

# The Battle of Neighborhood



ATLANTA, GA IMAGE FROM CERTAPET.COM

## Data:

To solve this problem, below data will be used:

- List of Atlanta Neighborhood, including Neighborhood name, population  
[https://en.wikipedia.org/wiki/Table\\_of\\_Atlanta\\_neighborhoods\\_by\\_population](https://en.wikipedia.org/wiki/Table_of_Atlanta_neighborhoods_by_population)

Neighborhood	Population (2010)
Adair Park	1,331
Adams Park	1,763
Adamsville	2,403
Almond Park	1,020
Ansley Park	2,277

- Latitude and Longitude of these neighborhood (*Python Geopy* )

The neighborhood name from the first step is going to be converted to latitude and longitude by using Python Geopy library. See example below:

	Neighborhood	Latitude	Longitude
0	Adair Park, Atlanta	33.724974	-84.411429
1	Adams Park, Atlanta	33.712052	-84.456873
2	Adamsville, Atlanta	33.759274	-84.505209
3	Ansley Park, Atlanta	33.794550	-84.376315
4	Ardmore, Atlanta	33.806282	-84.400028
5	Argonne Forest, Atlanta	33.776905	-84.377668

- Venue data related to these neighborhood ( *Foursquare API* )

We will leverage the location data from Foursquare, including Venue name, location and category. See example of data below

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Adair Park, Atlanta	33.724974	-84.411429	Nick's Food To Go	33.747492	-84.379749	Greek Restaurant
Adair Park, Atlanta	33.724974	-84.411429	Aviva by Kameel	33.760597	-84.386548	Mediterranean Restaurant
Adair Park, Atlanta	33.724974	-84.411429	Six Feet Under Pub & Fish House	33.746555	-84.372869	Seafood Restaurant
Adair Park, Atlanta	33.724974	-84.411429	Alma Cocina	33.759070	-84.387536	Latin American Restaurant
Adair Park, Atlanta	33.724974	-84.411429	Agave	33.747968	-84.368020	Mexican Restaurant

## Methodology:

The problem will be tackled in two folds. First, venue of all restaurant in city of Atlanta will be analyzed to identify the most popular type of restaurant. Then we will structure the data to form a restaurant type \* neighborhood matrix and clustering will be used to group the neighborhood into several clusters. The cluster with large number of total restaurants and small number of the most popular type of restaurant would be the recommended location for opening up a new business.