The geograpical coordinate of Miami, USA are 25.7742658, -80.1936589.

[16]:

Miami-Dade , Population 2,662,874.0

FINAL ASSIGNMENT

JOHNNIE PEREZ

ABSTRACT

This document provides the details of my final project for the assignment to the Certificate program – Coursera Capstone - week 4

OCT-19

Table of Contents

A.- PURPOSE

This document provides the details of my final project for the assignment to the Certificate program – Coursera Capstone - week 4

B.- INTRODUCTION

A small and dreamer investor asked me about the feasibility to open a crafted coffee and bakery store, he has would like to know which are the main cities (based on density) in South Florida in which you could open your store, but you also want to know about his possible competitors like coffee shops similar to Starbucks are present in the area in order to know if that kind of business is popular in those areas.

My intention as Data Science is to collect and provide data-driven facts and supplement and support his decision

This notebook will try to show and provide the pieces of information about the areas in which he could open his coffeehouse and for this demonstration

C.- DATA SOURCES

To this project, I will use the data of FourSquare and Wikipedia as main sources.

I will use the FourSquare API to explore neighborhoods, venues and so on to get information about coffeehouse chain shops like Starbucks and use it to group the neighborhoods into clusters. The following information is retrieved on the query:

- Latitude and Longitude
- Category Name
- Venue Name
- Address

On Wikipedia, I will use the list of counties in Florida to get the information and discover which are the first three counties which more population. The following information is retrieved on the query:

- County
- Population
- Density Area

D.- LIBRARIES

Requests: library for requests
Lxml.html: ibrary for handle html from wiki
BeautifulSoup: library for scraping web
Numpy: library to handle data in a vector
Pandas: library for data analysis
Random: library for random number generation
Matplotlib: plotting library
Sklearn: import k-means from clustering stage
Folium: map rendering library
Json: library to handle JSON files

Links to GitHub File

Githhub

In case of some issues you can use nbviewer

Nbviewer

E.- REPORTING RESULTS

Base on the available data provided by Wikipedia and the free developer FourSquare api version the data you can see the amount of coffee shops available in the three most populous and densely populated counties in South Florida:
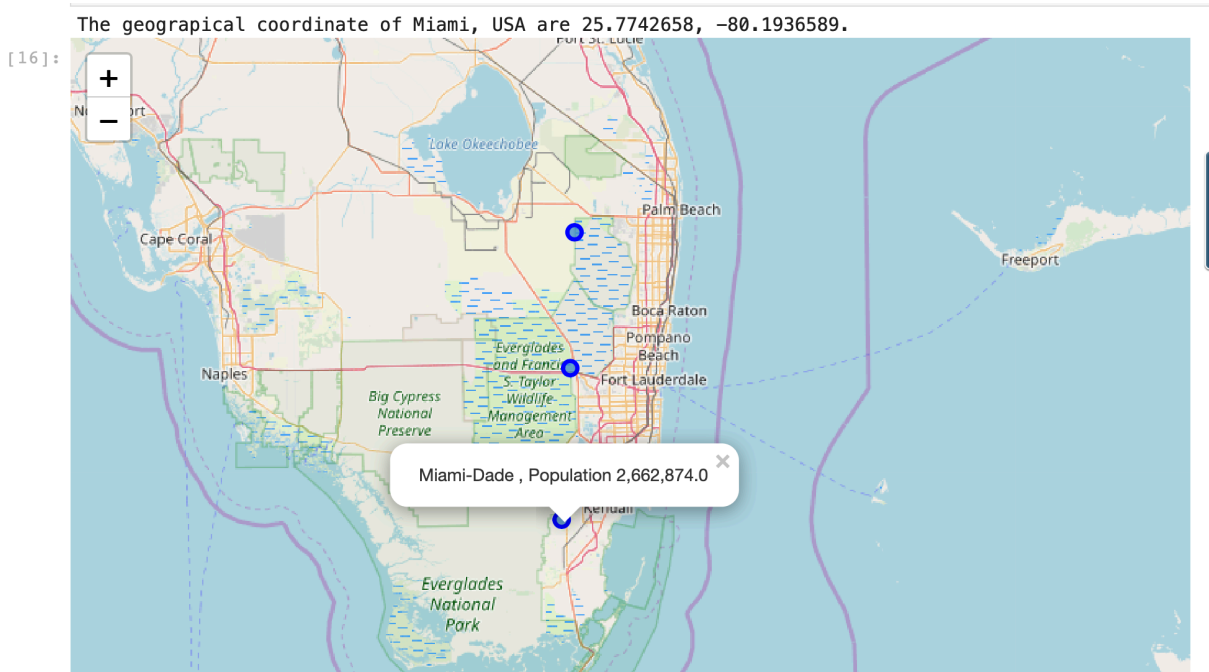
County DataSet Information

	County	Density	Population	Lat	Lon
43	Miami-Dade	131350.0	2662874.0	25.636425	-80.498947
6	Broward	147243.0	1780172.0	26.159807	-80.462364
50	Palm Beach	65643.0	1335187.0	26.627980	-80.449417

Counties Population (Wikipedia)	
Miami-Dade	2,662,874
Broward	1,780,172
Palm Beach	1,335,187

Main Counties Map

The geograpical coordinate of Miami, USA are 25.7742658, -80.1936589.

[16]:
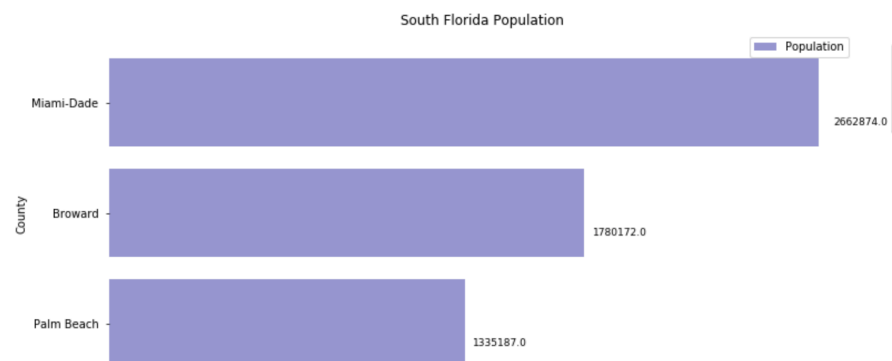
Coffee Shop DataSet Information

[21]:

	Unnamed: 0	County	ID	Name	Category	lat	lng	Address
43	43	Miami-Dade	4b23b959f964a520975824e3	Starbucks	Coffee Shop	25.656082	-80.396311	12512 SW 120th St
45	45	Miami-Dade	4b491b4af964a5201e6626e3	Starbucks	Coffee Shop	25.684782	-80.415240	13604 N Kendall Dr
49	49	Miami-Dade	4ba68762f964a520595b39e3	Starbucks	Coffee Shop	25.684432	-80.456718	16305 SW 88th St
87	87	Miami-Dade	4b43fa59f964a52089ef25e3	Starbucks	Coffee Shop	25.729099	-80.428006	14401 SW 42nd Street
103	103	Broward	4aca6578f964a520bec120e3	Starbucks	Coffee Shop	26.118198	-80.392763	310 Indian Trce
135	135	Broward	4b989284f964a520544735e3	Panna express	Coffee Shop	26.085816	-80.370859	2620 Weston Rd
178	178	Broward	4b40a037f964a52067b925e3	Starbucks	Coffee Shop	26.065390	-80.363010	4503 Weston Rd
219	219	Palm Beach	5315dd9c498e1fd749743356	Sub Culture Coffee	Coffee Shop	26.713478	-80.055814	509 Clematis St
249	249	Palm Beach	4b33a3c8f964a520f01b25e3	Starbucks	Coffee Shop	26.705902	-80.079880	1870 Okeechobee Blvd

Coffee Shop (Foursquare)	
Miami-Dade	5
Broward	3
Palm Beach	2
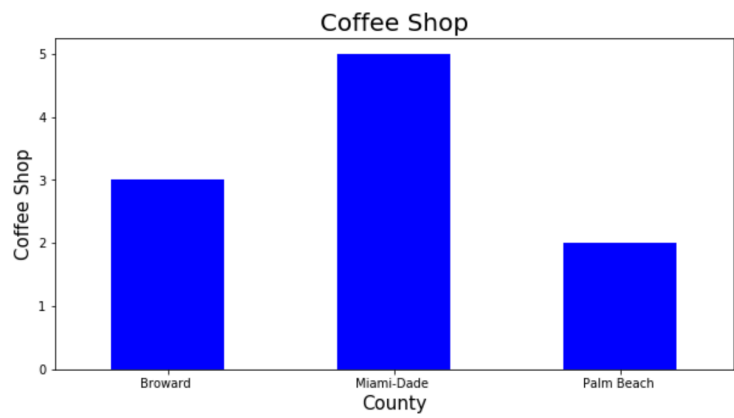
Coffee Shop Map
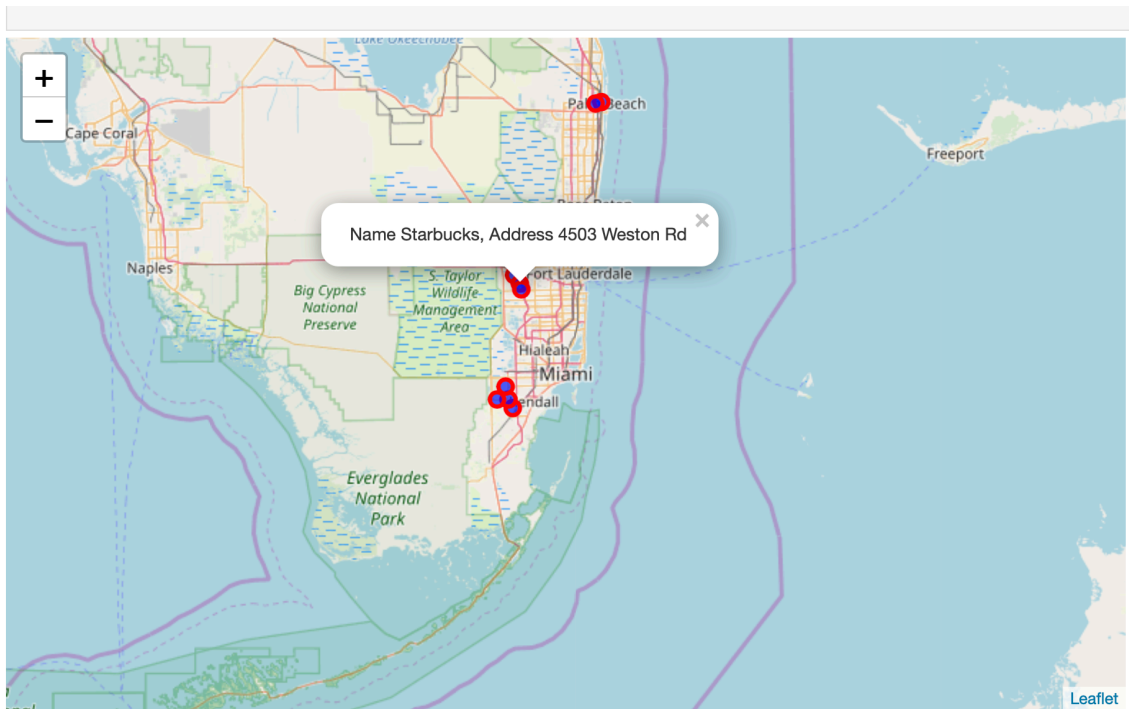
F.- CONCLUSION

My recommendation is to select the street with more visibility and open the cafeteria in Miami-Dade County, it is also recommended to make a more in-depth study on the consumption of coffee and cakes in the area, taking into account that Foursquare data is limited a certain number of files, in that way it is necessary get a better information from external databases.