957	-23.5693	-46.6565	4.750260	8	3, 3, 2, 2, 2, 1, 3	76033
5	Campo Belo	6000.00	0.935	-23.6264	-46.6855	6.886571	1	4	62530
6	Pinheiros	7000.00	0.960	-23.5666	-46.7030	0.000000	1	1	61711
7	Santo Amaro	6000.00	0.943	-23.6537	-46.7067	9.695455	0	0	60373
8	Lapa	5000.00	0.941	-23.5227	-46.7104	4.940949	3	3, 2, 1	58924
9	Alto de Pinheiros	4809.46	0.955	-23.5544	-46.7084	1.464441	2	3, 1	39477
10	Vila Leopoldina	5737.79	0.907	-23.5381	-46.7311	4.272997	0	0	30188

- Saúde's population is the biggest one of the 3 main candidates. Therefore, this is the best place to open the restaurant, according to this data analysis

Discussion

- ▶ Saúde
 - ▶ Has similar socioeconomics indicators than Pinheiros
 - ▶ Is far from Pinheiros
 - ▶ Has no competition for Italian/pizza restaurants
 - ▶ Is a populous district
- ▶ Santo Amaro is the second best option , but it has 54% of the population of Saúde
- ▶ Vila Leopoldina is the third option, but its population is 27% of Saúde and is not that far from Pinheiros

Conclusions

- ▶ Saúde is the most indicated district to open the second unit of the restaurant
- ▶ Santo Amaro is the second best option
- ▶ Vila Leopoldina is the third