

Assignment 2

Elle Farmer

Department of Information, Library, and Research Sciences, UNC Greensboro

LIS 631: Emerging Technology Trends

Dr. Fatih Oguz

September 18, 2024

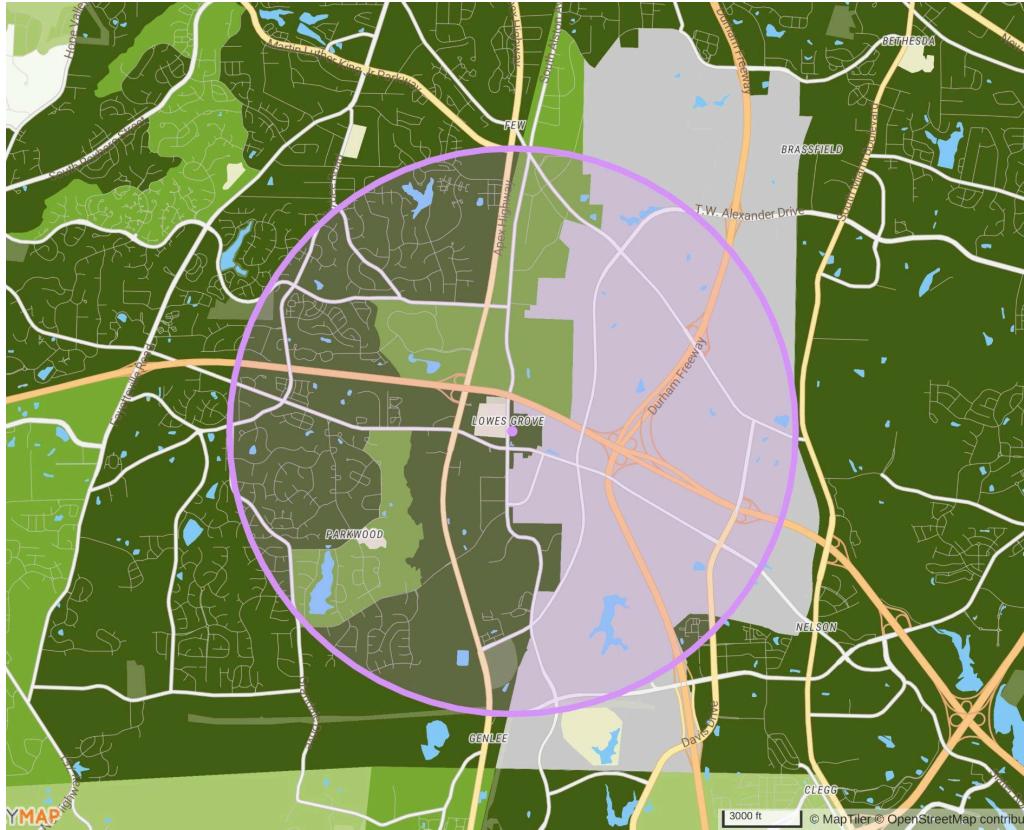
Assignment 2

Durham County is located in the Piedmont of North Carolina and, as of 2020, has a population of almost 325,000 people (U.S. Census Bureau). Durham County is part of the Research Triangle, along with Orange and Wake Counties. Compared to the other two, Durham has a significantly higher percentage of Black of African-American folks: 34.3% for Durham County versus 19.7% and 10.9% for Wake County and Orange County, respectively (PolicyMap, 2022d). Durham has rich Black and African American history and heritage. The historic Hayti (pronounced HAY-tie) neighborhood's claims to fame include Black Wall Street, the first Black public high school in North Carolina, the first insurance company in North Carolina (Indiana University Bloomington), the first Black public liberal arts university ("Durham's Story," n.d.), and the second Black library in the state ("Stanford L. Warren," n.d.).

Durham County's library system has seven locations: 4 regionals, 2 historic locations, and Main Library. I've worked for Durham County Library for about two and a half years now, first at North Regional Library and now at South Regional Library. I had originally planned on focusing on South Regional for this assignment, but due to its location it wasn't a good option. South Regional is located about half a mile from Research Triangle Park, which doesn't have census data, so the data from the two-mile service area radius would be leaving out a significant portion of South Regional's patron base.

Figure 1.

South Regional Library's Radius



Instead, I chose to focus on the Stanford L. Warren branch, the aforementioned second Black library in the state, located in the historic Hayti neighborhood.

Stanford L. Warren Library

The Durham Colored Library was originally founded in 1913. In 1940, the Durham Colored Library moved to a new location and was renamed Stanford L. Warren Public Library, after the president of the Durham Colored Library Board of Trustees. In 1966, Stanford L. Warren Library, its three branches, and its bookmobile joined the Durham County Library system (“Timeline,” n.d.). Stanford L. Warren Library remains in the same building today, though it has been renovated several times in the past 85 years.

Due to significant water damage, Stanford L. Warren closed in August 2021 for repairs and will be reopening in December of 2024. Durham County Library was still operating under reduced hours and COVID quarantine protocols in 2021, so in actuality Stanford L. Warren

hasn't been fully functioning or programming since March of 2020. This presents a unique opportunity for this assignment as I'm presented with almost a blank slate. I don't have any way to see what programs Stanford L. Warren was doing before the pandemic, and with such significant staff turnover in the past 4.5 years many of Stanford L. Warren's staff haven't worked in their own location or programmed for their own community. I have the ability to objectively analyze data using GIS and form recommendations that may be genuinely helpful for my coworkers in the coming months.

Methods

The data used in this report comes primarily from PolicyMap, a web-based tool that allows users to view, analyze, and map data. Using PolicyMap, I was able to explore Census and other data to make recommendations based on Stanford L. Warren's surrounding area. Because Stanford L. Warren is a smaller location, is located 1.3 miles from the large, multi-story Main Library, and is located in an urban area, I decided to set a one-mile radius around Stanford L. Warren as its effective service area (Oguz, 2024).

Results

An estimated 15,995 people live within the one-mile radius of Stanford L. Warren as of 2020. The racial demographics of this area, located within the historic Hayti community, are 63.2% Black, 19% White, and 14.2% Hispanic (PolicyMap, 2024).

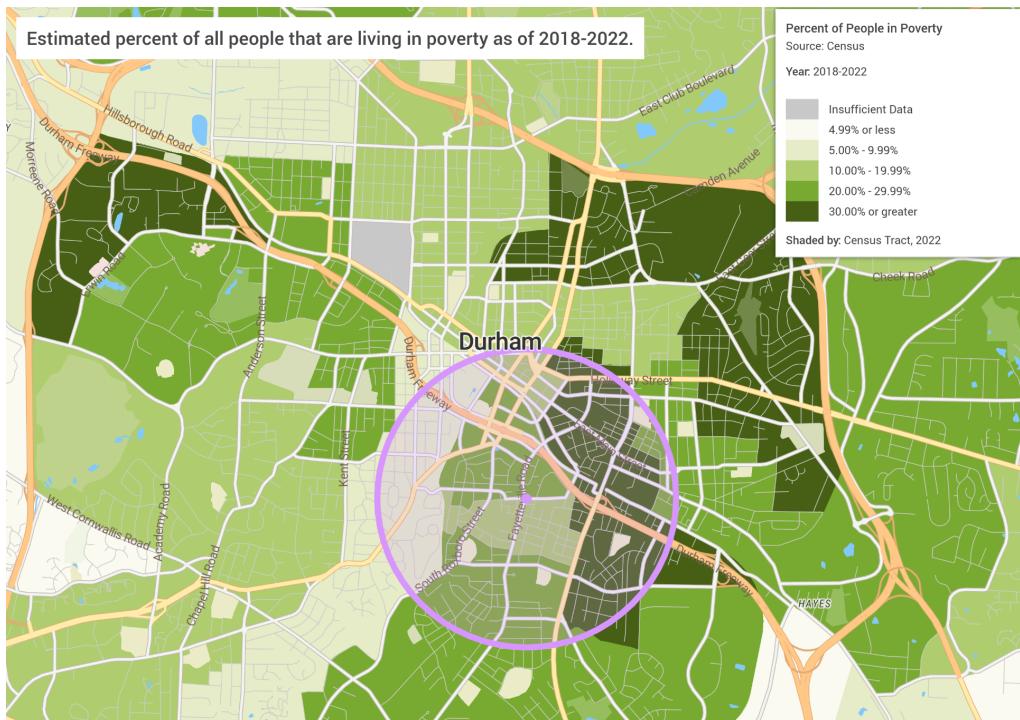
Poverty Level

Stanford L. Warren serves some of the most impoverished areas of Durham, with an average poverty rate of 26.5% (PolicyMap, 2022c). 52.9% of households have an annual income

of less than \$50,000, compared to 38.3% for all of North Carolina. In fact, almost 30% of households make less than \$25,000 per year¹ (PolicyMap, 2024).

Figure 2.

Percent of People in Poverty



Food Access and Food Insecurity

Food Insecurity

Durham County has a similar food insecurity rate to nearby counties: 12.2% for Durham versus 11.1% and 12.3% for Wake and Orange Counties, respectively (PolicyMap, 2022b). The child food insecurity rate, however, is significantly higher, at 19.8% versus 12.7% and 11% for Wake and Orange Counties (PolicyMap, 2022a). In August of this year, Durham Public Schools (DPS) became the first school district in North Carolina to provide universal free lunch to all

¹ It's important to note that both North Carolina Central University and Durham Technical Community College are located within 1.5 miles of Stanford L. Warren Library. College students living off campus can significantly impact poverty rates, often by between 5 and 10% (Benson & Bishaw, 2021). That said, even if the poverty rates for these two census tracts were decreased by 10%, the average poverty rate of the area would still be high at 22.6% (PolicyMap, 2022c).

students, regardless of household income, through the USDA (Gaertner, 2024). The county's eligibility for the program is due to its proportion of students eligible for SNAP: 46% (Schlemmer, 2024). This is sure to significantly affect the child food insecurity rate drastically, but more still needs to be done to address the inequity of food access in Durham.

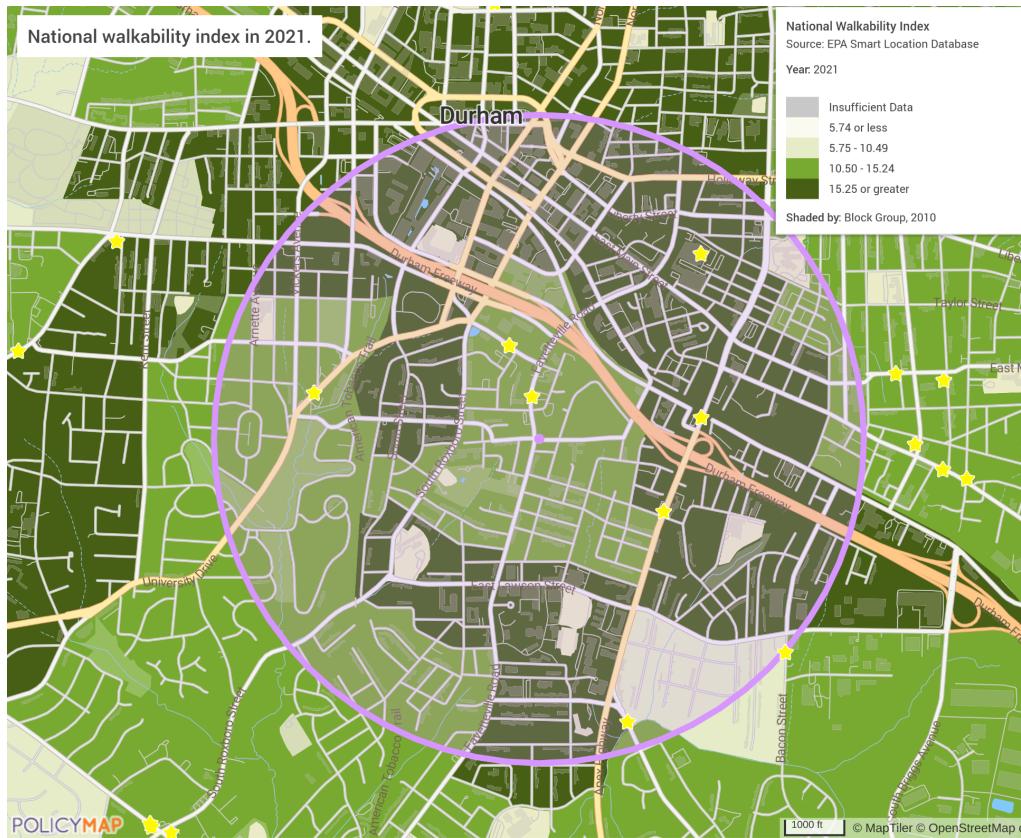
Supplemental Nutrition Assistance Program

The Hayti neighborhood is highly walkable. With almost all scores on the 2021 National Walkability Index of 15 or higher (PolicyMap, 2021), Stanford L. Warren's service area is categorized as Most Walkable (Thomas et al., 2021).

As of 2023, there were eight SNAP Retail Locations in Stanford L. Warren's service area (PolicyMap, 2021), which doesn't sound terrible for a 3.14 square mile, highly walkable area. After briefly looking into each of the locations, however, a less positive picture emerged. Of those eight, one or two are permanently closed, two are food marts that don't have hours listed online, one is only open during regular business hours, one is a farmer's market that is only open for three hours every other Saturday, at least one is a gas station store with little-to-no fresh produce, and the last is a Family Dollar. Furthermore, 31.5% of food insecure folks in Durham aren't eligible for SNAP or any other nutrition programs (PolicyMap, 2020).

Figure 3.

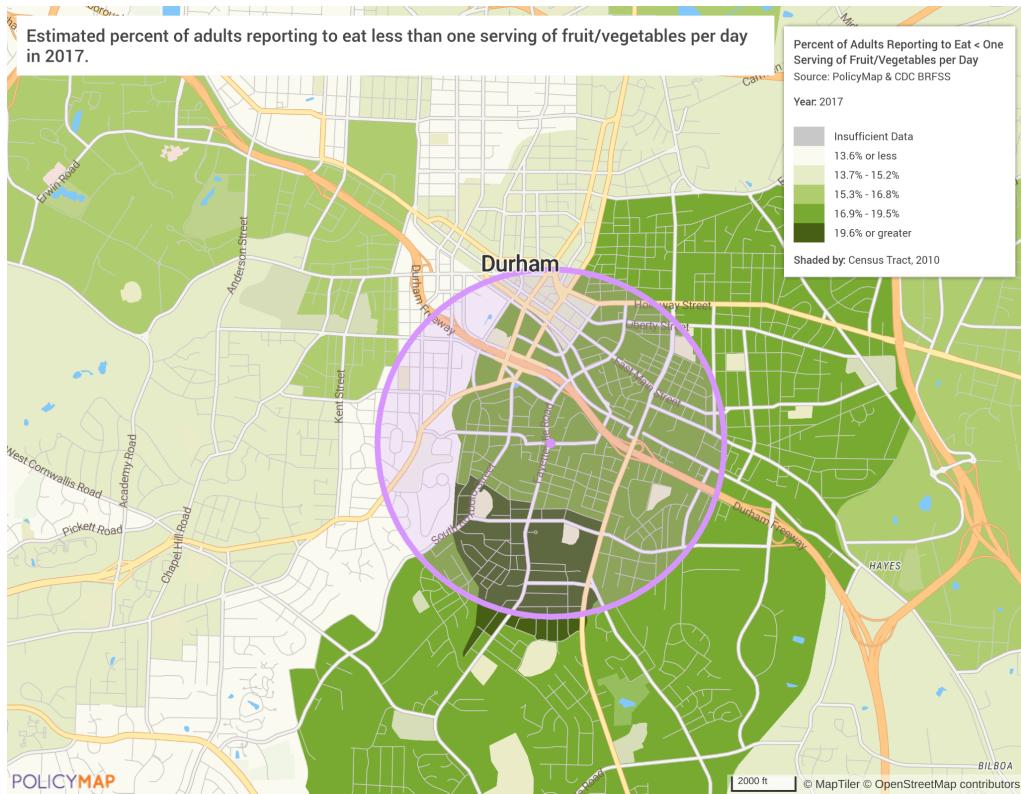
National Walkability Index with SNAP Retail Locations



This hypothesis is supported by the fact that in 2017, 18.5% of adults in Stanford L. Warren's service area reported eating less than one serving of fruit/vegetables per day, versus 14.2% for Durham County as a whole (PolicyMap, 2017).

Figure 4.

Percent of Adults Eating Less Than One Serving of Fruit/Vegetables Per Day



Food Pantries

End Hunger Durham has lists of food resources and food pantries as well as a food pantry locator phone app and a Durham food resources interactive map (using arcGIS!). Using their interactive map, I found eight food pantries within Stanford L. Warren's service area, though a majority of them are churches who offer 9am-12pm hours once a week (Durham's Innovative Nutrition Education Program, n.d.).

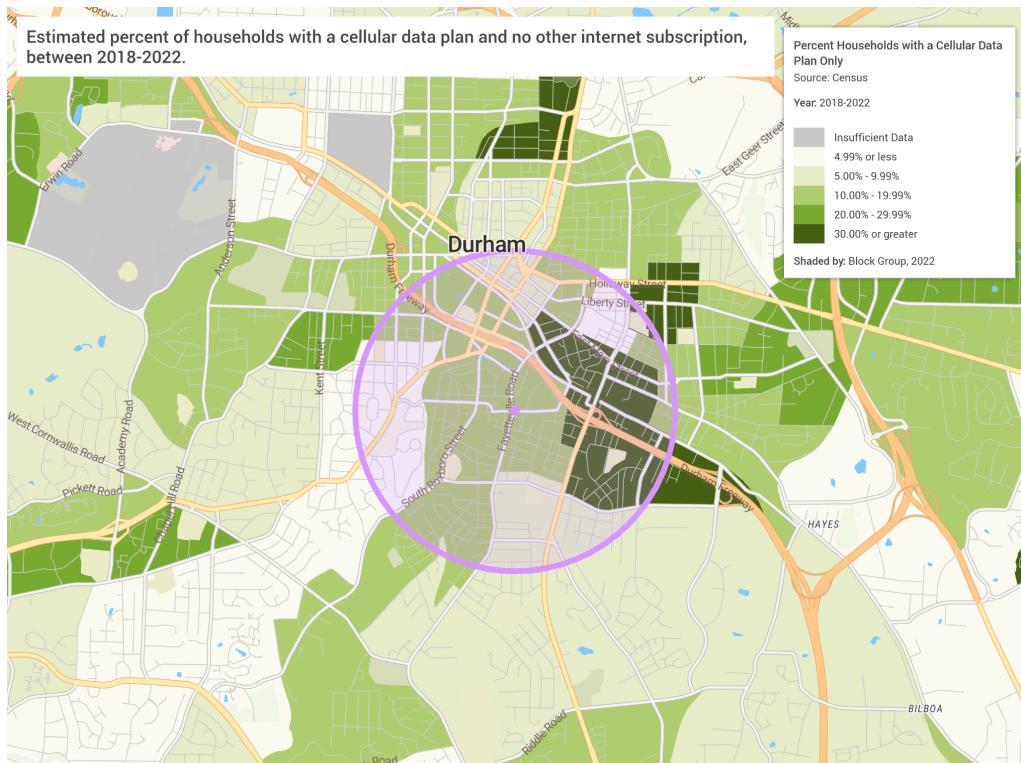
Internet Access

Stanford L. Warren's service area suffers from decreased access to the internet and computers compared to Durham County as a whole. The average percent of households with no internet access around Stanford L. Warren is 11.5%, versus 5.8% for Durham County (PolicyMap, 2022f). The percentages for households without any type of computer are 10.4% and 3.8%, respectively (PolicyMap, 2022g). Similarly, the percentage of households with cellular

data plan as their only internet access is 18.3% for the service area and only 9.4% for Durham County (PolicyMap, 2022e).

Figure 5.

Percent of Households With Cellular Data Plan Only



Discussion

Based on the findings above, I have a number of recommendations for Stanford L. Warren's Branch Manager when they reopen in December.

Food Access and Food Security Recommendations

It's clear that the Hayti area struggles with food insecurity and access, particularly for children. To combat the food apartheid in this area, I have a few recommendations.

Durham Public Schools Summer Meals Program

In the past, various Durham County Library branches have served as locations for DPS's Summer Meals Program, but none did in 2024. I highly encourage Stanford L. Warren Library to

participate in the Summer Meals Program in 2025 to continue the work DPS has done in feeding children through the school year. However, providing lunches for children is not enough to fix the food access issues in Hayti.

Community Garden

There are multiple community gardens in Durham, but none that are close enough to Stanford L. Warren to be accessible to the Hayti community. Research shows that community gardens can substantially increase fruit and vegetable intake for gardeners. Evidence for health-related outcomes is mixed, with some studies reporting a decrease in obesity and hypertension and others finding little-to-no difference. Beyond health outcomes, community gardens are also found to boost happiness, mental health, and quality of life. In addition, community gardens promote social cohesion and civic participation (Hume et al., 2022). I recommend Stanford L. Warren staff look into creating a community garden to lower the percentage of adults that eat fewer than one serving of fruits/vegetables a day and promote individual and community wellness.

Charlie Cart and Food Education

Charlie Cart is a compact mobile kitchen used by schools and libraries to teach hands-on food education. Hundreds of institutions across the country have put Charlie Carts to use, teaching people of all ages about the importance and benefits of cooking nutritious meals. I suggest Stanford L. Warren staff submit grant proposals to get funding for a Charlie Cart as well as other food education materials, like cookbooks and even cooking implements for a Library of Things. Resources such as these, especially in combination with the community garden, will provide underserved communities in the Hayti area with the resources and knowledge to prepare fresh, nutritious meals with homegrown produce.

Internet Access Recommendations

The digital divide is alive and well in Durham, with data showing that residents in Stanford L. Warren's service area having less internet and computer access. To help bridge this digital divide, I have several recommendations.

Increasing the Number of Public Computers

Stanford L. Warren is smaller than the other regional libraries in Durham County, and has a smaller service area due to its close proximity to Main Library. Each of the regionals has approximately 35 public computers, divided between the children's, teen, and adult areas. Before Stanford L. Warren closed, it had 20 public computers. In fiscal years 2017-2018 and 2018-2019, Stanford L. Warren had more computer use sessions than East Regional (who has 35 public computers) and roughly the same number of computer use sessions as North Regional (who has 36 public computers) (Durham County Library, 2019). I suggest that Stanford L. Warren should add more public computers to better serve their population.

Increasing the Number of Hotspots Available for Checkout

This suggestion is more for Durham County Library as a whole rather than specifically for Stanford L. Warren. Durham County Library's public catalog shows that the system has 66 hotspots, all in use with 125 more patrons on the waitlist (Hotspot, n.d.). In the past few years that I've worked here, I've never seen the hotspot hold list at less than 100. The Library should invest in more hotspots to serve all of Durham County, especially those in underserved areas like Hayti.

Working With Kramden Institute

Kramden Institute is a nonprofit organization located in Durham who, since 2003, have “provide[d] technology tools and training to bridge the digital divide” (“Media Kit,” 2024).

Kramden Institute refurbishes old computers, donates them to K-12 students in need, and sells them for only \$30 to adults on government assistance programs like SNAP. They also offer a number of free beginner technology classes in English and Spanish (“About Kramden,” 2024). Kramden has partnered with Durham County Library multiple times in the past, offering the English and Spanish beginner technology classes at Main Library. I suggest that Stanford L. Warren staff reach out to Kramden to bring technology classes and free and discounted computers to Hayti to help bridge that digital divide.

References

About Kramden. (2024, June 6). Kramden Institute. <https://kramden.org/about/>

Benson, C., & Bishaw, A. (2021, October 8). *Small and large college towns see Higher Poverty Rates.* Census.gov.

<https://www.census.gov/library/stories/2018/10/off-campus-college-students-poverty.html>

Durham's Innovative Nutrition Education Program. (n.d.). *Durham area food resources locator [Map].* ArcGIS Hub. <https://durham-area-food-resources-durhamnc.hub.arcgis.com/>

Durham County Library (2019). *Fiscal Year 2018-2019 Final* [Dataset]. Unpublished.

Durham's story. (n.d.). Discover Durham.

<https://www.discoverdurham.com/community-culture/black-history/durhams-story/#:~:text=Durham%27s%20Black%20History,worked%20on%20its%2030%2C000%20acres>

Gaertner, J. R. (2024, August 21). Durham Public Schools offers free meals to all students.

Spectrum News 1 Charlotte.

<https://spectrumlocalnews.com/nc/charlotte/news/2024/08/21/durham-public-schools-free-meals#:~:text=DURHAM%2C%20N.C.%20%E2%80%94%20A%20school%20district,regardless%20of%20their%20parents%20income>

Hotspot. (n.d.). Durham County Library.

<https://durhamcounty.bibliocommons.com/v2/record/S217C191610>

Hume, C., Grieger, J. A., Kalamkarian, A., D'Onise, K., & Smithers, L. G. (2022). Community gardens and their effects on diet, health, psychosocial and community outcomes: a systematic review. *BMC Public Health*, 22(1).

<https://doi.org/10.1186/s12889-022-13591-1>

Indiana University Bloomington. (n.d). *Teaching about Hayti (Durham, North Carolina)*. Land, wealth, liberation: The making and unmaking of Black wealth in the United States.

<https://collections.libraries.indiana.edu/iulibraries/s/land-wealth-liberation/item/23172>

Media Kit, Logo, & Brand Guidelines. (2024, April 12). Kramden Institute.

<https://kramden.org/media-kit/>

Oguz, F. (2024). *Module 2: Technologies for Information Retrieval, Access, & Visualization* [PowerPoint slides]. Canvas. <http://uncg.instructure.com>

PolicyMap. (2017). *Estimated percent of adults reporting to eat less than one serving of fruit/vegetables per day in 2017* [Map]. <https://policymap.com>

PolicyMap. (2020). *Estimated percent of food insecure persons not eligible for SNAP or other nutrition programs in 2020* [Map]. <https://policymap.com>

PolicyMap. (2021). *National walkability index in 2021* [Map]. <https://policymap.com>

PolicyMap. (2022a). *Estimated child food insecurity rate in 2022* [Map]. <https://policymap.com>

PolicyMap. (2022b). *Estimated food insecurity rate in 2022* [Map]. <https://policymap.com>

PolicyMap. (2022c). *Estimated percent of all people that are living in poverty as of 2018-2022* [Map]. <https://policymap.com>

PolicyMap. (2022d). *Estimated percent of all people who were Black or African American, between 2018-2022* [Map]. <https://policymap.com>

PolicyMap. (2022e). *Estimated percent of households with a cellular data plan and no other internet subscription, between 2018-2022* [Map]. <https://policymap.com>

PolicyMap. (2022f). *Estimated percent of households with no internet access, between 2018-2022* [Map]. <https://policymap.com>

PolicyMap. (2022g). *Estimated percent of households without any type of computer, between 2018-2022* [Map]. <https://policymap.com>

PolicyMap. (2024, September 12). *Community profile report of custom region: dcol slw* [Custom Report]. <https://policymap.com>

Schlemmer, L. (2024, March 22). *Durham Public School plans to provide universal free meals — and more districts could too.* WUNC.

<https://www.wunc.org/education/2024-03-22/durham-public-school-universal-free-meals>

Stanford L. Warren Branch Library. (n.d.). Durham County Library.

<https://durhamcountylibrary.org/location/stanford-l-warren-branch-library/>

Thomas, J., Zeller, L., & Rourk Reyes, A. (2021, June). *National walkability index: Methodology and user guide.* EPA.

https://www.epa.gov/sites/default/files/2021-06/documents/national_walkability_index_methodology_and_user_guide_june2021.pdf

Timeline. The History of the Stanford L. Warren Library. (n.d.) Durham County Library.

<https://durhamcountylibrary.org/exhibits/slw/timeline.php>

U.S. Census Bureau. (2020). *Durham County, North Carolina* [Profile].

https://data.census.gov/profile/Durham_County,_North_Carolina?g=050XX00US37063