# ATLANTA CITY NEIGHBORHOOD SEGMENTATION AND CLUSTERING

CAPSTONE PROJECT BY

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ATLANTA CITY AND NEIGHBORHOOD

- Atlanta city has a population of 498,000 but including the many suburbs the metropolitan area is home to about 5.6 million people. HTTP://WORLDPOPULATIONREVIEW.COM/US-CITIES/ATLANTA-POPULATION/

- City has more than 200 distinct neighborhoods

HOUSEHOLD DEMOGRAPHICS

Atlanta Renter vs Owner Occupied by Household Type
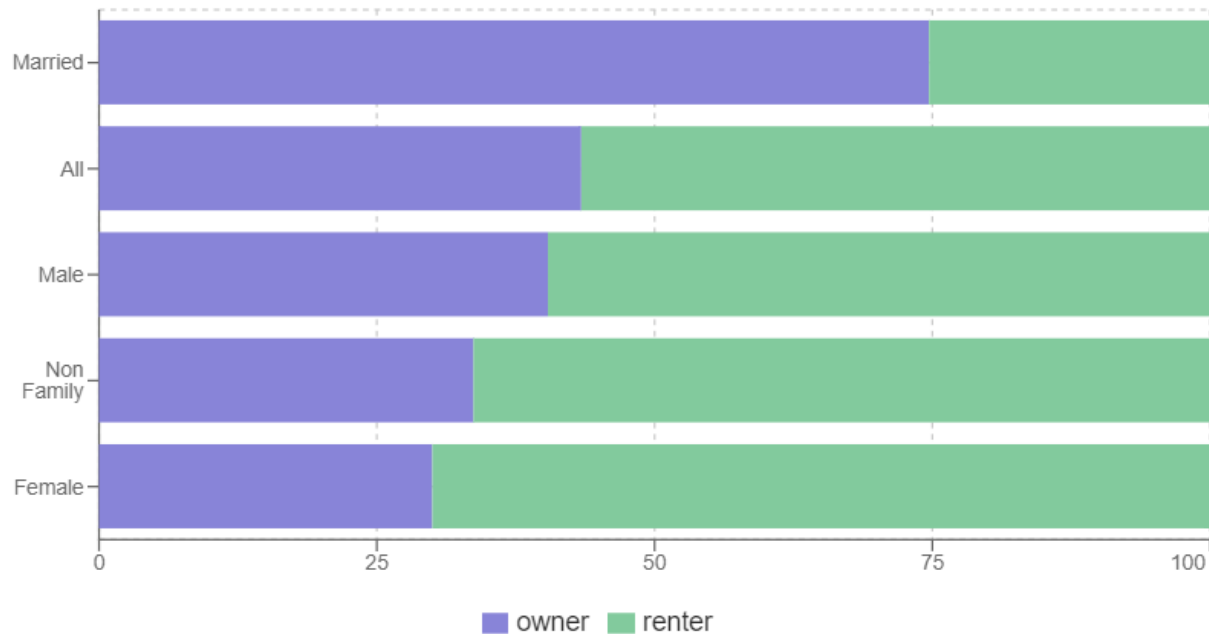
Atlanta Household Types

Type	Owner ▾	Renter
Married	74.7%	25.3%
All	43.4%	56.6%
Male	40.4%	59.6%
Non Family	33.7%	66.3%
Female	30%	70%

43.4% Rate of Home Ownership

CAPSTONE PROJECT DATA

- GEORGIA ZIP CODES WITH NEIGHBORHOODS INFO
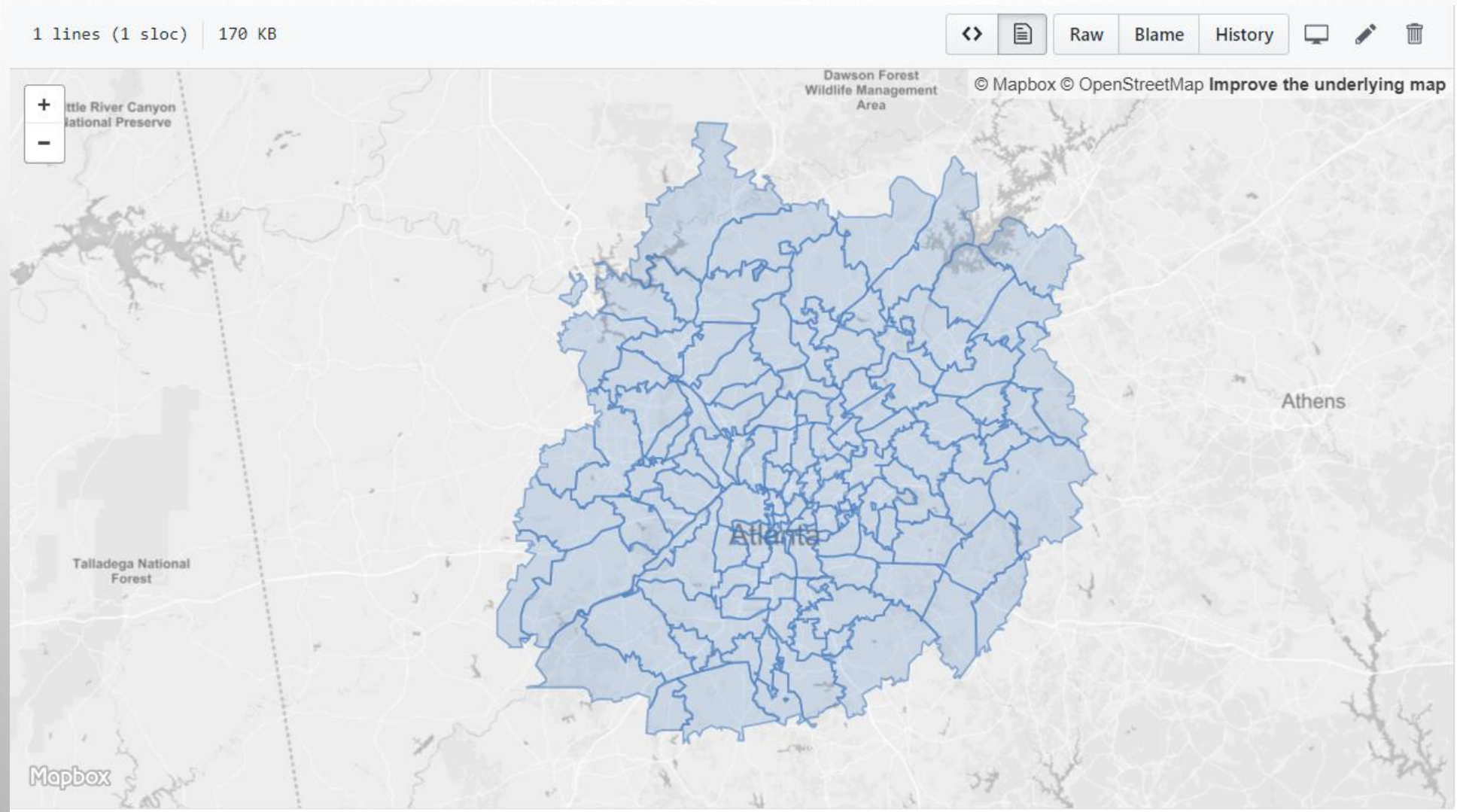 HTTPS://WWW.ZIPCODESTOGO.COM/GEORGIA/

- GEO JSON DATA FOR ATLANTA NEIGHBORHOODS
  HTTPS://GITHUB.COM/CODEFORAMERICA/CLICK_THAT_HOOD/BLOB/MASTER/PUBLIC/DATA/ATLANTA.GEOJSON

- FOURSQURE

ATLANTA MAP

FOLIUM VISUALIZATION
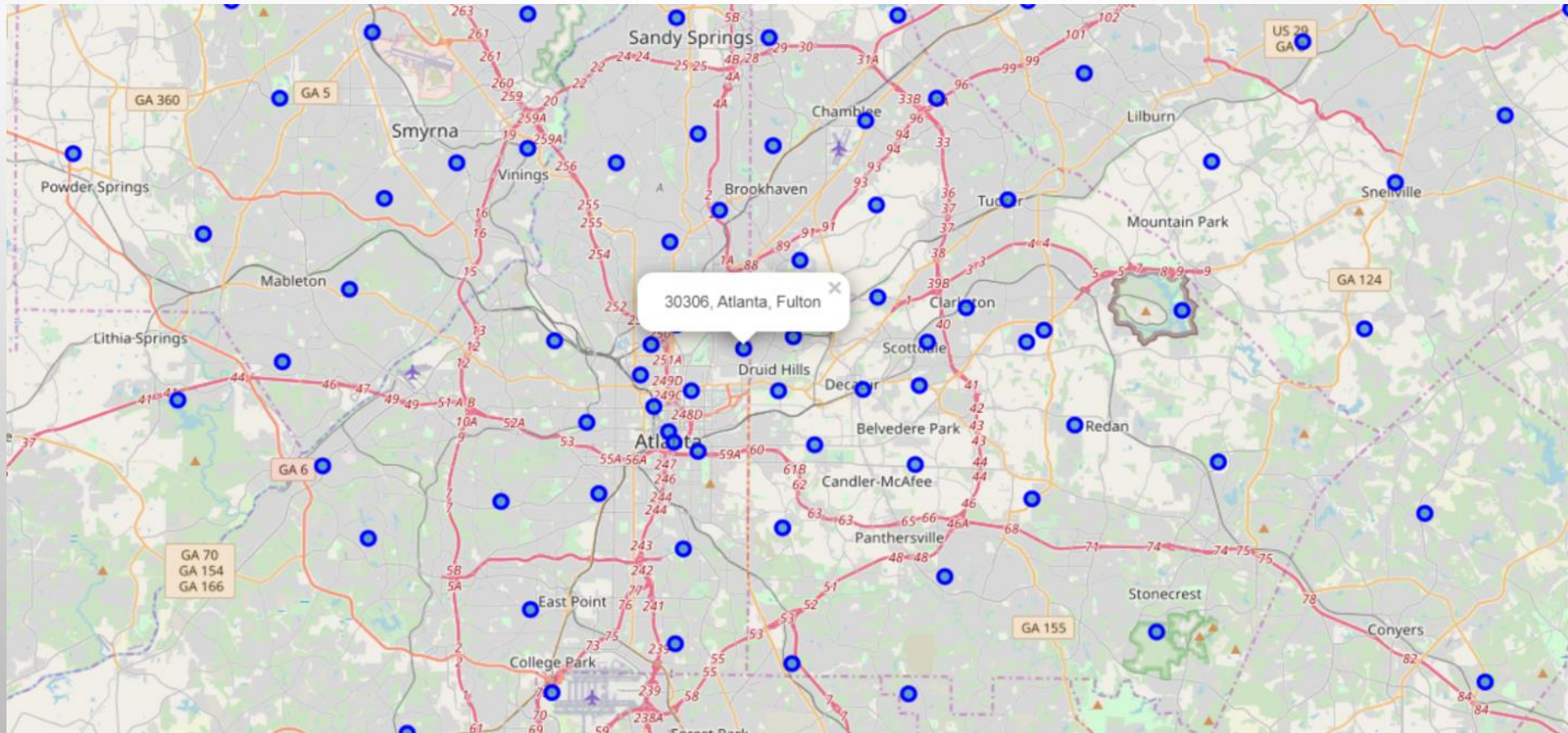
ATLANTA CLUSTER 1– MAIN CITY

[55]:

	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1	33.797412	0	Bakery	Park	Automotive Shop	Convenience Store	Big Box Store	Campground	Lake	Garden Center	Pharmacy	Photography Lab
2	33.747999	0	Clothing Store	American Restaurant	Coffee Shop	Pizza Place	Mexican Restaurant	Park	Women's Store	Cosmetics Shop	Bakery	Department Store
4	33.794492	0	Clothing Store	American Restaurant	Coffee Shop	Pizza Place	Mexican Restaurant	Park	Women's Store	Cosmetics Shop	Bakery	Department Store
5	33.613639	0	Gym / Fitness Center	Discount Store	Business Service	Construction & Landscaping	Yoga Studio	Food Court	Flea Market	Flower Shop	Food	Food Stand
6	33.757576	0	Clothing Store	American Restaurant	Coffee Shop	Pizza Place	Mexican Restaurant	Park	Women's Store	Cosmetics Shop	Bakery	Department Store
7	33.791004	0	Clothing Store	American Restaurant	Coffee Shop	Pizza Place	Mexican Restaurant	Park	Women's Store	Cosmetics Shop	Bakery	Department Store
8	33.999280	0	Platform	Athletics & Sports	Garden	Moving Target	Basketball Stadium	Construction & Landscaping	Cosmetics Shop	Automotive Shop	Bank	Fried Chicken Joint
9	33.948631	0	Platform	Athletics & Sports	Garden	Moving Target	Basketball Stadium	Construction & Landscaping	Cosmetics Shop	Automotive Shop	Bank	Fried Chicken Joint
10	33.939949	0	Breakfast Spot	Cosmetics Shop	Hobby Shop	Speakeasy	Pool	Pharmacy	Football Stadium	Intersection	Arepa Restaurant	Bakery
12	34.124212	0	Dentist's Office	Southern / Soul Food Restaurant	Pizza Place	Chinese Restaurant	Pharmacy	Pub	Mexican Restaurant	Grocery Store	Shipping Store	Film Studio

CLUSTER 2 & 3 – SPORTS ARENA AND DINING

Cluster 2 - Atlanta Sports Arena

```
[56]: atlanta_merged.loc[atlanta_merged['Cluster Labels'] == 1, atlanta_merged.columns[[1] + list(range(5, atlanta_merged.shape[1]))]]
```

[56]:

	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
57	33.97561	1	Food	Yoga Studio	Farmers Market	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Football Stadium	Food Truck	Food Stand	Food Service

Cluster 3 - Atlanta dining area

```
[57]: atlanta_merged.loc[atlanta_merged['Cluster Labels'] == 2, atlanta_merged.columns[[1] + list(range(5, atlanta_merged.shape[1]))]]
```

[57]:

	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
29	33.583798	2	American Restaurant	Yoga Studio	Farmers Market	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Football Stadium	Food Truck	Food Stand	Food Service

ATLANTA CLUSTER 4 & 5 – FARMERS MARKET AND LAKE AREA

Cluster 4 - Atlanta Farmers market area

```
atlanta_merged.loc[atlanta_merged['Cluster Labels'] == 3, atlanta_merged.columns[[1] + list(range(5, atlanta_merged.shape[1]))]]
```

	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	34.034515	3	Farm	Farmers Market	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Football Stadium	Food Truck	Food Stand	Food Service	Food Court
93	34.103138	3	Farm	Farmers Market	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Football Stadium	Food Truck	Food Stand	Food Service	Food Court

Cluster 5 - Atlanta lake and recreational area

```
atlanta_merged.loc[atlanta_merged['Cluster Labels'] == 4, atlanta_merged.columns[[1] + list(range(5, atlanta_merged.shape[1]))]]
```

	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
72	33.766909	4	Lake	Yoga Studio	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Football Stadium	Food Truck	Food Stand	Food Service	Food Court

CONCLUSION

- NEW BUSINESS NEED TO ALIGN WITHIN THE CLUSTER WITH SAME INTEREST

- DINING AND OTHER ENTERTAINMENT NEED TO LOOK AT THE AREAS WITH THAT DENSITY AND AT A SMALL DISTANCE FROM OTHER SIMILAR LOCATIONS

- PEOPLE BUYING A HOUSE CAN LOOK AT THE VENUES OF INTEREST TO THEM