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LIS 631. Emerging Tech Trends

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## **Assignment 2 – GIS Mapping – Black Mountain Public Library**

### **Introduction**

The Black Mountain Public Library, which is located in the town of Black Mountain, is one of thirteen public libraries that serve Buncombe County in North Carolina. Built in 1968, this library boasts over 40,000 sources in their collections, which is comprised of books, music, audiobooks, DVDs, and more. It is one of the branches that make up Buncombe County's library system. If a patron is looking for a source that the library doesn't have, the library can acquire that particular source from one of the other libraries. Along with this, other services that the Black Mountain library is that they have a used book sale program going on, a community meeting room, a seed library, and more.

There is also one important service that the library is adamantly trying to promote to the community. That particular service revolves around children. On their website, as well as their video, the library specifically emphasized the services that they can provide to kids, which includes story time, a children's area, and more. According to their website, they renovated the library back in 2009 to include an expanded children's area. It seems that one of the big goals that the Black Mountain Public Library is trying to accomplish is to promote their services to the community's family population. In regards to that, is the library achieving this goal on a regular basis? Are they effectively reaching

out to the family population in their community? Are they reaching out to all types of families that make up the community that the library resides in?

The answers to these questions are going to be uncovered in my examination of the Black Mountain library's services and the community. In this report, I will be analyzing both the community and the library's services through the use of GIS mapping. Once I have uncovered the areas where the library is doing good and where they could be doing better, I will suggest some recommendations that could potentially help the library further strengthen their relationship with the community.

## **Methods**

Using SimplyAnalytics, I generated several maps of both Buncombe County and Black Mountain so that I could compare them to one another. I also generated multiple maps of Black Mountain so that I could analyze population demographics in that community. For my analysis, I used the following variables to examine the Black Mountain community:

- Median Household Income
- Family Population
- Single Parents with Children
- White Collar Employment
- Households with One Vehicle

I mainly focused my analysis on single parents, because Buncombe County is home to quite a decent number of them. According to the comparison table (Table 1) that was generated by SimplyAnalytics, out of the 74.95% family population in Black Mountain, 13.23% are single parents that have children to look after. These families are also part of

the percentages that have white collar office jobs and only have vehicle, which they need to get to and from their workplace. This makes it difficult for single parents to access a library's services for either themselves or their children, because they simply do not have the time to go to the library. I am interested in seeing if the Black Mountain Public Library is doing anything to help accommodate these families in particular.

Finally, I look at Buncombe County's public library website to see what kind of features and services are they providing to patrons. Since the Black Mountain library is part of Buncombe County's library system, the organization provides the same services at the twelve other libraries that are in the area. I use the website to compare their services to the population demographics to see which areas they are excelling or falling behind in.

## **Results & Discussion**

After putting the town of Black Mountain under multiple microscopes, I have uncovered the fact that a majority of these groups reside within the Black Mountain Library's community. One of the most useful abilities that GIS mapping can provide is that it provides organizations the ability to identify different kinds of populations are within the vicinity. This allows the library to create and/or modify their services so that they can cater to that specific kind of audience. After all, an organization has to cater to the needs and wants of its community if they want to succeed.

*Median Household Income:* One of those needs just so happens to be one the most common needs that not just libraries, but businesses in general have to meet as well. That need is to provide services that the community can afford within the range of their income. Compared to the average median household income in North Carolina (\$63,597), the income in Buncombe County is a little bit below average. Referring back

to Table 1, the average median household income in Buncombe County is \$60,548.

Despite that though, the county does not seem to be economically disadvantaged. If you look at the demographic map (Figure 1) of Buncombe County, most of the opulent and middle class community seems to be concentrated towards the south near Asheville.

Part of that particular community just so happens to reside within the borders of Black Mountain. According to its respective map (Figure 2) from SimplyAnalytics, most of the community that is part of the middle class makes up the majority of the Black Mountain population. Based on this observation, it would seem what while the community the library is trying to cater to may not have a super luxurious lifestyle, they do however have the financial means to be able use some of the library's services, like the used book sale program for example.

*Family Population & Single Parents:* Out of the 8,598 residents that reside within Black Mountain, 74.99% of that population is made up of families in general. Black Mountain, NC seems to be a family oriented community where the majority of services that are provided are geared towards a family-based audience. To be more specific, the community seems to be mostly occupied by single-parent families. According to the single parent demographic map (Figure 3), the population seems to cover a little more than half of Black Mountain. While the single parent population may seem like the minority on paper, it is what makes up the majority of Black Mountain's population in general. While I have absolutely no experience whatsoever, I can see single parenting as a very challenging and stressful job in of itself. The parent not only has to take care of the kids, but also has to make sure they have both a roof over their

heads and food on the table. It probably leaves them with little to no time to take their kids to the library, which makes giving them access to library services a bit difficult.

*White Collar Employment:* Another obstacle that single parents face is the time that they have to spend at their workplace. It is even more prominent within white-collar jobs. White-collar jobs are jobs that involve working in an office or administrative setting. Some of these jobs involve running a whole business or organization, which keeps the parent away from home and their kids. Going back to Table 1, about 57.14% of the Black Mountain community has white-collar jobs. This is even more evident in its respective demographic map (Figure 4), where the white-collar population dominates more than half the community. If you look at both Figure 3 and Figure 4 side by side, you will notice that both populations overlap one another in certain parts of the community. This shows that some of the single parents that live in Black Mountain also have white-collar jobs as well.

*Households with One Vehicle:* Another factor that seems to be dominating within the Black Mountain community is the population that comprises of people who only have one vehicle. If you look at Table 1, 39.07% of the Black Mountain community only own one vehicle, which is a decent percentage. Figure 5 solidifies this, which is a demographic map that shows where households with one vehicle are concentrated. Figure 5 shows that the number of households with one vehicle is highly concentrated towards Black Mountain's western border. The map shows that this overlaps with the previous variables. It further hinders a single parent when they are trying to get their kids access to the public library's services and resources.

## **Library Services**

Looking at the services that the library provides, it seems that the Black Mountain Public Library is taking single parents into consideration. According to Buncombe County website, one of the services that the county library system provides is a program called Story Time Readers. It is a free service that basically brings the library's collection to preschool children at daycare centers while the parents are at work. If a parent can't bring their kids to the library, the library will come to their kids. That way, single parents don't have to worry about denying their kids access to library services because of work.

Another way that the library is making an effort to reach out the their community can be seen within the policies that the library system has created for its branches. The library policy in Buncombe County seems to revolve around putting the patrons at the front first, which is what every library should be doing. One thing about their policy that stands out is that they require non-library sponsored events that take place at their library to be free and open to the public. It would seem that they don't want any potential obstacles to prevent their community from being able to access the potential new opportunities that these events provide. Overall, some of these policies show that not just the Black Mountain library, but also all libraries in Buncombe County are taking some effort to make sure that kids who have single parents can get the access that they need.

### **Recommendations**

Ultimately, I would say that the Black Mountain Public Library is making progress when it comes to meeting the needs of the family-oriented community that they serve. Some of that progress can be attributed to the library system that they serve. They

are reaching out to single parent households and helping them make getting access to their services much easier.

As far as recommendations go, I really only have a few recommendations that improve on a good system that the library has already got. Those recommendations are the following:

1. Continue the outreach programs, but improve upon them by including elementary and middle school kids in their targeted audience.
2. Hire single parent staff so that the single parent community can have someone to relate to.
3. Create and implement services and programs that further make the library unique and stand out from the other libraries in the county.
4. Create and develop more collections that are specifically geared towards the grade K-8 audience.

If the library implements some of these suggestions, then they will make the organization shine brighter than they did before. There are most likely more members of the community that the library hasn't reached out to yet. Most likely, there are new avenues that the library has yet to discover and travel on. Overall, the Black Mountain Public Library is doing all right and they should continue finding ways to improve the services that they are giving to their community.

## Table & Figures

**Table 1:**

Attribute	North Carolina	Buncombe County, NC	Asheville, NC	Black Mountain, NC
Geographic Unit	usa:state	usa:county	usa:place	usa:place
Median Household Income, 2018	\$63,597.00	\$60,548.00	\$57,598.00	\$57,643.00
# Population, 2018	10,329,863	259,764	90,747	8,598
% Family Population, 2018	80.43%	74.64%	64.56%	74.99%
% Families, Single Parents with Children, 2018	18.26%	14.69%	19.22%	13.23%
% Employment, White Collar, 2018	59.40%	59.48%	61.99%	57.14%
% Households w/ 1 Vehicle, 2018	32.93%	36.30%	41.87%	39.07%

**Figure 1:**

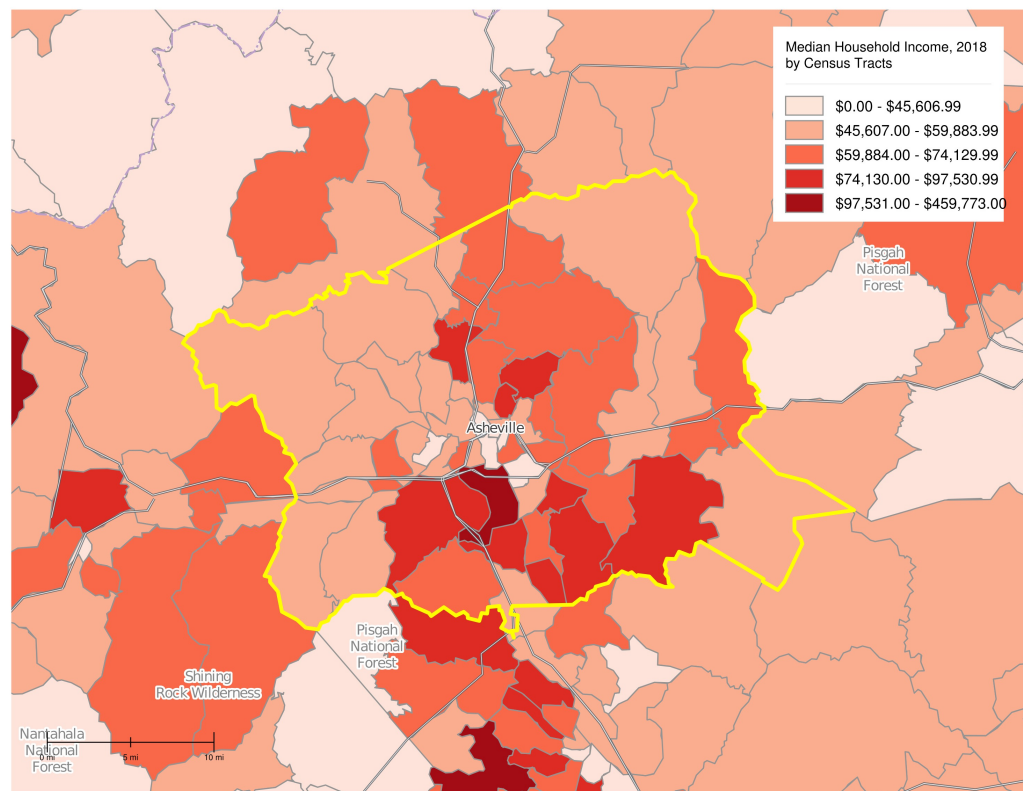
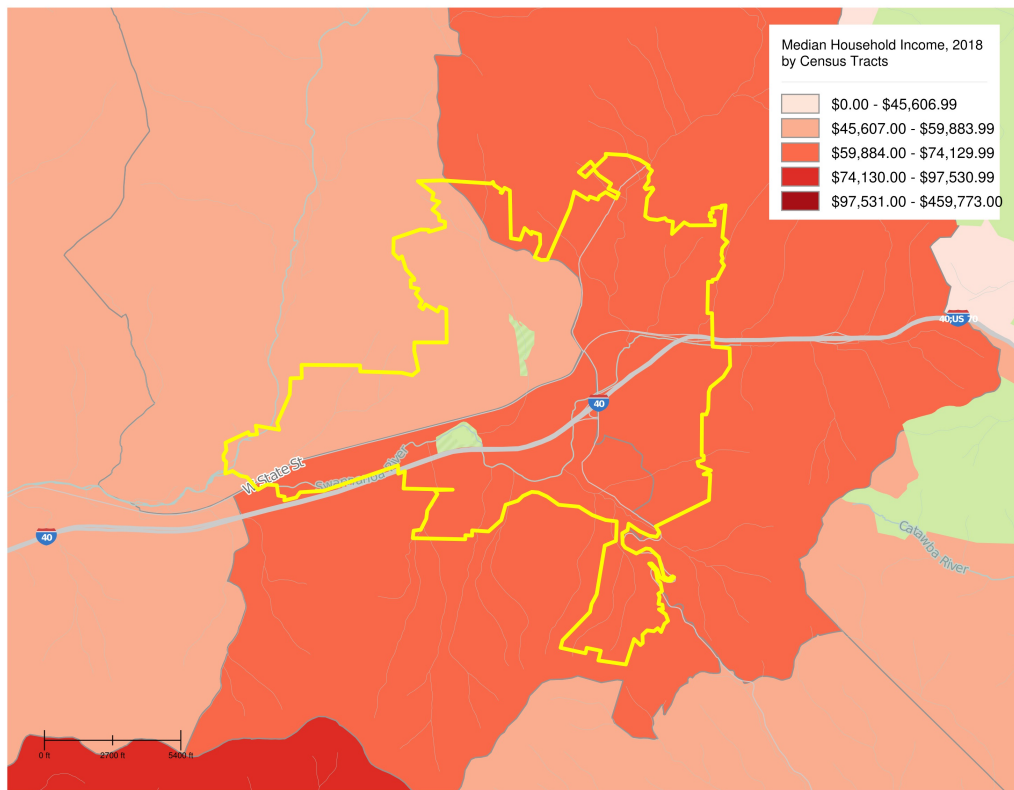




Figure 2:



**Figure 3:**

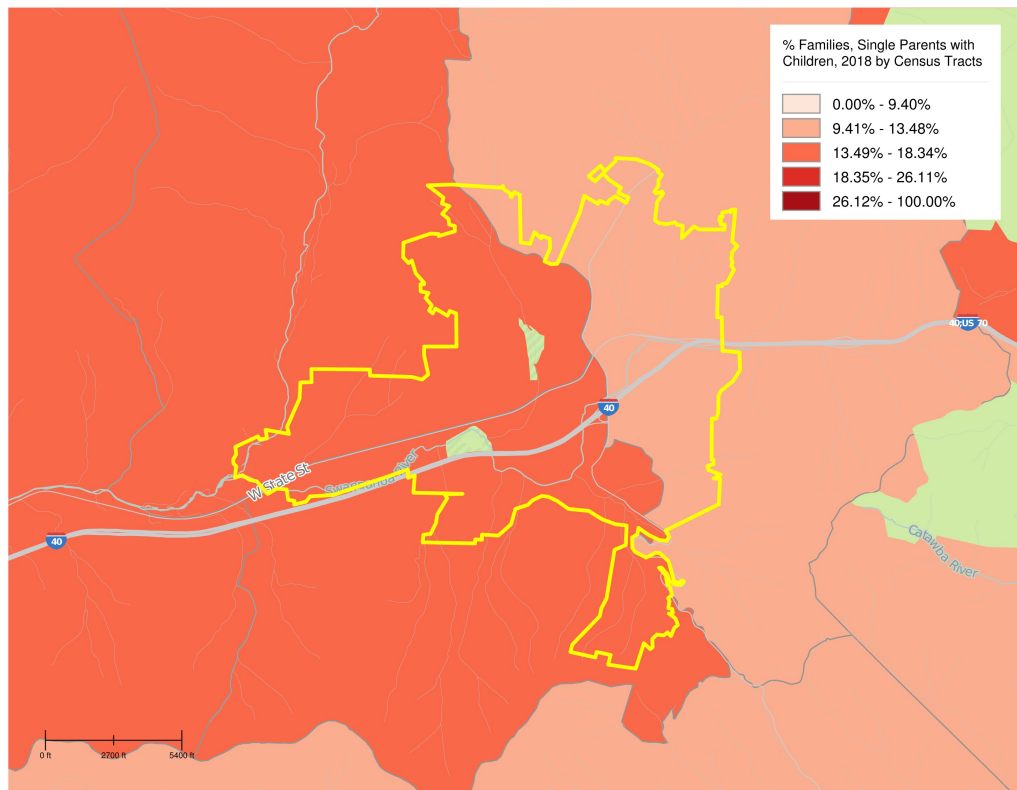


Figure 4:

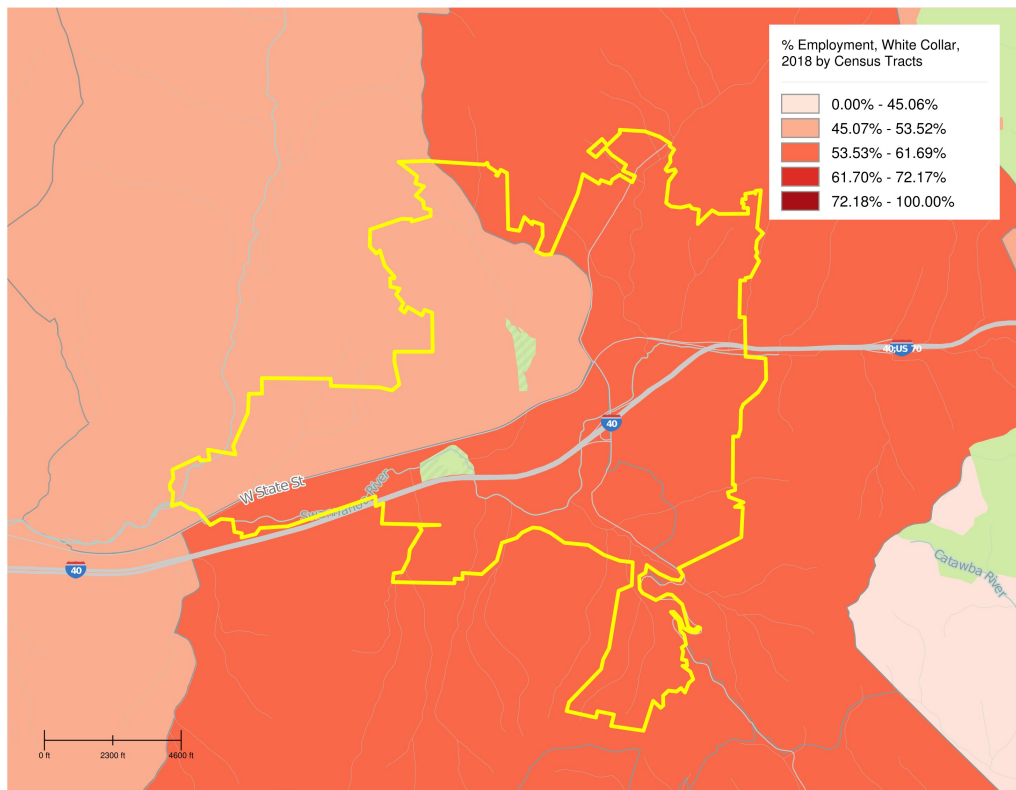
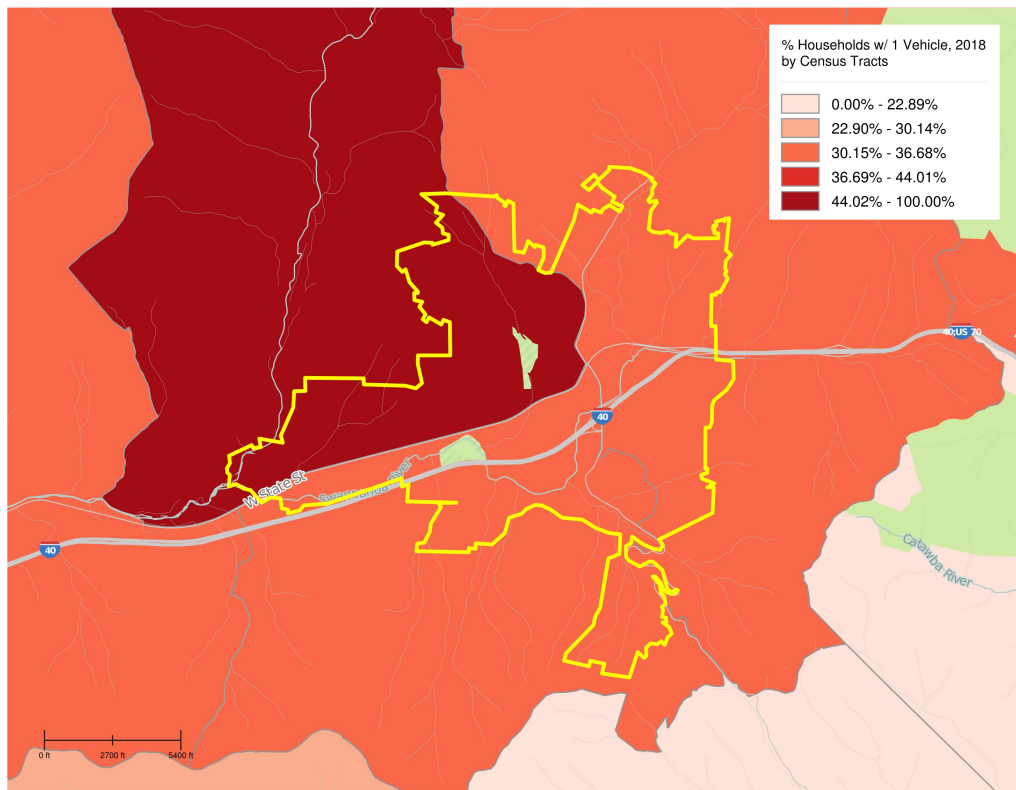


Figure 5:



**Reference**

Black Mountain Public Library. *Buncombe County: North Carolina*.

<https://www.buncombecounty.org/governing/depts/library/branch-locations/black-mountain.aspx> (accessed October 1, 2018).