Data Science Capstone

Finding the ideal spot for a new restaurant in Miami, Florida.

Background

- Miami is a major center and leader in finance, commerce, culture, media, entertainment, the arts, and international trade. The metro area is by far the largest urban economy in Florida and the 12th largest in the United States.
- Miami is the sixth most densely populated major city in the United States.
- Miami is split roughly into north, south, west and Downtown areas.
- The cuisine of Miami is a reflection of its diverse population, with a heavy influence from Caribbean and Latin American cuisine. By combining the two with American cuisine, it has spawned a unique South Florida style of cooking known as Floribbean cuisine.

Business Problem

- A group of investors wants to open a number of fine dining restaurants in the United States of America. New York and Miami are the cities they are mostly interested in. New York's current market was analyzed before so now its time for Miami, Florida.
- By using available data and taking into consideration multiple parameters for every neighborhood in Miami, we will make recommendations to the investors about the possible ideal spots for their restaurant and its suggested cuisine .
- In general, anyone interested in opening a new restaurant in Miami should be interested ,because he could get very useful information about Miami's current situation(restaurants cuisine and location, population demographics). Furthermore chefs could use our data to learn about restaurants' cuisine and as a result the skills they would probably need to land a job in Miami.

Data

- Miami neighborhoods information from Wikipedia(names, population).
- Foursquare location data in order to find nearby venues, and cluster neighborhoods together(venue name, coordinates and category). Data will be visualized into maps using folium.
- Visualized demographic data(bar charts, box plots etc.) from various sources about Miami like:
  - Age
  - Average income
  - Race

Detailed information about our data and the way we use them, will be available on next week's presentation after an extensive search for online available data.

Sample Data

- Wikipedia data

	Neighborhood	Denonym	Population	Population/sqkm	Sub	Coordinates
0	None	None	None	None	None	None
1	Allapattah		54,289	4,401		25.815,-80.224
2	Arts & Entertainment District		11,033	7,948		25.799,-80.190
3	Brickell	Brickellite	31,759	14,541	West Brickell	25.758,-80.193
4	Buena Vista		9,058	3,540	Buena Vista East Historic District and Design ...	25.813,-80.192
5	Coconut Grove	Grovite	20,076	3,091	Center Grove, Northeast Coconut Grove, Southwe...	25.712,-80.257

- Foursquare data

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Allapattah	25.815	-80.224	Three Fingers Liquor & Lounge	25.815408	-80.224361	Lounge
1	Allapattah	25.815	-80.224	Ross	25.815820	-80.221753	Department Store
2	Allapattah	25.815	-80.224	Showtime Boxing Gym	25.812364	-80.224504	Boxing Gym
3	Allapattah	25.815	-80.224	Damage Ink Screen Printing	25.811107	-80.223729	Print Shop
4	Arts & Entertainment District	25.799	-80.190	Bunnie Cakes	25.799544	-80.190953	Cupcake Shop

Sample data

- Earnings data

	Neighborhood	Earnings
0	Allapattah	25.700
1	Arts & Entairteinment District	70.597
2	Brickell	44.154
3	Buena Vista	33.666
4	Coconut Grove	77.685
5	Coral Way	41.603
6	Design District	53.203

- Demographic data scraped from wikipedia

	Profile	2010
1	White (Includes White Hispanics)	72.6%
2	Hispanics	70.0%
3	Black or African American	19.2%
4	Non-Hispanic White	11.9%
5	Other	4.2%
6	Asian	1.0%