

# Capstone Project: The Battle of Neighborhoods

## MOVING TO ATLANTA, GEORGIA. ANALYSIS OF THE JOURNEY.

### Data Section:

The following data was considered in the analysis:

#### 1.- Cities and Counties Data:

I found the list of Cities and Counties from Wikipedia : [https://en.wikipedia.org/wiki/List\\_of\\_municipalities\\_in\\_Georgia\\_\(U.S.\\_state\)](https://en.wikipedia.org/wiki/List_of_municipalities_in_Georgia_(U.S._state)) . I will scrapped the data from the wiki, then cleaned and reduced to be applied creating choropleth map .

State capital and county seat‡								
Name	Type <sup>[1]</sup>	County <sup>[1]</sup>	Population (2010) <sup>[1]</sup>	Population (2000) <sup>[1]</sup>	Change (%)	Land area (2010) <sup>[1]</sup>		Population density
						sq mi	km <sup>2</sup>	
Abbeville †	City	Wilcox	2,908	2,298	Sort ascending +26.5%	3.06	7.9	950.3/sq mi (366.9/km <sup>2</sup> )
Acworth	City	Cobb	20,425	13,422	+52.2%	8.24	21.3	2,478.8/sq mi (957.1/km <sup>2</sup> )
Adairsville	City	Bartow	4,648	2,542	+82.8%	9.11	23.6	510.2/sq mi (197.0/km <sup>2</sup> )
Adel †	City	Cook	5,334	5,307	+0.5%	8.06	20.9	661.8/sq mi (255.5/km <sup>2</sup> )
Adrian	City	Emanuel, Johnson	664	579	+14.7%	1.37	3.5	484.7/sq mi (187.1/km <sup>2</sup> )
Ailey	City	Montgomery	432	394	+9.6%	2.01	5.2	214.9/sq mi (83.0/km <sup>2</sup> )

In this case it is just an example of the result of the dataset that will be reduced.

```
.0]: df1.head()
```

```
at[10]:
```

	City	County	Population	Land
0	Baxley	Appling	4400	8.38
1	Graham	Appling	291	1.74
2	Surrency	Appling	201	0.77
3	Pearson	Atkinson	2117	3.35
4	Willacoochee	Atkinson	1391	3.82

## 2.- Coordinates for Georgia Cities:

I created own table with Coordinates (Latitude and Longitude) using Google Maps. That info will be merged with data from Cities and Counties. [2]

In this case , since the Geocoder is not allowing to retrieve information related coordinates , we wil create extract coordinates directly using Google Map.

The following example will show how will be the dataset to use.

```
: df2.head()
```

```
:[5]:
```

	City	Latitude	Longitude	Google URL
0	Baxley	31.7632088	-82.420583	<a href="https://www.google.com/maps/place/Baxley,+Geor...">https://www.google.com/maps/place/Baxley,+Geor...</a>
1	Graham	31.8283134	-82.519823	<a href="https://www.google.com/maps/place/Graham,+Geor...">https://www.google.com/maps/place/Graham,+Geor...</a>
2	Surrency	31.7216402	-82.207543	<a href="https://www.google.com/maps/place/Surrency,+Ge...">https://www.google.com/maps/place/Surrency,+Ge...</a>
3	Pearson	31.2975054	-82.871033	<a href="https://www.google.com/maps/place/Pearson,+Geo...">https://www.google.com/maps/place/Pearson,+Geo...</a>
4	Willacoochee	31.3232856	-82.989815	<a href="https://www.google.com/maps/place/S+Atkinson+B...">https://www.google.com/maps/place/S+Atkinson+B...</a>

## 3.- Foursquare API Data:

We will use “**Foursquare API**” to extract data from the most common venues of each city in Atlanta. It will help us to provide the options in the comparative analysis. [3]

In this case we will use the credentials already created to consume the venues.

Below an example of the credentials to be used :

#### Define Foursquare Credentials and Version

```
: ▶ CLIENT_ID = 'GGC3K0AGI0AZI2UUM1NGQBNQPSNJ44RREQYWHTJ00FANW443' # your Foursquare ID
CLIENT_SECRET = '2TGU23WQQKEITSG1011ZFXSG0DENDH5QCORZCXB FUMOVRRLC' # your Foursquare Secret
VERSION = '20180605' # Foursquare API version

print('Your credentials:')
print('CLIENT_ID: ' + CLIENT_ID)
print('CLIENT_SECRET:' + CLIENT_SECRET)
```

```
Your credentials:
CLIENT_ID: GGC3K0AGI0AZI2UUM1NGQBNQPSNJ44RREQYWHTJ00FANW443
CLIENT_SECRET: 2TGU23WQQKEITSG1011ZFXSG0DENDH5QCORZCXB FUMOVRRLC
```

#### 4.-School, Colleges, University ranking and price of house rental Data

I will create own tables for School, Colleges, University Ranking extracting from different websites It will help us to provide ranking analysis. [4]

There are not too many public datas related to Education and rental prices of apartments. Therefore I will create own tables to collect that information for our analysis.

Here an example of the data.

```
▶ df3.head()
```

6]:

	School	City	Average Standard Score (2019)	Rank (2018)
0	Allatoona High School	Cobb County	80.5	33.0
1	Alpharetta High School	Fulton County	87.8	19.0
2	Arabia Mountain High School - Academy of Engin...	DeKalb County	64.0	87.0
3	Archer High School	Gwinnett County	72.7	46.0
4	Bleckley County High School	Bleckley County	71.1	50.0

```
: ▶ df4.head()
```

7]:

	City	Average Rent October
0	Acworth, GA	\$1,121
1	Alpharetta, GA	\$1,488
2	Atlanta, GA	\$1,475
3	Augusta, GA	\$850
4	Austell, GA	\$1,027

```
df5.head()
```

```
3]:
```

	University	City	University.1	Rank
0	Georgia Institute of Technology	Atlanta	Georgia Institute of Technology	1
1	Georgia State University	Atlanta	Georgia State University	2
2	University of Georgia	Athens	University of Georgia	3
3	Emory University	Atlanta	Emory University	4
4	Kennesaw State University	Kennesaw	Kennesaw State University	5

## References:

- [1] Georgia — Wikipedia : [https://en.wikipedia.org/wiki/Georgia\\_\(U.S.\\_state\)](https://en.wikipedia.org/wiki/Georgia_(U.S._state))
- [2] Google Map : <https://www.google.com/maps>
- [3] Forsquare API : <https://developer.foursquare.com/>
- [4] Schools, University, Rental Houses websites :
  - <https://www.schooldigger.com/go/GA/schoolrank.aspx?level=3#>
  - <https://www.rentcafe.com/blog/rental-market/local-rent-reports/georgia-rent-report-october-2019/>
  - <https://www.4icu.org/us/georgia/>