



FINDING THE BEST PLACE TO OPEN A BAR IN VITÓRIA

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Finding the best place to open a bar in Vitória

What's the best place to open a bar in the city?

How can we evaluate this?

Data acquisition and cleaning

- There are three sources of our data:

- **Foursquare**

- **“Vitória Bairro a Bairro – 2013” report**

(http://legado.vitoria.es.gov.br/regionais/geral/publicacoes/Vitoria_bairro_bairro/Vit%C3%B3ria_bairro_%20a_bairro.pdf)

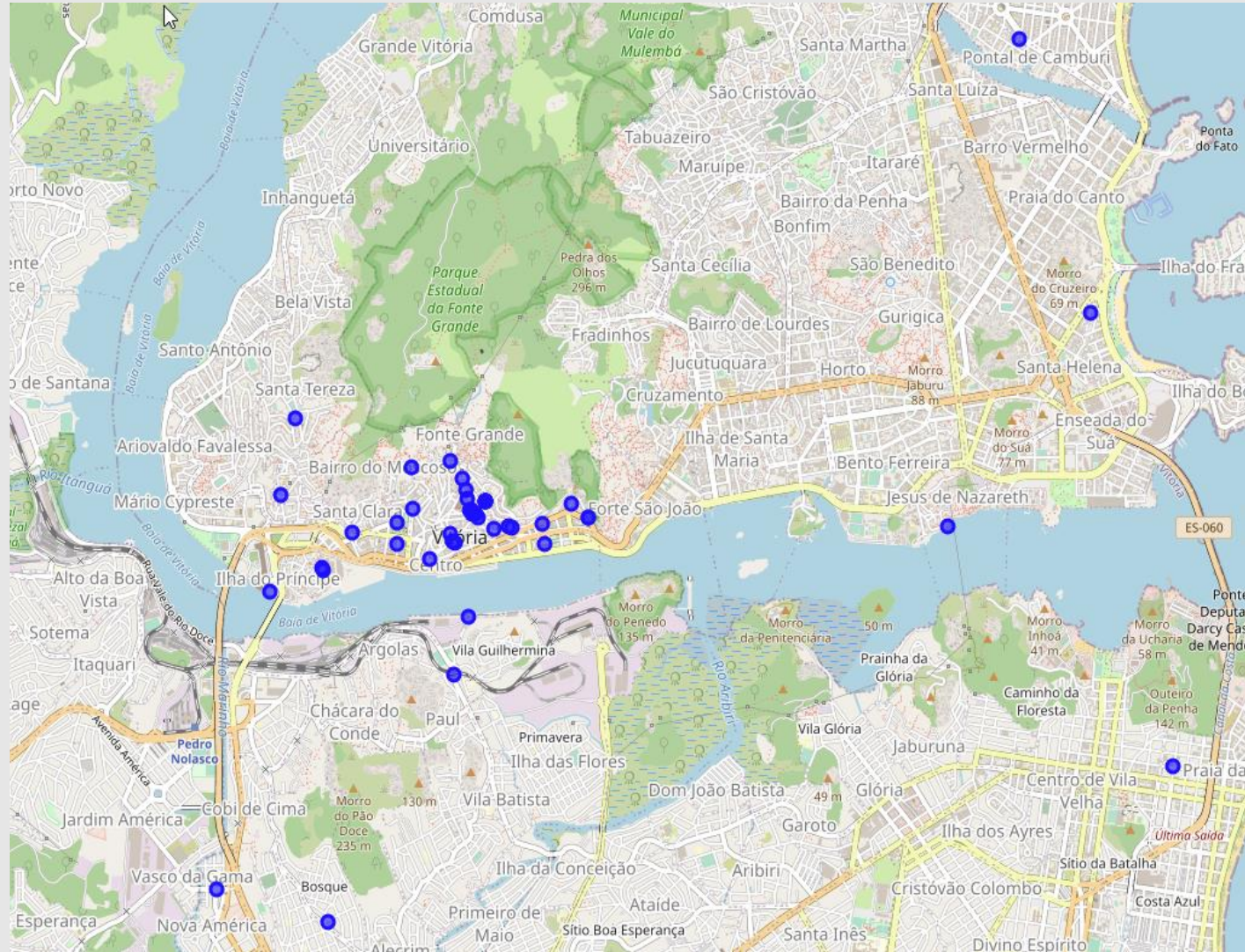
- **“Administrative regions – Vitória” report**

(http://legado.vitoria.es.gov.br/regionais/geral/dados/reg_adm ger.pdf)

How the sources will be used?

- **Foursquare**
- The Foursquare will be responsible to show others main bars in Vitória.
-
- **“Vitória Bairro a Bairro – 2013” report**
- This report will provide some informations as Male and Female concentration per region, age range and income class.
-
- **“Administrative regions – Vitória” report**
- Vitória is divided in seven administrative regions. This information will be acquired from this report.

How many bars are there?



Getting the values

```
'country': 'Brasil',  
'distance': 1446,  
'formattedAddress': ['Brasil'],  
'labeledLatLngs': [{'label': 'display',  
  'lat': -20.312522725912157,  
  'lng': -40.3493830273724}],  
'lat': -20.312522725912157,  
'lng': -40.3493830273724},  
'name': 'Bar do Zeca',  
'referralId': 'v-1604537566'}}}]}
```

```
[53] # assign relevant part of JSON to venues  
venues = results['response']['venues']
```

```
# tranform venues into a dataframe  
dataframe = json_normalize(venues)  
dataframe
```

```
/usr/local/lib/python3.6/dist-packages/ipykernel_launcher.py:5: FutureWarning: pandas.io.json.json_normalize is deprecated, use pandas.json_normalize instead  
.....
```

	id	name	categories	referralId	hasPerk	location.address	location.lat	location.lng	location.labeledLatLngs	location.distance	location.c
0	4ee2b58561aff5a340194235	Buery Bar	{'id': '4bf58dd8d48988d1c7941735', 'name': 'S...	v- 1604537566	False	Rua 7	-20.318546	-40.336738	[{'label': 'display', 'lat': -20.3185460006729...	455	Bl

Treating data:

```
[88] vitoria_data = pd.read_csv("vitoria.csv")
```

vitoria_data

☐

	Homens	Mulheres	0-14 anos	15-24 anos	25-64 anos	acima de 65	Ate 1/2 salario minimo	Mais de 1/2 a salario minimo	Mais de 1 a 2 salarios minimos	Mais de 2 a 5 salarios minimos	Mais de 5 a 10 salarios minimos	Mais de 10 a 20 salarios minimos	Mais de 20 salarios minimos	Sem rendimento
Centro	4416	5422	1274	1441	5673	1450	8	116	340	1035	1155	772	262	79
Santo Antonio	343	444	174	134	407	72	1	26	46	89	57	13	2	7
Bento Ferreira/Jucutuquara	2741	2904	833	799	3292	645	4	32	80	320	532	604	361	37
Maruípe	977	1054	420	389	1098	124	2	64	161	274	109	8	1	33
Praia do Canto	2634	2995	851	849	3448	481	2	14	40	169	385	606	744	48
Continental	599	748	180	230	737	200	2	14	30	119	136	86	30	9
Sao Pedro	438	456	228	178	443	45	2	38	84	90	13	0	0	56

```
[105] data.sort_values(by='People',ascending=False)
```

	People	Teen	Adult	Older	Low	Medium	High
Centro	9838	1274	7114	1450	124	1375	2189
Bento Ferreira/Jucutuquara	5645	833	4091	645	36	400	1497
Praia do Canto	5629	851	4297	481	16	209	1735
Maruípe	2031	420	1487	124	66	435	118
Continental	1347	180	967	200	16	149	252
Sao Pedro	894	228	621	45	40	174	13
Santo Antonio	787	174	541	72	27	135	72

Sorting Values:

```
[106] data.sort_values(by='High',ascending=False)
```

	People	Teen	Adult	Older	Low	Medium	High
Centro	9838	1274	7114	1450	124	1375	2189
Praia do Canto	5629	851	4297	481	16	209	1735
Bento Ferreira/Jucutuquara	5645	833	4091	645	36	400	1497
Continental	1347	180	967	200	16	149	252
Maruípe	2031	420	1487	124	66	435	118
Santo Antonio	787	174	541	72	27	135	72
Sao Pedro	894	228	621	45	40	174	13

```
[107] data["Clus_km"] = labels  
data
```

```
↳ /usr/local/lib/python3.6/dist-packages/ipykernel_launcher.py:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row_indexer,col_indexer] = value instead
```

See the caveats in the documentation: <https://pandas.pydata.org/pandas-docs/stable/10min.html#copy-on-write>
"""Entry point for launching an IPython kernel.

	People	Teen	Adult	Older	Low	Medium	High	Clus_km
Centro	9838	1274	7114	1450	124	1375	2189	0
Santo Antonio	787	174	541	72	27	135	72	1
Bento Ferreira/Jucutuquara	5645	833	4091	645	36	400	1497	2
Maruípe	2031	420	1487	124	66	435	118	1
Praia do Canto	5629	851	4297	481	16	209	1735	2
Continental	1347	180	967	200	16	149	252	1
Sao Pedro	894	228	621	45	40	174	13	1

Results:

- Crossing with data from Foursquare it's possible to see that there is no significant places there. Due this, the best place to open a bar in Vitória, according to the data available is "Praia do Canto" that has the highest income.

Questions?