

A Complex City: The Dynamics of Spatial Structure and Growth in Nashville, Tennessee

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I. Introduction

Nashville, the capital city of Tennessee, has experienced immense growth in its recent history, with the population of the Nashville-Davidson metropolitan area increasing 14.7 percent from 2010 to a total of 689,447 people in 2020.¹ The city consistently ranked among the fastest-growing cities in the past decade and became a hotspot for tourists. Nashville gained the nicknames “Nashvegas” for its bar scene on Broadway, “Music City” for being a major hub of country music, and “Athens of the South” for the universities and colleges located in the city and its Parthenon replica. This paper will explore how Nashville has evolved over time to become the city it is today. I will first discuss employment centers and industries in Nashville through an urban economics lens. Next, I will examine the patterns of land value and population density to see if these trends fit the monocentric model. Then, I will consider the ways in which income and race play a role in the city’s spatial structure. Ultimately, this paper examines the forces that have shaped Nashville’s spatial structure, showing the way in which it diverges from and, occasionally, follows the monocentric model.

II. Centers of Employment

Nashville’s urban spatial layout does not fully conform to the monocentric model. While many businesses are concentrated around the city center, labeled “Downtown” on Map 1, there are other major centers of employment dispersed throughout the city. In addition to Downtown, the Vanderbilt University area is another major center of employment. Even farther outside the

¹ “Nashville-Davidson Metropolitan Government (Balance), Tennessee,” US Census Bureau Quick Facts <https://www.census.gov/quickfacts/fact/table/nashvilledavidsonmetropolitangovernmentbalanceTennessee/PST045222>.

city center, there are regions of high employment, such as the area containing Opry Mills, a shopping mall. The location of the manufacturing sector exhibits some qualities of the monocentric model; Map 2 shows manufacturing concentrated outside of the city center (though only to the east of the city center, which the monocentric model does not specify). Nashville's three sectors, manufacturing, commercial, and residential, do not perfectly conform to the traditional monocentric model.

Downtown Nashville contains a mixture of commercial, government, sports, and entertainment buildings. Though not necessarily one of the tallest cities, Downtown still boasts a number of skyscrapers. The AT&T Building, nicknamed the “Batman Building” for its shape, is the tallest, standing at 617 feet (188.1 meters) high.² Healthcare, music and entertainment, and automobile production are some of Nashville's largest industries, with the three largest employers being Vanderbilt University Medical Center, Nissan North America, and HCA Healthcare.³ To develop Downtown, the city has previously discounted property taxes by over 60 percent to attract real estate investments.⁴ Overall, Downtown has grown tremendously throughout the 21st century.

III. Land Value and Population Density

Map 3 shows that median house values tend to increase when moving southwest of Downtown. The Green Hills and Belle Meade neighborhoods are among the highest-income locations on Map 3 (though Belle Meade is technically not part of the Davidson-Metro balance because it has independent operations). While the map only displays the Nashville-Davidson area, zooming even farther out will show that Williamson County, which is south of Nashville,

² “AT&T Building,” The Skyscraper Center, <https://www.skyscrapercenter.com/building/att-building/2047>.

³ “Major Employers,” Nashville Area Chamber of Commerce, 2020, <https://www.nashvillechamber.com/explore/work/major-employers>.

⁴ Kim Severson, “Nashville's Latest Big Hit Could Be the City Itself,” *The New York Times*, January 8, 2013, sec. U.S., <https://www.nytimes.com/2013/01/09/us/nashville-takes-its-turn-in-the-spotlight.html>.

has consistently higher house values than Nashville. The general pattern that emerges from Map 3 is that suburban housing is more expensive than housing downtown. This finding contradicts the monocentric model's assertion that land values decline as one moves away from the city center. However, this finding assumes house value is a reasonable empirical proxy for land value; examining house value may not show differences in the prices of business property downtown versus business property farther out. The monocentric model predicts that the most valuable land is near a city's core, but, in Nashville, southern suburban dwellings hold greater value. On the other hand, moving outward from the city's core to the north and southeast, the monocentric model accurately depicts the decline of land values.

The monocentric model predicts that population density will increase as land values rise. However, Map 4 reveals that the spread of population density in Nashville does not follow the monocentric model. The most densely populated areas are near Vanderbilt University, in East Nashville, and in the southeast region of Map 4. In fact, areas with the highest median house value from Map 5 are among the lowest in terms of population density. This may indicate that Nashville exhibits urban sprawl and that residents in these high-value areas may have preferences that they are able to afford, such as a preference for space. Additionally, the Nashville-Davidson metropolitan area is relatively spread out, covering 475.28 square miles.⁵

IV. Income Distribution, Gentrification, and Racial Divides

The spread of income is polarized throughout Nashville. Many wealthy residents choose to live south of the city center in Belle Meade and Green Hills, as pictured in Map 5. Upscale houses with a sizeable amount of land typically comprise these neighborhoods. Comparing Map 4 and Map 5 confirms that the population density is very low in these spread-out, affluent neighborhoods. These neighborhoods are still located a relatively close distance to the main

⁵ "Nashville-Davidson Metropolitan Government (Balance), Tennessee," US Census Bureau Quick Facts.

employment centers; thus, the cost of commuting is less of a concern. Furthermore, Tennessee, notably, does not have an income tax, which attracts many people to the city, especially those with large incomes.

East Nashville, North Nashville, and Edgehill have typically been lower-income communities; however, these areas have experienced gentrification as Nashville has risen in popularity. Rising property values have displaced lower-income residents who can no longer afford to live in these areas. East Nashville, known for being a creative, “hipster” area, is one example of such gentrification. Map 6 paints a clear picture of how widespread the percent change in median house value was from 2011 to 2021 in East Nashville. Richard Lloyd, a professor at Vanderbilt University, calls out urban renewal efforts in East Nashville, writing “redesign aimed at creating ‘community and connectivity’ cannot be said, in this case, to be innocent of racial and class exclusions.”⁶

Cameron Hightower of Vanderbilt University and James Fraser of the University of Minnesota discuss gentrification in North Nashville, which is home to multiple historically black colleges and universities such as Fisk University marked on Map 7. They conducted interviews, finding rent increases led to the involuntary displacement of many previous North Nashville residents. The residents in their study lived predominantly in “one-story, single-family homes” and were “almost exclusively African American.”⁷

Edgehill is another site greatly affected by urban renewal and marked on Map 7 with a high level of black population. Edgehill was one of the first African-American neighborhoods in

⁶ Richard Lloyd, “East Nashville Skyline,” *Ethnography* 12, no. 1 (March 1, 2011): 131, <https://doi.org/10.1177/1466138110387219>.

⁷ Cameron Hightower and James C. Fraser, “The Raced-Space of Gentrification: ‘Reverse Blockbusting,’ Home Selling, and Neighborhood Remake in North Nashville,” *City & Community* 19, no. 1 (2020): 230, <https://doi.org/10.1111/cico.12444>.

Nashville and was largely established through redlining during the Jim Crow era.⁸ Now, Airbnb renters and upscale businesses seek to locate in Edgehill. Previous zoning efforts have attempted to protect the historic community, and, currently, the Metro Nashville Planning Department is working on a plan with a stated goal of preserving “Edgehill’s historic neighborhood and mixed-income character.”⁹ Ultimately, the challenges Nashville’s historically black neighborhoods face play a large role in the urban composition of the city as a whole.

V. Conclusions

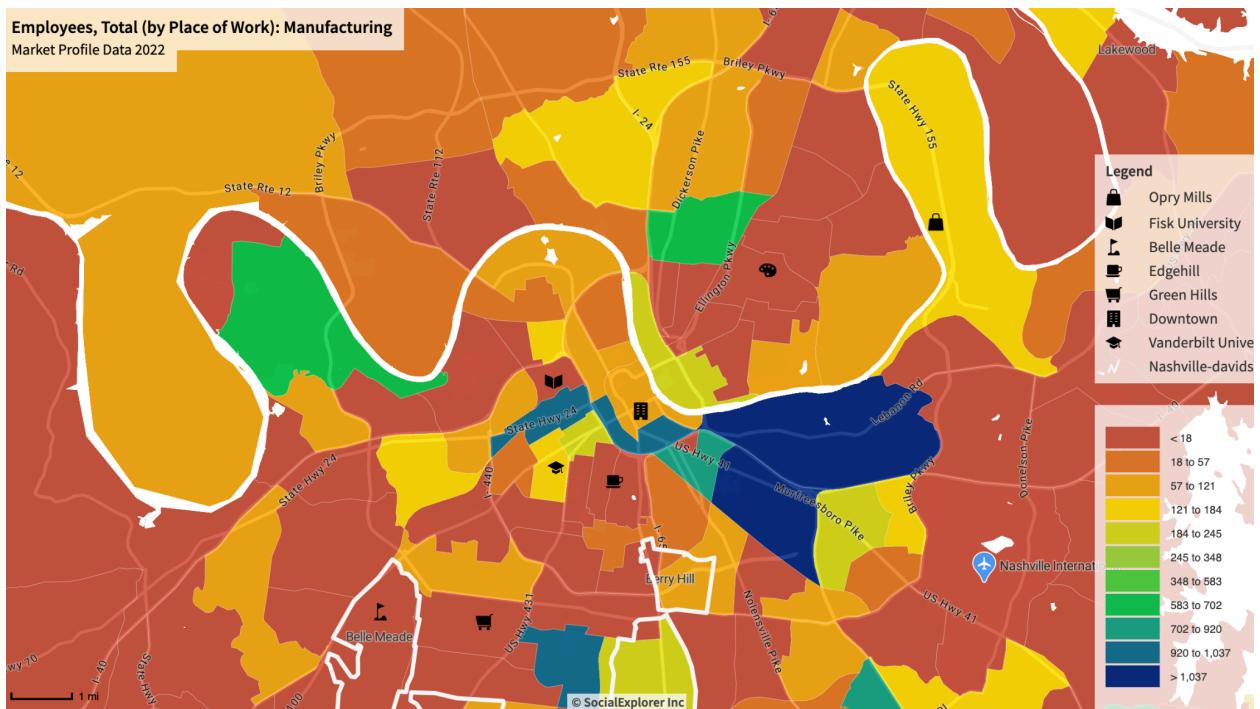
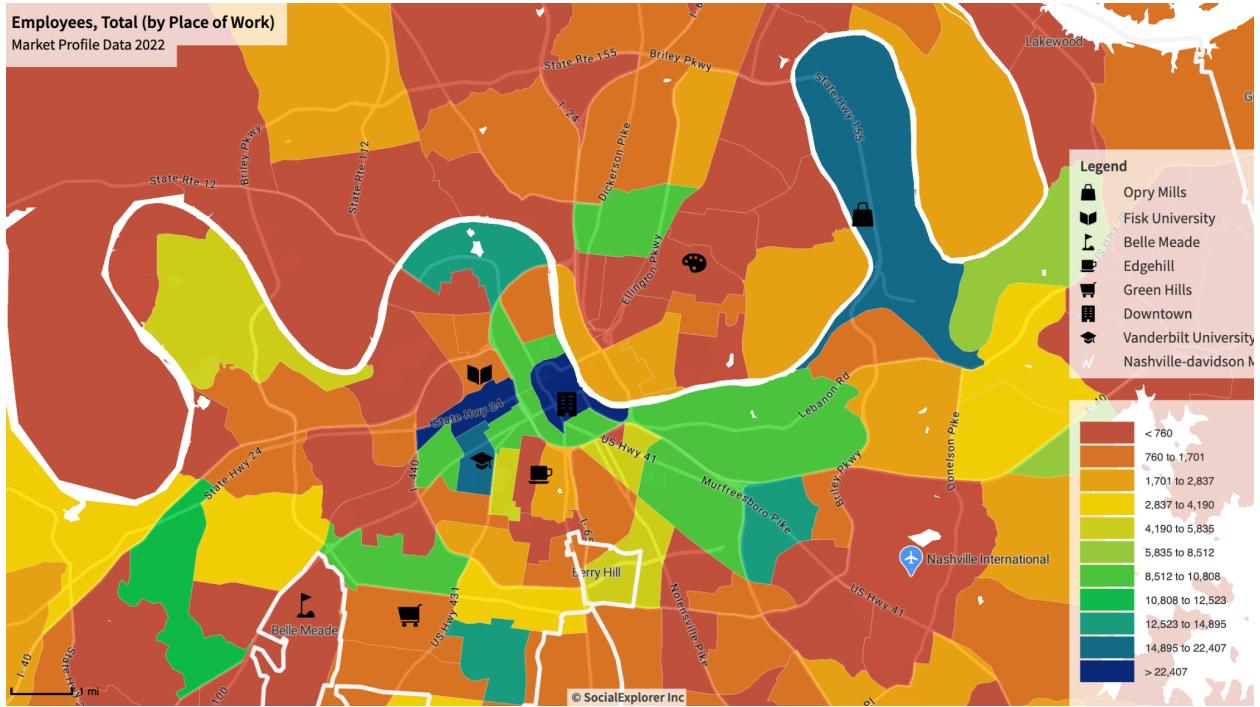
This paper examined measures of employment, land value, population density, income, house value change over time, and race, seeking to understand how and why trends across these measures have formed. In sum, Nashville contains several main centers of employment, the largest being Downtown and the Vanderbilt University area. This diverges from the monocentric model that emphasizes a commercial city center. Nashville adheres somewhat to the monocentric model’s prediction of the location of the manufacturing sector. The healthcare industry has been a consistent economic driver for Nashville’s growth. The concentration of educational establishments has also helped foster development. The city’s lack of income tax and comparatively low property taxes have attracted business investment. Some of the patterns of land value and population density are opposite the monocentric model predictions. In the southern suburbs, land has high value but low population density. South of the city center, specifically, Belle Meade and Green Hills, is where the wealthiest and most white neighborhoods are. North Nashville, Edgehill, and East Nashville are on the lower end of the income spectrum.

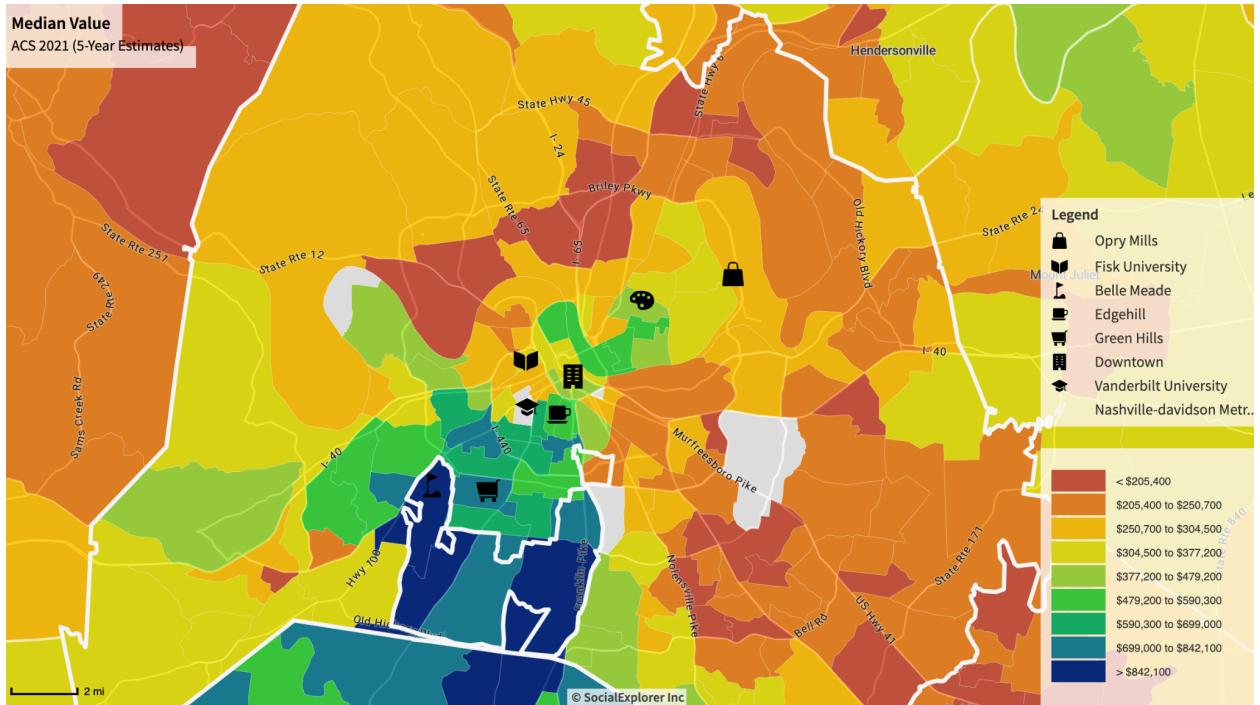
⁸ Victoria Hensley, “‘State of Emergency’: Edgehill, Nashville, Tennessee and the Fight Against Displacement from Urban Renewal to Gentrification,” *ProQuest Dissertations and Theses* (Ph.D., United States -- Tennessee, Middle Tennessee State University, 2022), 87, <https://login.proxy048.nclive.org/login?url=https://www.proquest.com/dissertations-theses/state-emergency-edgehill-nashville-tennessee/docview/2656130838/se-2?accountid=10427>.

⁹ “Edgehill Community Planning Study,” Metropolitan Government of Nashville and Davidson County, Tennessee, <https://www.nashville.gov/departments/planning/long-range-planning/local-planning-studies/edgehill>.

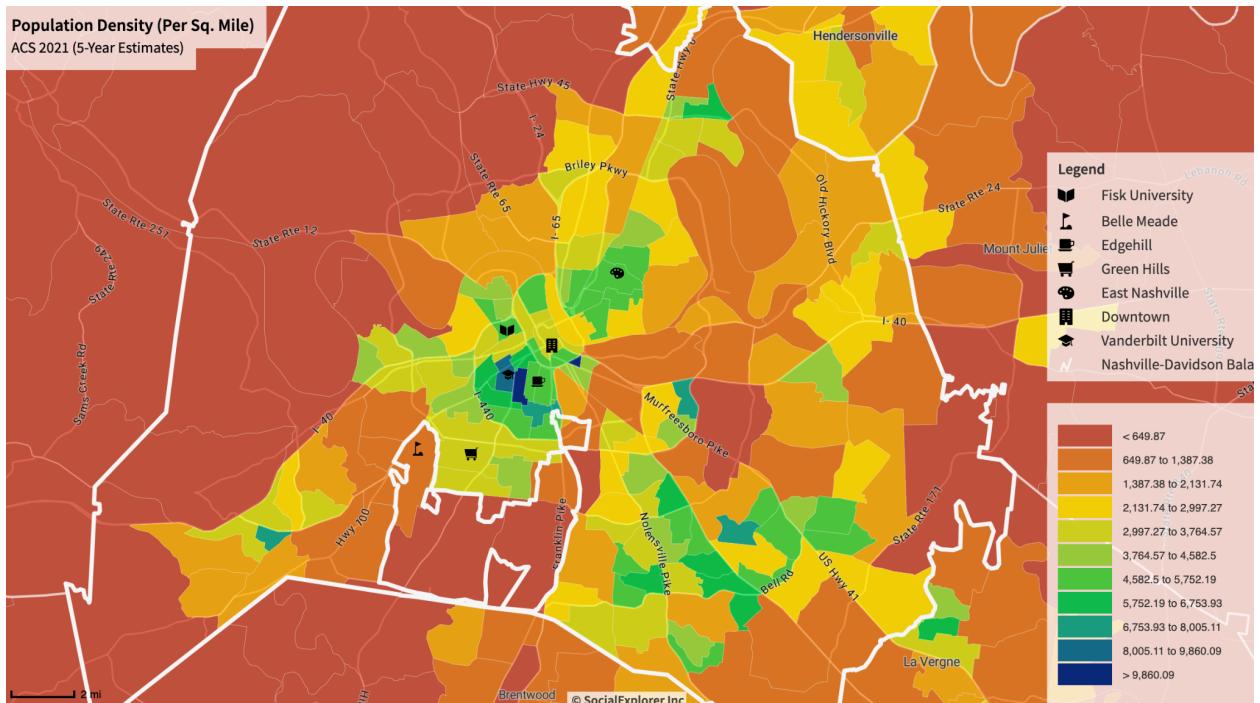
There are many factors that have shaped the trends seen today. Broadly speaking, historical events, business decisions, government policy, and geography are among some of the most influential factors. This paper provides an overview of some of the shaping factors, though it certainly does not cover in detail how complex Nashville's history is.

Maps:

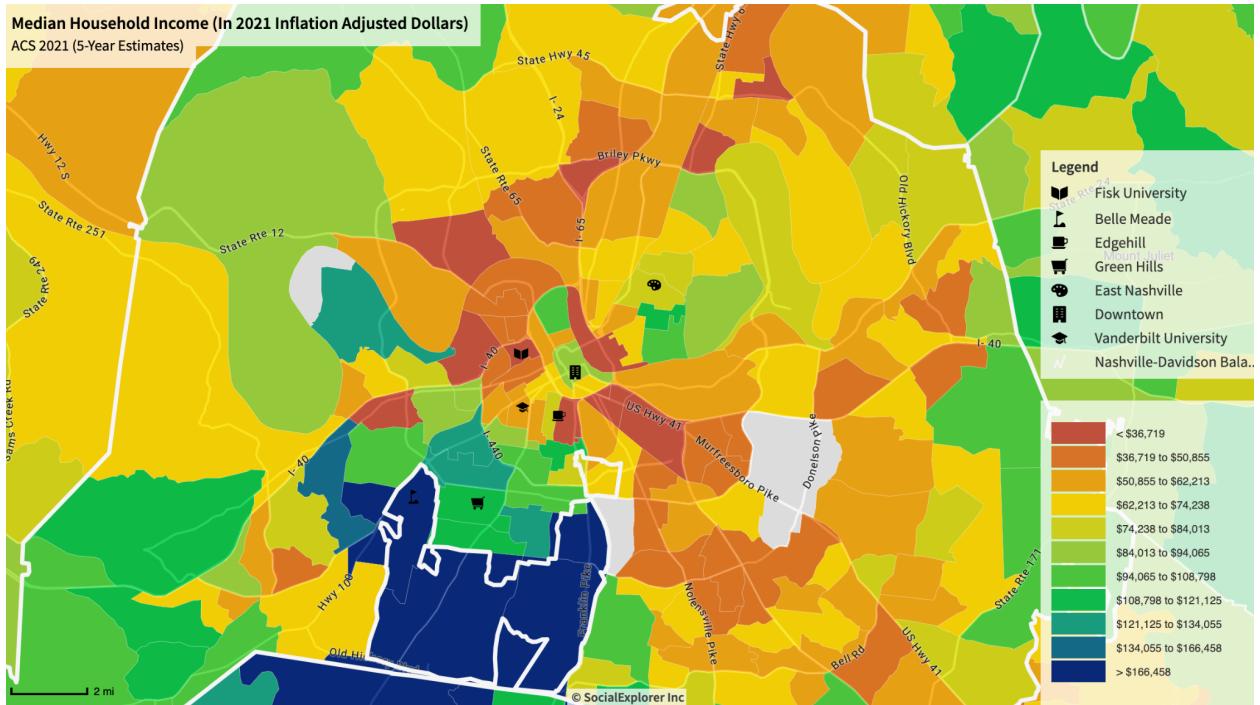




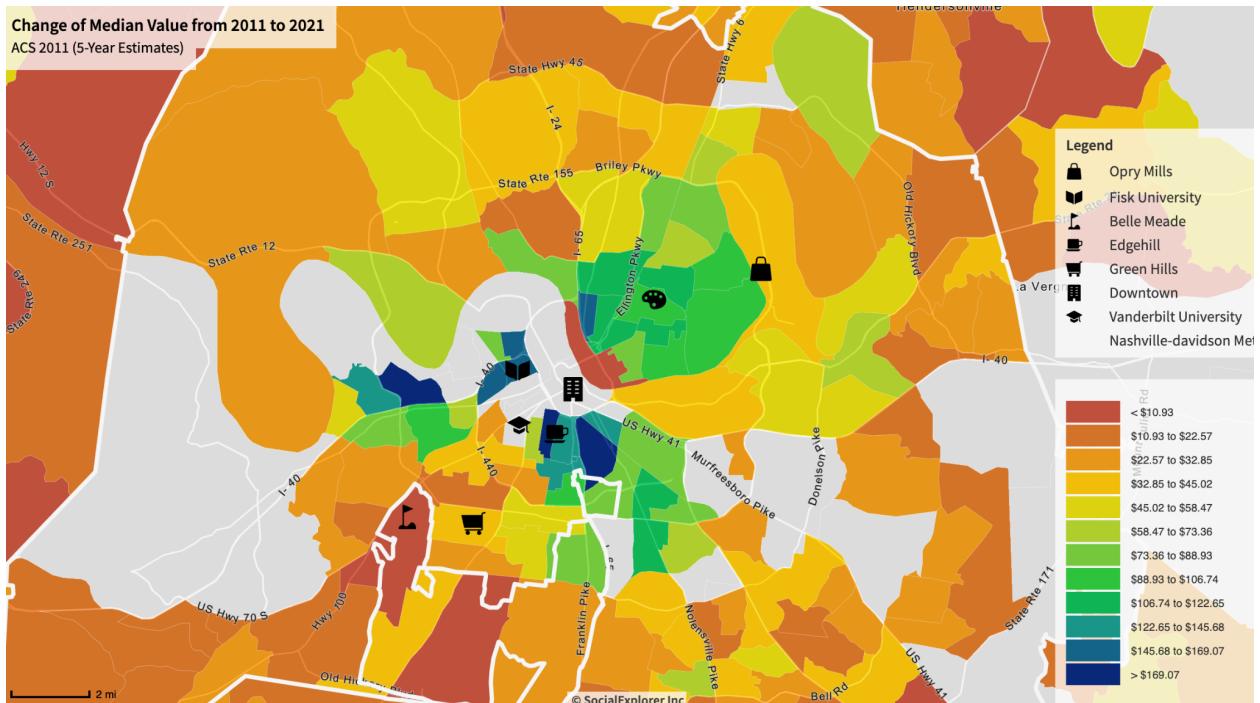
Map 3 – Median House Value for Nashville, TN: ACS 2021 (5-Year Estimates)



Map 4 – Population Density for Nashville, TN: ACS 2021 (5-Year Estimates)

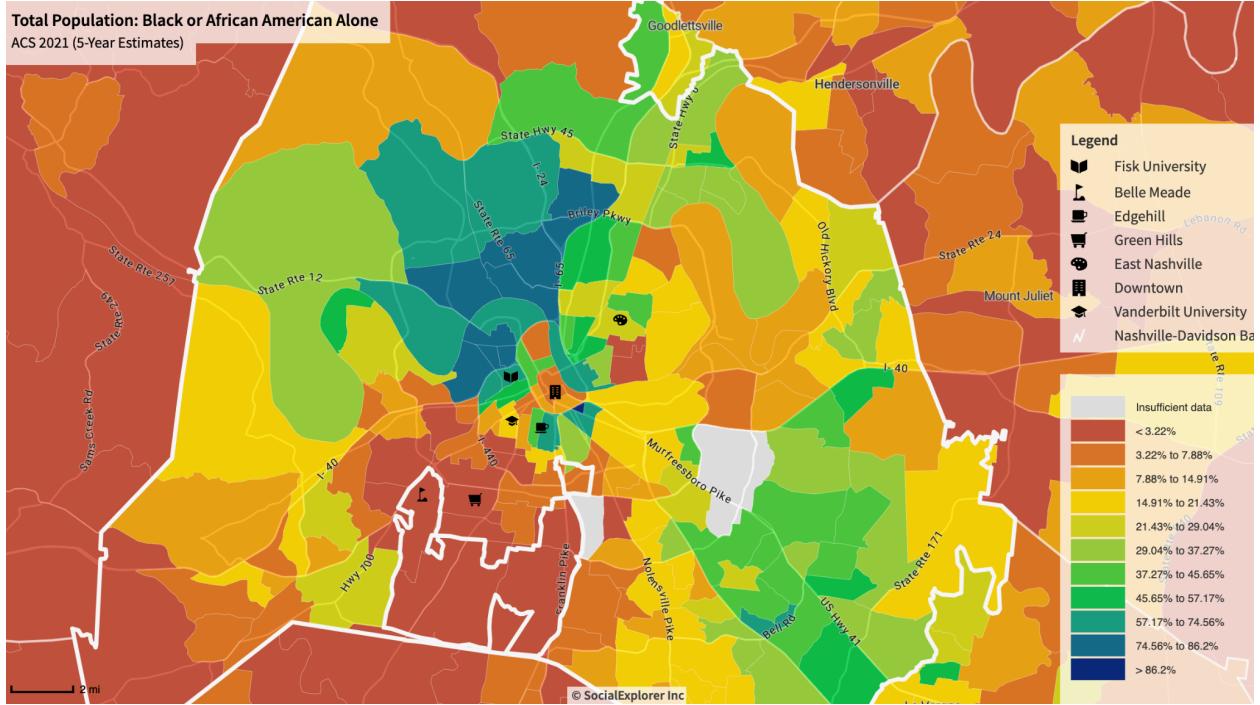


Map 5 – Median Household Income for Nashville, TN: ACS 2021 (5-Year Estimates)



Map 6 – Percent Change of Median House Value for Nashville, TN: ACS 2021 (5-Year Estimates), 2011 to 2021

*note: Social Explorer kept marking the legend using the dollar sign symbol instead of the percent symbol only when I exported it to a png. This map shows *percent* change and I am not sure why the key is marking it in dollars when I export it.



Map 7 – Black Percent of Population for Nashville, TN: ACS 2021 (5-Year Estimates)

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