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Mentor

HPC in the City's

HOTSPOT
HERO 6

Agenda

Github

https://github.com/mventparram/HotspotHero6

K-12 Broadband Access

The Presented Challenge:

How can we help Atlanta area schools provide mobile internet hotspots to low income housing areas?

- With enough time and data, ideally we want to create a resource for schools and their students to use.
- A website where the student can input internet speed/location.
- Schools can also collect the data for them to analyze and make decisions about where they can step in and add more hotspots.

Data Collection

We collected data from the Georgia Department of Community Affairs to receive information regarding the counties of Atlanta. From that information we were able to determine the unserved census blocks and the percentages of the unserved communities within a county.

Also, we obtained data from Atlanta Public Schools system to access the percentage of free and reduced lunch within a county.

High Performance Computing Technology

How our Team Journey Began

Our skill sets:

Alex:

- Mathematics, Education, Java

Taeyonn:

- Coding and Mathematics

Melissa:

- Mathematics- Theory and Application, Python, Excel

Brianne:

- Mathematics, Excel

What we developed/acquired:

Alex:

- Python, Google Colab, Jupyter notebook, Geopandas, data carpentry
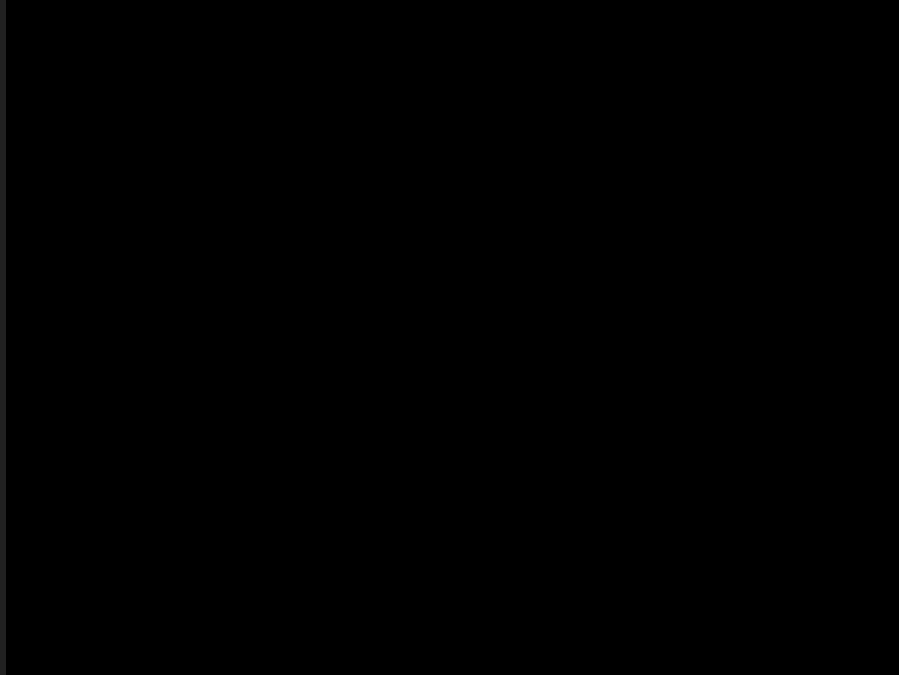
Taeyonn:

- Google Colab, Geopandas

Melissa:

- Python, Geopandas, Google Colab, Jupyter notebook, GitHub, data carpentry
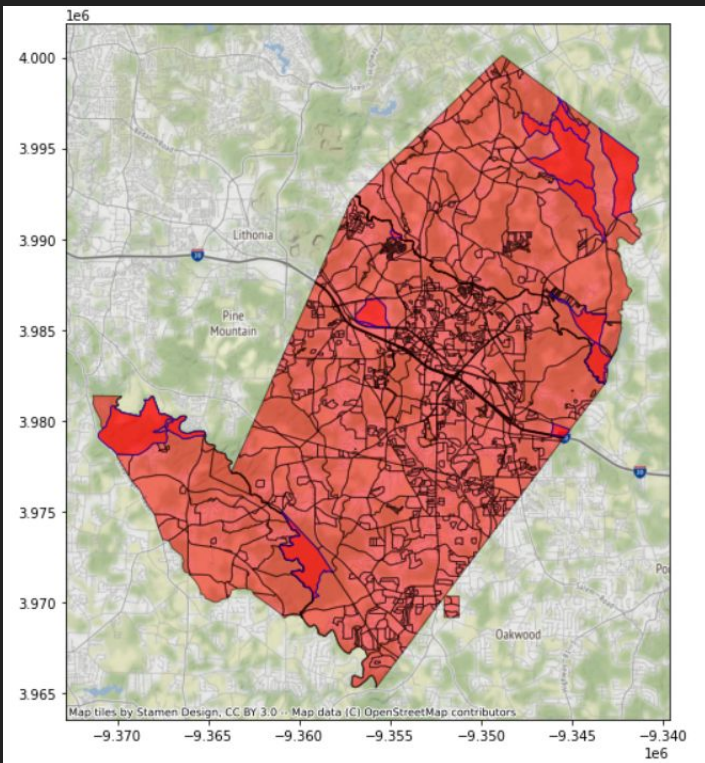
Brianne:

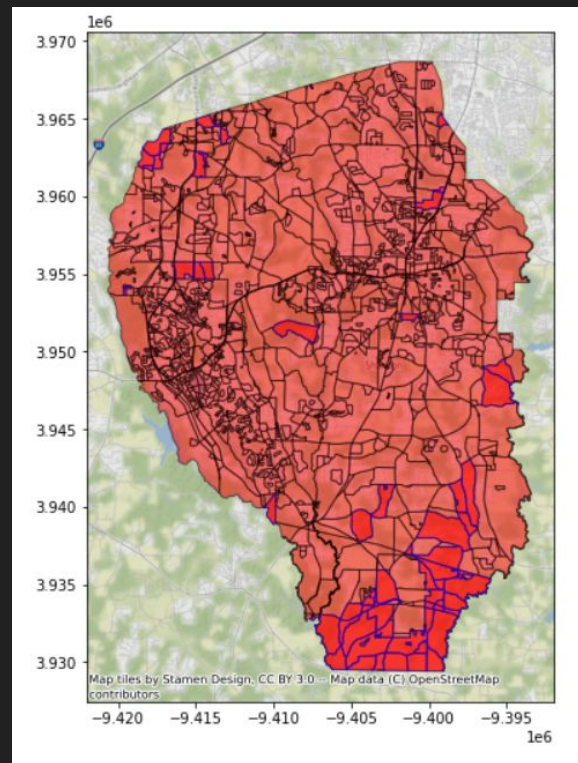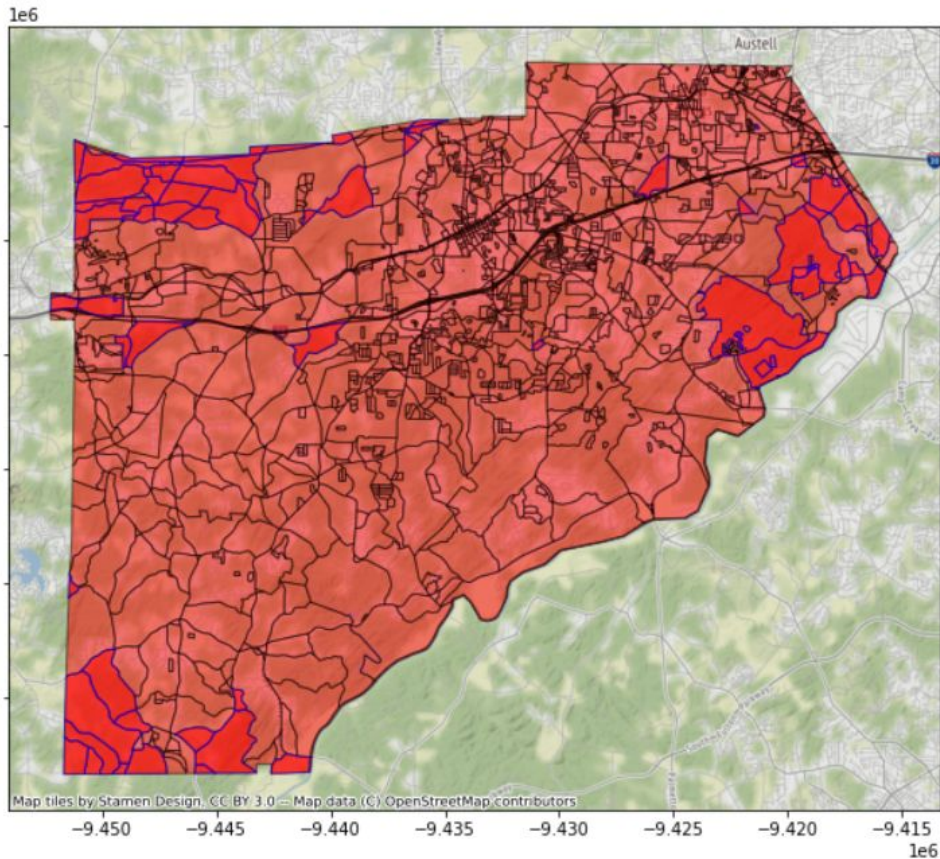- Github, Jupyter notebook, Google Colab

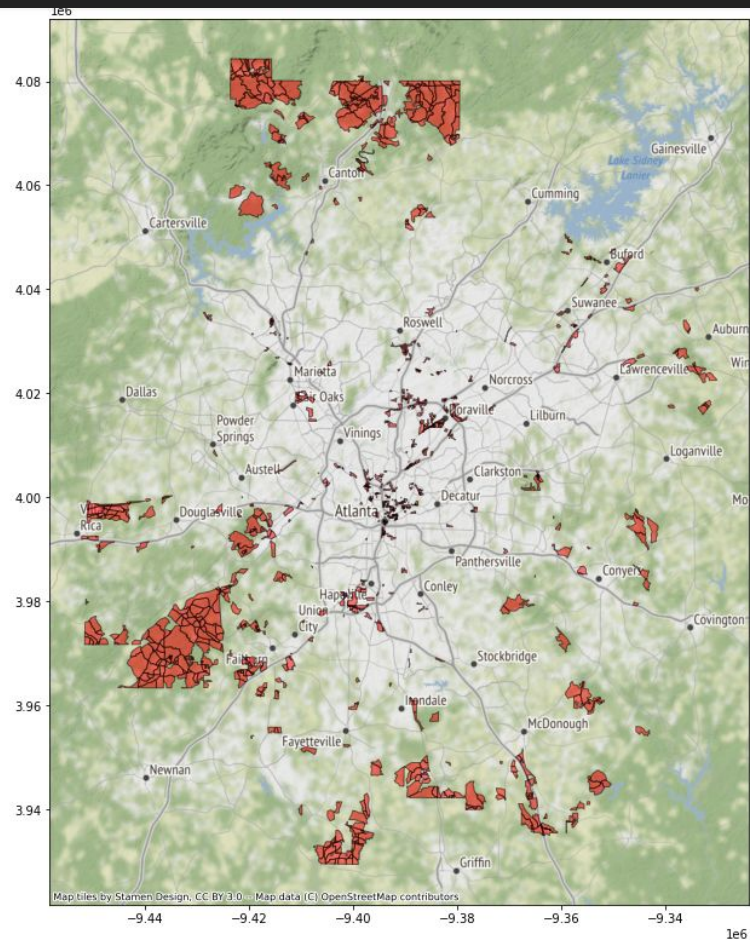# Demo Time

Deliverables

Rockdale County

Fayette County

Douglas County

Atlanta Regional Commission

Future Work:

As we continue our research, we would like to expand across multiple counties to analyze the rest of Georgia.
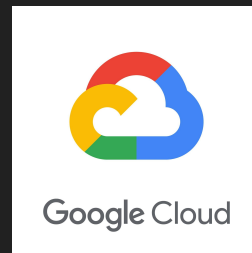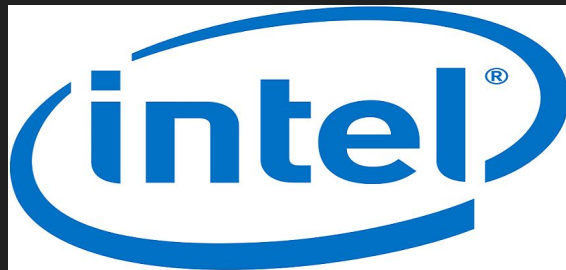
Once that is completed we can focus on other particular cities or states. Concern for internet availability should not cease even after covid 19 diminishes. We know as students, professionals, and HPC in the City participants firsthand the importance of internet access in the present society as well as the future.

Future coding work would involve expanding the scalability of the maps and the ability to plot school locations. We would need to merge two datasets to accomplish this.

Acknowledgements

Thank You

Data Source

https://www.atlantapublicschools.us/Page/48363

https://broadband.georgia.gov/maps/map-data