Capstone Project - The Battle of Neighborhoods (Week 2)
Traveling tips to touristic agencies

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- The main ideia of this project is to explore the recommended and trending venues of specific cities to sell traveling packages to stakeholders that owns travel agencies
- According to a brazillian survey tourism has increased by 10% in the last year
- Rio de Janeiro is a very popular city, full of brazilian culture, wonderfull beaches and good people
- So, the idea is to explore venues around the 10th coolest neighbourhoods in Rio de Janeiro using the foursquare API

Data

We use geolocator to get the coordinates from each of the ten coolest neighbourhoods in Rio de Janeiro

|	Neighbourhood	latitude	longitude
0	Copacabana	-22.971964	-43.184343
1	Santa Teresa	-22.921399	-43.188214
2	Ipanema	-22.983956	-43.202216
3	Lapa	-22.913600	-43.181700
4	Leblon	-22.983556	-43.224938
5	Jardim Botanico	-22.968385	-43.228694
6	Botafogo	-22.948845	-43.179829
7	Urca	-22.952858	-43.159934
8	Lagoa	-22.976330	-43.209660
9	Centro	-22.907000	-43.181900

Map

Here we can see the map of Rio de Janeiro generated with folium. Each black marker show one of the chosen neighbourhoods.
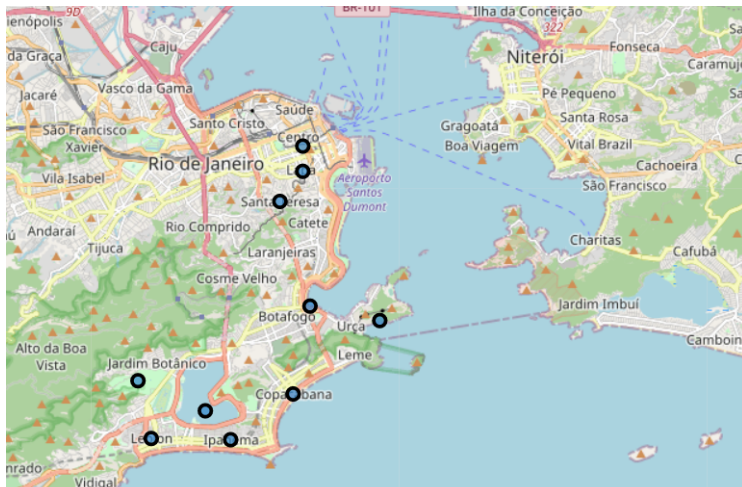
Analyzing the data

- There are 153 uniques venues categories
- The most commom are: bars, brazilian restaurants, hotels, hostels and coffee shops
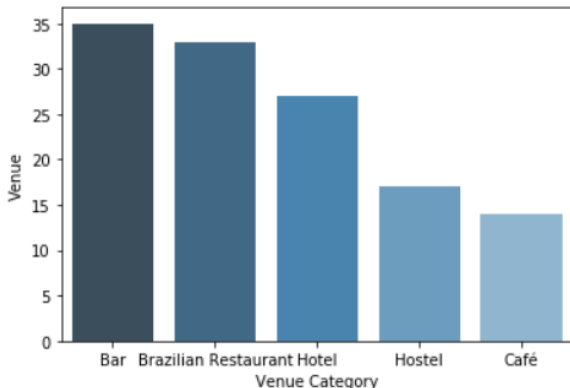
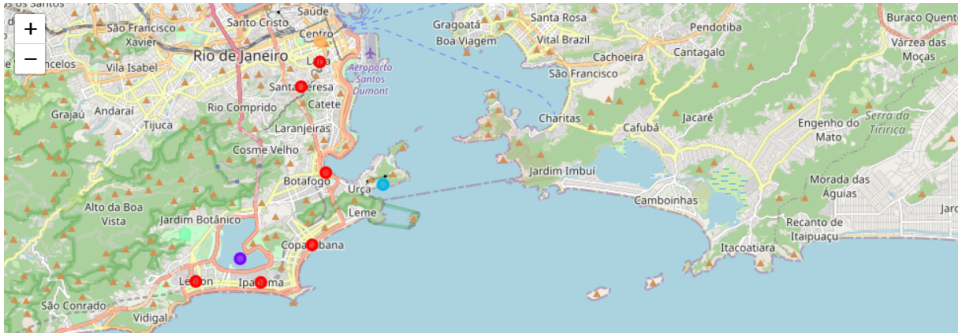- The neighbourhoods with most venues are in Copacabana, Ipanema and Leblon

|:

	Neighbourhood	Venue
0	Botafogo	45
1	Centro	92
2	Copacabana	100
3	Ipanema	100
4	Jardim Botanico	23
5	Lagoa	4
6	Lapa	70
7	Leblon	100
8	Santa Teresa	49
9	Urca	14

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- Applying k-means to cluster the neighbourhoods, the result was as one can see in this map

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Results and Discussion

- The first cluster (red) is formed with Copacabana, Santa Teresa, Ipanema, Lapa, Leblon and Botafogo neighbourhoods, this area is recommended to night life and taste local food, because it has a lot of bars, brazilian restaurants and hotels
- The second (purple) and fourth (light green) clusters are formed with Lagoa and Jardim Botânico respectelively, and is great to do outdoor activities in contact with nature
- The third cluster (light blue) is formed with Urca and it has trails as most commom venue, so its possible to travel to any venues of the city
- The fifth cluster is composed by the down town (orange) that also has a night life, but is has a lot of coffee shops

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Analyzing the data

- As the trending endpoint didnt work in this case, the search endpoint was used to recommend coffee shops and brazilian restaurants with a 500 meters radio from each nerighbourhood, these venues are shown in the map
- Red markers are restaurants
- Blue markers are coffee shops

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- For this last analysis, the foursquare API shows that Rio de Janeiro has a lot of local food and coffee shops located only in Lapa and Centro neighbourhoods
- Others neighbourhoods provides another atractions
- These two search queries were explored to recommend brazilian culture food restaurants and taste coffee, because they are a greater exporter of this commodity
- These queries were created because the trending endpoint did not work

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Conclusion

- The main ideia of this project was to get as a result more touristic spots as the Cristo redentor and the famous Copacabana beach using the trending endpoint
- In order to overcome this issue I chose explore the recommend and more frequent venues in the most coolest neighbourhoods in Rio
- Foursquare is a good API to explore new venues in unknown towns
- Probably with the pay account one could discover more cool things to do

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Thank you for your time :)