Understanding the Complex Canvas of Lafayette Using Data Visualization

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Introduction/Background:

The city of Lafayette is rich in culture, creating a complex and diverse canvas of study. The issue of concern involves the equitable balance of resources and opportunity. In order to provide a viable solution to access to resources, population data must be explored to identify where the imbalances are. The purpose of this research is to apply data visualization techniques to understand census data for Lafayette. This research aims to address the following research questions: What are the socioeconomic indicators of growth and development that characterize Lafayette? Are there other unexplored indicators that could provide insight into stakeholders? In this study, 2019 census data for Lafayette will be analyzed for unexplored trends. Ultimately, the goal is to inform stakeholders on how they can more efficiently balance resources among struggling areas. The implications of this work will inform future resource distribution and development decisions based on census data.

Methodology

The data was provided by Dr. Byrd in an Excel Sheet with just under 4000 data entries. The tools utilized included Excel and Tableau to visually represent the data. We decided to focus on the 2019 data sheet and chose household ownership as our primary focus to identify neighborhoods where most of the population is living temporarily by renting.

Insights/Results

Figure 1 shows housing ownership in Lafayette neighborhoods. By representing it visually, we are able to identify neighborhoods such as Historic Jefferson and Lincoln where the majority of the population is renting and may need new housing changes. Figure 2 is filtered by those with under 20,000 household income to identify only those of low-income. We represent the circles with color (home owner) and size (years in home) to better understand the population distribution. This gives us confirmation that Historic Jefferson and Lincoln have low home ownership for their population. However, by seeing the blue circles larger than others, we see they are not necessarily living there temporarily as they have a higher value in years in home than other neighborhoods such as Hedgewood and Vinton, where the blue circles are smaller.

Conclusion/Next Steps:

This project is still a work in progress. Since there are many different data variables available to use in the dataset, a larger dashboard will be created connecting many more population attributes, such as veteran status, household income, internet usage, and other topics that will help identify resource balance in Lafayette.

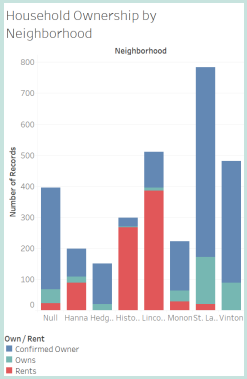

Figure 1

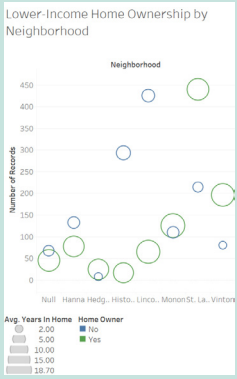

Figure 2

Tools Used:
Excel, Tableau

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