Estimation of discretionary income by region

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Problem Statement

We propose to create a program as a tool to assist in rough estimation of calculating expected discretionary income (the income leftover after taxes, and cost of living: obligatory costs are deducted) over the different states in the United States.

Data

- Cost Of Living and Quality of Life data from https://www.numbeo.com/cost-of-living/. NUMBEO is a crowd-sourced global database of reported consumer prices, perceived crime rates, quality of healthcare, among other statistics.
- Federal and State Income Tax Rate from https://taxfoundation.org/
- Average salary data by region from US government Census Bureau and Bureau of Labor Statistics API.

Prospective Solution and Real World Application

This tool would aim to help students and professionals alike, gain an understanding of the ratio of expenses as it pertains to offered salary for given regions. This tool will be helpful in job searches as spot-checks for practical estimations, or for assisting in negotiating higher salaries.

Additional features can be implemented to improve context of the results given to the user, depending on the complexity of resolving the data. Such additional features could include:

- Comparison between two regions for a given salary
- Comparison for that salary against industry average in the region
- Visualizations for a given salary's results distributed across a landscape map
- Referencing region's Quality of Life index
- Referencing Individual versus Married, w/ children options to elaborate further precision

Prospective Display Form

We will present the statistics result in the form of visual data by using Python Matplotlib and Seaborn library.

An expected salary breakdown can be elaborated as a **Pie chart**, representative of how much of the proposed salary is consumed by expected obligatory expenses, versus how much is left over.

Another visualization breakdown can relate the resultant discretionary income against other regions via an **intensity mapping** breakdown through the US map.

Project Steps:

Step	Estimated completion time	Person(s) in charge (among the group of 3)
1. Extraction, cleaning and compilation of data	**1.5 weeks**	**Steve Sharp, Tanaya Kolankari**
2. Data processing and tool generation	**1.5 weeks**	**Yifei Wu, Tanaya Kolankari**
3. Data visualization (to obtain data statistics and mapping)	**1 week**	**Yifei Wu, Steve Sharp**