

IE 6600 Computation and Visualization

Project 2

Regional Desirability Dashboard

Documentation

Name – Paritosh Vyawahare

NEU-ID:002416079

Introduction

The project is about creating a data visualization dashboard that analyzes various regional data based on zip codes. For this project Howard County is used which comes under Maryland State. Tableau and Excel are used for this project.

References (Data Collection)

U.S. Census Bureau. (2022). American Community Survey (ACS) 5-Year Data (2017–2022): Employment Status, total population, poverty status, and median income by ZIP code. Retrieved from <https://data.census.gov/table>

Zillow. (2022). Housing prices by ZIP code. Retrieved from <https://www.zillow.com/research/data/>

Variables used

- 1) Total Population
- 2) Employment Status
- 3) Mean Income
- 4) Housing Prices
- 5) Poverty Status

Methodology for Calculating Overall score

1) To calculate the composite or overall score for the selected metrics z-score standardization method is used. I calculated Z-score standardization using python

2) Z-score gives negative values as well, so I used min-max scaling for scaling the values in the range 0-1

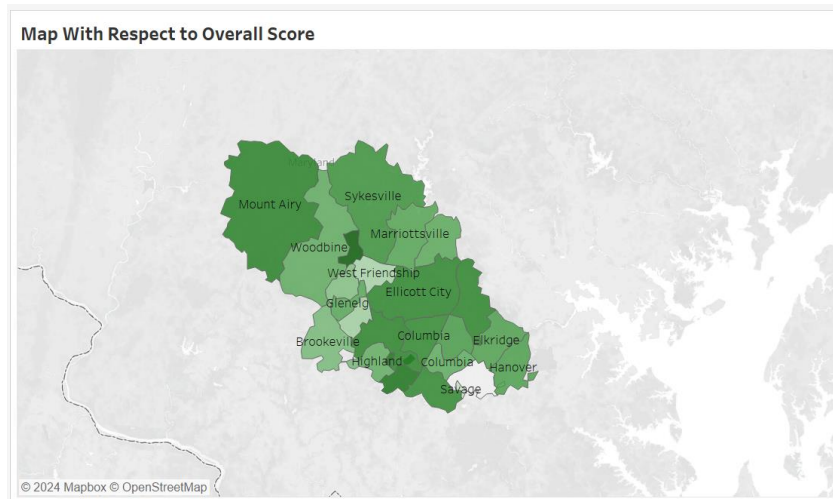
3) Weight allotment

- Total population = 15%
- Mean Income = 30%
- House Prices = 10%
- Employment = 35%
- Poverty Status = 10%

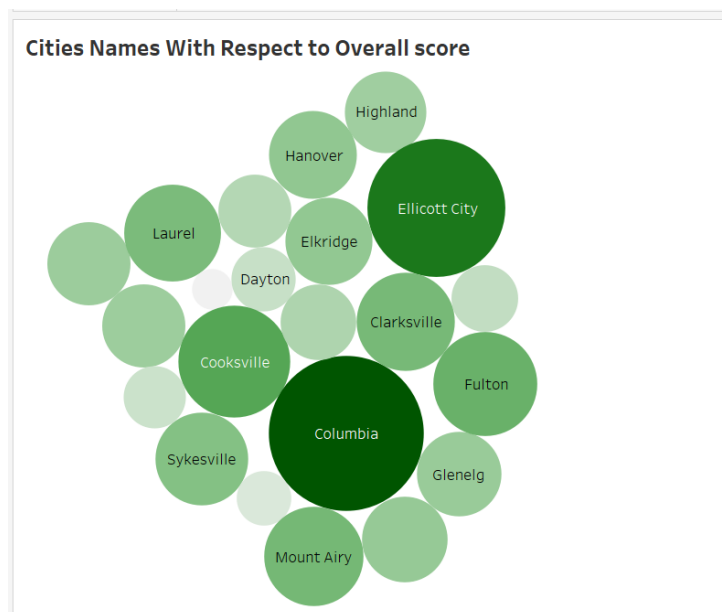
- 4) Then I Multiple the score obtained from min max by its respective weight allotment
- 5) Overall score was calculated by adding all the scores for a particular zip code divided by 5 (which is total number of variables)

Insights From the Dashboard

Howard County in Maryland is one of the most popular county which is known for its quality of life and top schools.



This map represents the city and its respective overall score within Howard County.



Cities like Columbia and Ellicott have the highest overall score which means these cities have low poverty rates and high employment which makes these two cities the most desirable cities within the Howard County

Link for Tableau Dashboard

https://public.tableau.com/views/HowardCountyDesirabilityDashboard/HowardDasboard?:language=en-US&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

