Interactive Atlanta Map

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The Story

We created a dashboard of basic information about the metro Atlanta area. The idea was to create a starting point for people researching a move to or within the metro Atlanta area.

Our inspiration came from one group member in the middle of researching a move, another who enjoys analyzing statistics, and a third who is learning to love Leaflet.

Data Sets - GeoJSON

Metro Atlanta GeoJSON:

https://opendata.atlantaregional.com/datasets/GARC::counties-atlanta-region/explore

Grocery Store GeoJSON:

https://services1.arcgis.com/Ug5xGQbHsD8zuZzM/arcgis/rest/services/Grocery_Stores_in_13County_Area/FeatureServer/0/query?outFields=*&where=1%3D1&f=geojson

MARTA Stations GeoJSON:

https://arcgis.atlantaregional.com/arcgis/rest/services/OpenData/FeatureServer/17/query?outFields=*&where=1%3D1&f=geojson'

Data Sets - Metro Atlanta Statistics

Economic, Political, Educational, Socioeconomic, etc:

https://georgiadata.org/data/data-tables

Housing:

https://www.census.gov/quickfacts/fact/table/US/PST045222

Population:

https://www.georgia-demographics.com/counties_by_population

Weather:

https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/mapping/9/hdd/202201/12/mean

Database

- Data was collected from various sources

- Pandas was used to clean and manipulate data

- Data was then exported as a csv

- Data was than imported into MongoDB for simple requests

flaskapp.py

- Flask was used to make a connection to MongoDB

- Queries were executed to pull desired data

- Data was rendered with variables to be references in HTML

- HTML used references queries to generate data on webpage

HTML/CSS

The HTML renders the dashboard webpage.

The head references the CSS pages for:

- Bootstrap
- Leaflet
- AOS

The body creates:

- the drop down menu
- containers for the data, bubble chart, and map

The body references:

- Leaflet JavaScript
- D3 JavaScript
- AOS JavaScript
- app4.js
- data.js
- map.js

Plotly

Plotly controls the data displays.

https://plotly.com/python/

JavaScript - app4.js

Creates and populates:

- The drop down menu
- The bubble chart
- The county statistics
- The color changes when the drop down selection changes

JavaScript - data.js

Holds the list of the metro Atlanta counties:

```
projects > Project3 > JS data.js > [∅] counties
 1    let counties = [
 2        {name:'Cherokee'},
 3        {name:'Clayton'},
 4        {name:'Cobb'},
 5        {name:'DeKalb'},
 6        {name:'Douglas'},
 7        {name:'Fayette'},
 8        {name:'Forsyth'},
 9        {name:'Fulton'},
10        {name:'Gwinnett'},
11        {name:'Henry'},
12        {name:'Rockdale'}
13    ]
```

JavaScript - map.js

Creates the map

- Options for street or topographical map
- Selections for county outlines, seats, grocery stores and MARTA stations

Uses GeoJSON files to create:

- Outlines of metro Atlanta counties
- Markers for county seats with hover and clickable information
- Circles for grocery stores and MARTA stations with clickable information

As the user selects a county, the map re-centers on the seat for that county.
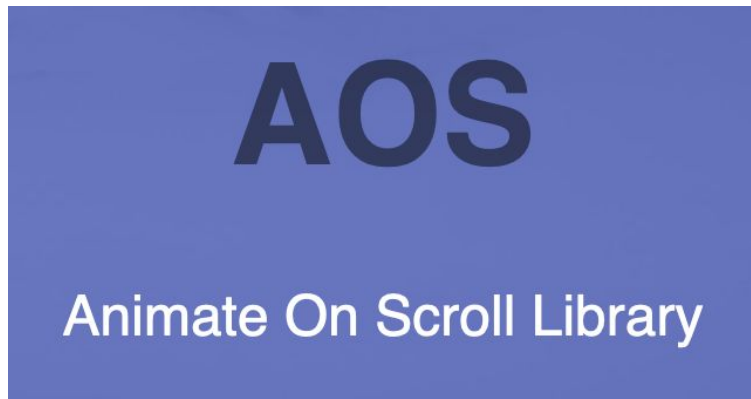
New JavaScript Library

AOS sets how different components fade/zoom/flip as the user scrolls.

Animate on Scroll (AOS)

https://michalsnik.github.io/aos/

Documentation:

https://htmlstream.com/preview/front-v3.1.1/documentation/aos.html

Leaflet

Leaflet controls the map for map.js.

https://leafletjs.com/reference.html

It allows for the tile layers, markers, and circles.

Dashboard

Dropdown for selecting a new county on which to focus

Interactive Atlanta Map

Mountain Pancakes

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County Selection

Cherokee

Cherokee County Statistics

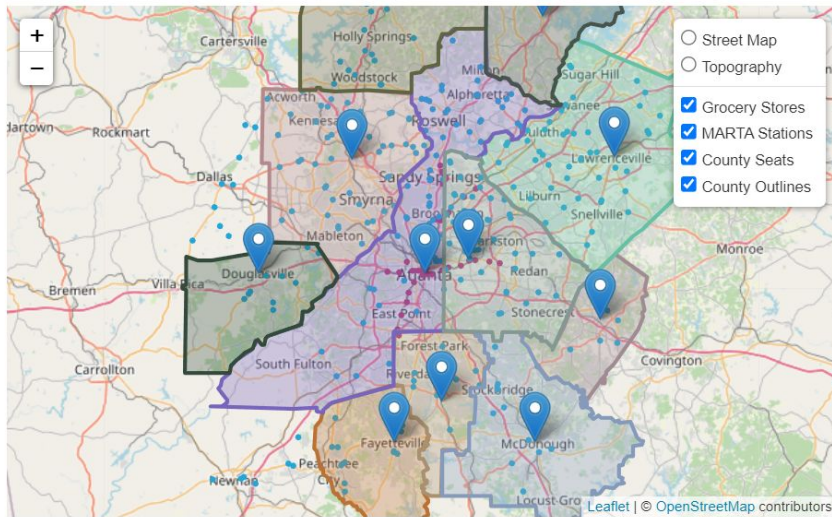ACT Composite Score (2019-20): 22

Average Commute Time (2016-20): 67.7

Average SAT Score, Combined (2020-21): 1129

CCRPI Score (2019): 83.4

Democratic Votes, Pct (2020 Presidential Election): 29.50%

Median Gross Rent (2017-21): $1,421

○ Street Map
○ Topography

☑ Grocery Stores
☑ MARTA Stations
☑ County Seats
☑ County Outlines

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Toggle-able map layers:

1. Grocery stores in aqua circles
2. MARTA stations in fuschia circles
3. County seats as icons
4. County outlines with specified color

Basic county statistics: data and color change with new selection

Visualizations

County Selection

Fulton

Fulton County Statistics

ACT Composite Score (2019-20): 24

Average Commute Time (2016-20): 28.9

Average SAT Score, Combined (2020-21): 1098

CCRPI Score (2019): 83.8

Democratic Votes, Pct (2020 Presidential Election): 72.60%

Median Gross Rent (2017-21): $1,367

Median Household Income (2020): $71,504

Median Value of Owner-Occupied Units (2017-21): $345,100

Name: FULTON

Public Schools Count (2020-21): 110

Republican Votes, Pct (2020 Presidential Election): 26.20%
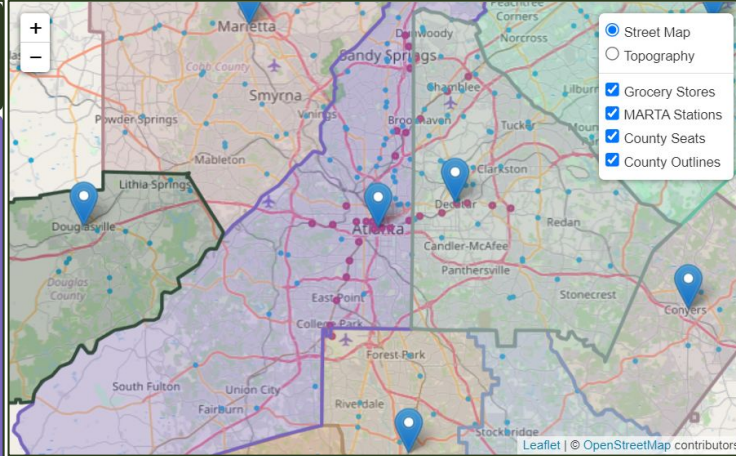
Total Crash Fatalities (2020): 145

Total Crimes Reported (2020): 13581
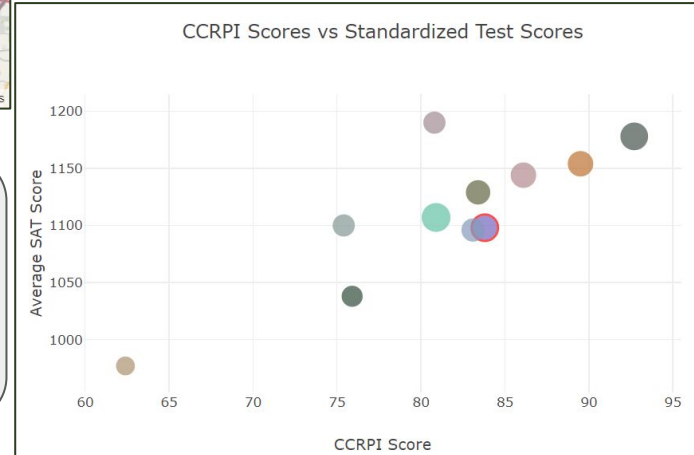
Total Persons in Poverty (2020): 136220

Unemployment Rate (2020): 7.90%

Weekly Wages (2020): $1,641

- Street Map
- Topography
- ☑ Grocery Stores
- ☑ MARTA Stations
- ☑ County Seats
- ☑ County Outlines

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The graph at the bottom displays each county's College and Career Ready Performance Index (CCRPI) Score against their student's average combined SAT score. The size corresponds to the average ACT score. The active county will have a red border around its marker.

Upon selecting a new county with the dropdown, the county statistics card will update. The map will zoom in and center on the selected county's seat. Clicking the icon will display the name of the seat.

CCRPI Scores vs Standardized Test Scores

Future Possibilities

- Weather widget

- Graph of apartment rents by type (studio, 1BR, 2BR, etc)

- Include counties beyond metro Atlanta

- All users to find information for neighborhoods within counties

- Include other metro areas

- Include more graphs for each county