Capstone Project - IBM Data Science Professional
Certificate on Coursera

The Battle of Neighborhoods - Week 1

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Contents

1 Introduction

The opening of a new business is a matter which requires several considerations - from findig finacing to working the logistics of hiring staff and buying new equipment. This project will focus on one of these aspects, namely how to choose the right location, in this case, for a new Italian restaurant in the city of Miami. Making use of data, one can make an educated decision in order to maximize the chances of a successful outcome.

This report and its findings aims at to aid its main stakeholders, amongst who we could point businessmen in the city of Miami and its vicinities; Italian cuisine chefs; and the Italian community of Miami.

2 Data

The data used in this project come from:

- **Foursquare** - used to retrieve the venues in the city of Miami. With the Foursquare data, one can identify which are the most popular venues in Miami, and observe the popularity of Italian restaurants in each neighborhood.

- **Wikipedia** - https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Miami - used to retrieve the list of neighborhoods in Miami in Miami-Dade County, Florida, United States, together with its coordinates. This data is used together with the Foursquare data to understand how Italian restaurants are distributed in the neighborhoods of Miami. The dataframe scraped from the Wikipedia page can be seen in Fig. 1.

```
In [60]:  ▶  df = pd.read_html("https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Miami", header=0)[0]

In [61]:  ▶  df.head()
```

Out[61]:

	Neighborhood	Demonym	Population2010	Population/Km²	Sub-neighborhoods	Coordinates
0	Allapattah	NaN	54289	4401	NaN	25.815-80.224
1	Arts & Entertainment District	NaN	11033	7948	NaN	25.799-80.190
2	Brickell	Brickellite	31759	14541	West Brickell	25.758-80.193
3	Buena Vista	NaN	9058	3540	Buena Vista East Historic District and Design ...	25.813-80.192
4	Coconut Grove	Grovite	20076	3091	Center Grove, Northeast Coconut Grove, Southwe...	25.712-80.257

Figure 1: Dataframe scraped from Wikipedia