Poverty in Colorado

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The Situation Today in Colorado

9.4% - Coloradans below the poverty line

$1.76 - Average SNAP Benefit Per Meal

14,439 - Total Number of Homeless Coloradans

$520,000 - Median Single-Family Home Price

69% - Increase in Family Homelessness from 2022 to 2023

How Did We Get Here?

This is our overarching question.

Areas of focus:

1. Poverty
2. Homelessness
3. Housing
4. Employment
5. Income

We hope to begin to paint a clearer picture of our question through our analysis.

Data Collection

- The goal of our data window was for the years 2011-2021
- Data was collected from the following sources:
  - U.S. Census Bureau, HUD Exchange, State of Colorado, Federal Reserve Bank of St. Louis, Self-Sufficiency Standard
- Some data was retrieved using the Census API
  - We had to collect data for each county and year separately
  - County data was retrieved using FIPS codes
  - Allowed us to do comparisons between counties with the lowest & highest populations and the state
- Other data was imported from CSV and Excel files

Data Cleanup and Exploration

- Data was cleaned using Python and Pandas

- Some data was cleaned using Excel to remove unnecessary sheets and to format the data

- Data was exported to a CSV file

Group Approach for Achieving Goals

- We divided the work into tasks and assigned them to each team member
- We met regularly to discuss progress and issues
- We used Slack, GitHub, and Google Drive to communicate and share files
- We used Jupyter Notebook to write and test our code
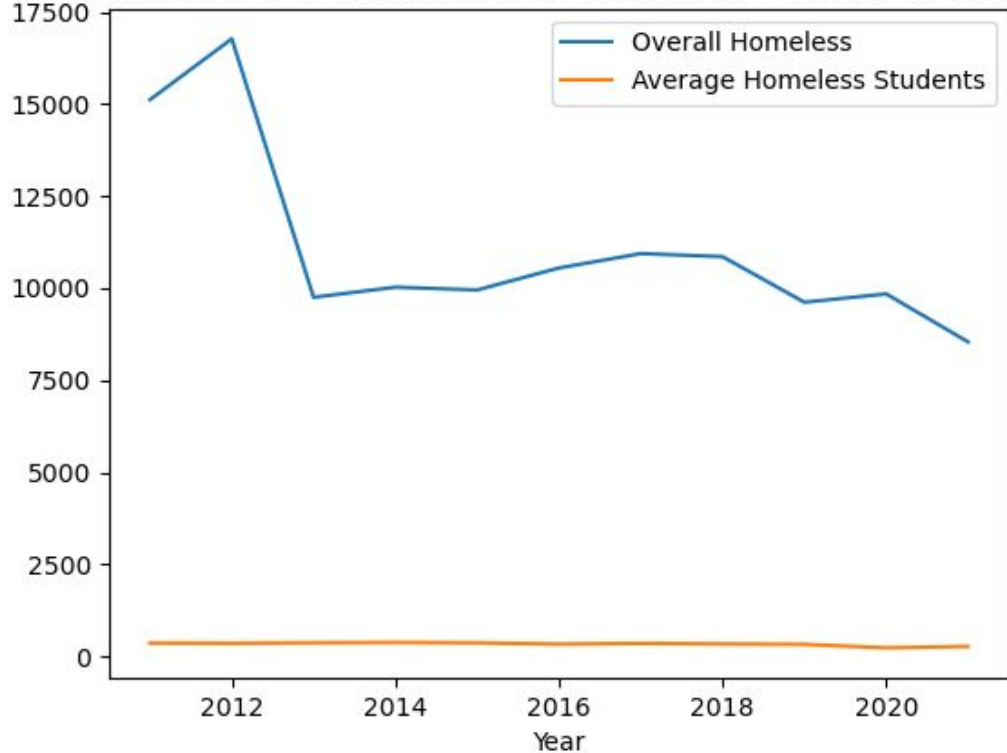- We used matplotlib to create visualizations

Homelessness

Does the Homeless Students and PIT data correlate?

Overall Homeless PIT numbers have no correlation to the average number of homeless students

Overall Homeless vs. Avg Homeless Students in Colorado (2011-2021)
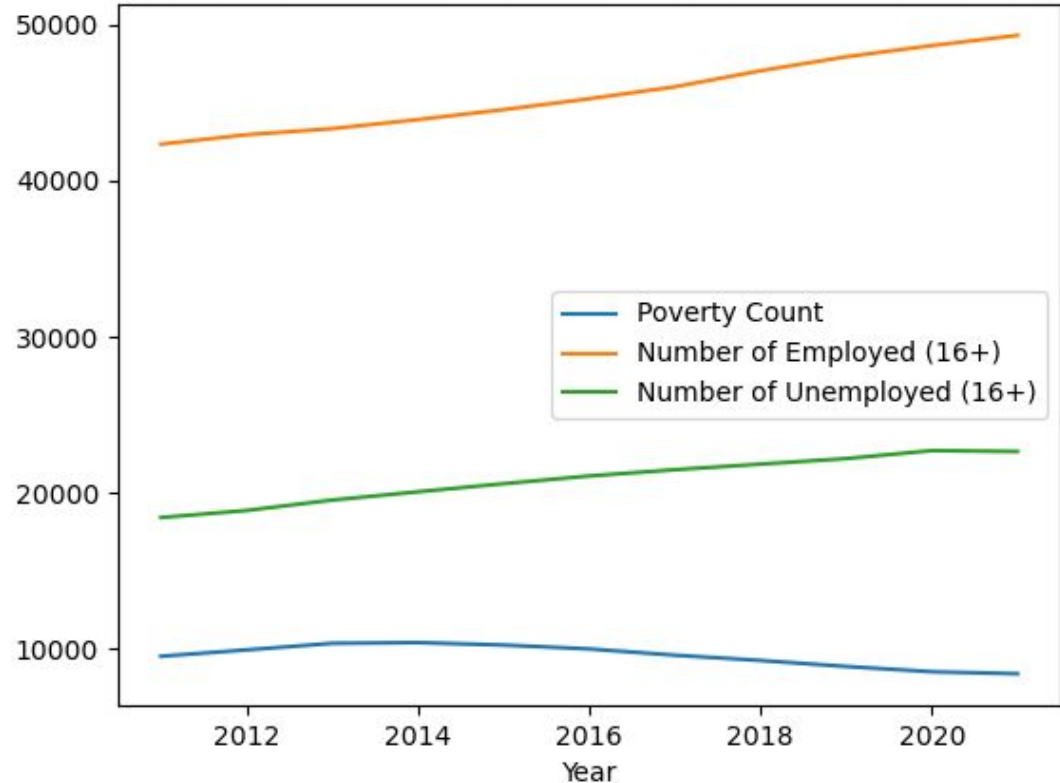
Poverty vs Employment

Is there a relationship between poverty and employment?

There does seem to be an inverse correlation between the poverty count and the employment count.

Data sources: U.S. Census

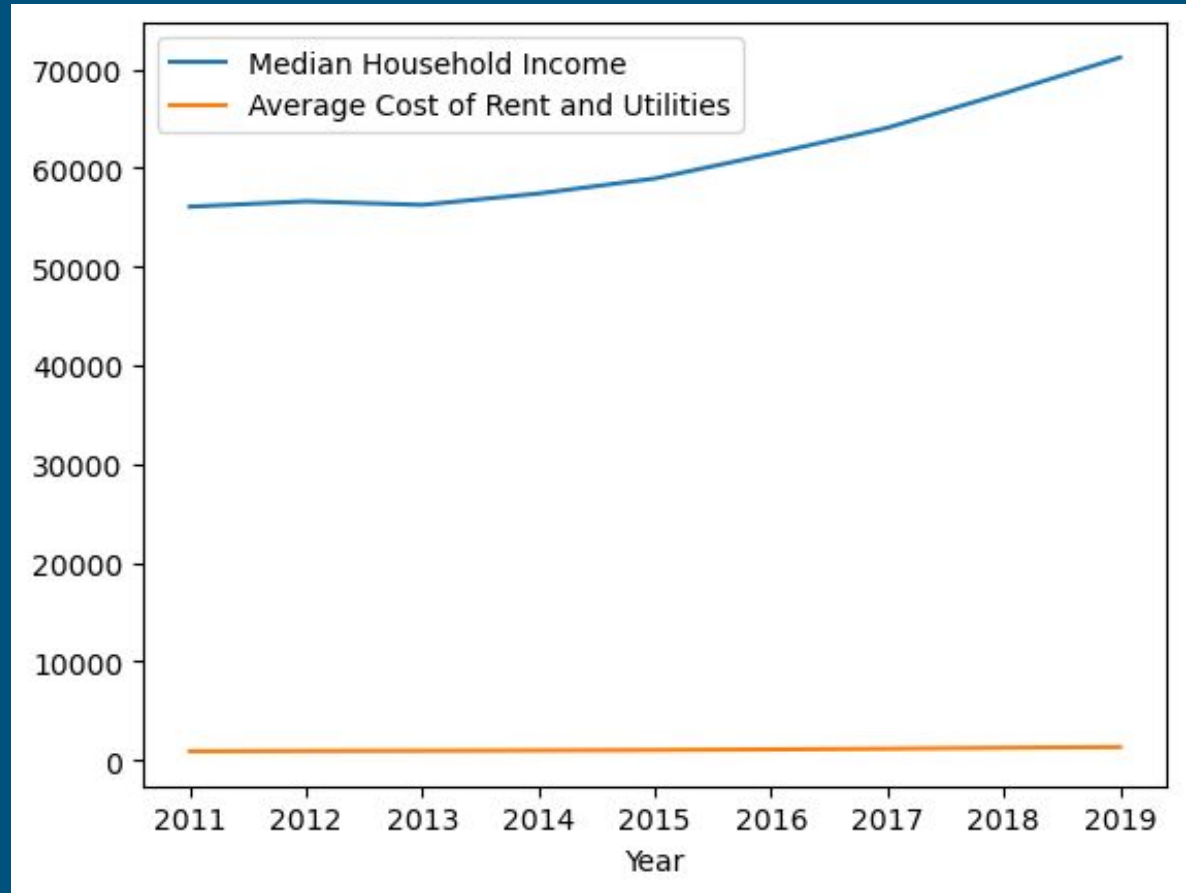Poverty Count vs. Employment (16+) in Colorado (2011-2021)

Legend:
- Poverty Count
- Number of Employed (16+)
- Number of Unemployed (16+)

Housing

Is income keeping pace with the average price of rent?

The data shows that the median household income is keeping pace with the average cost of rent and utilities
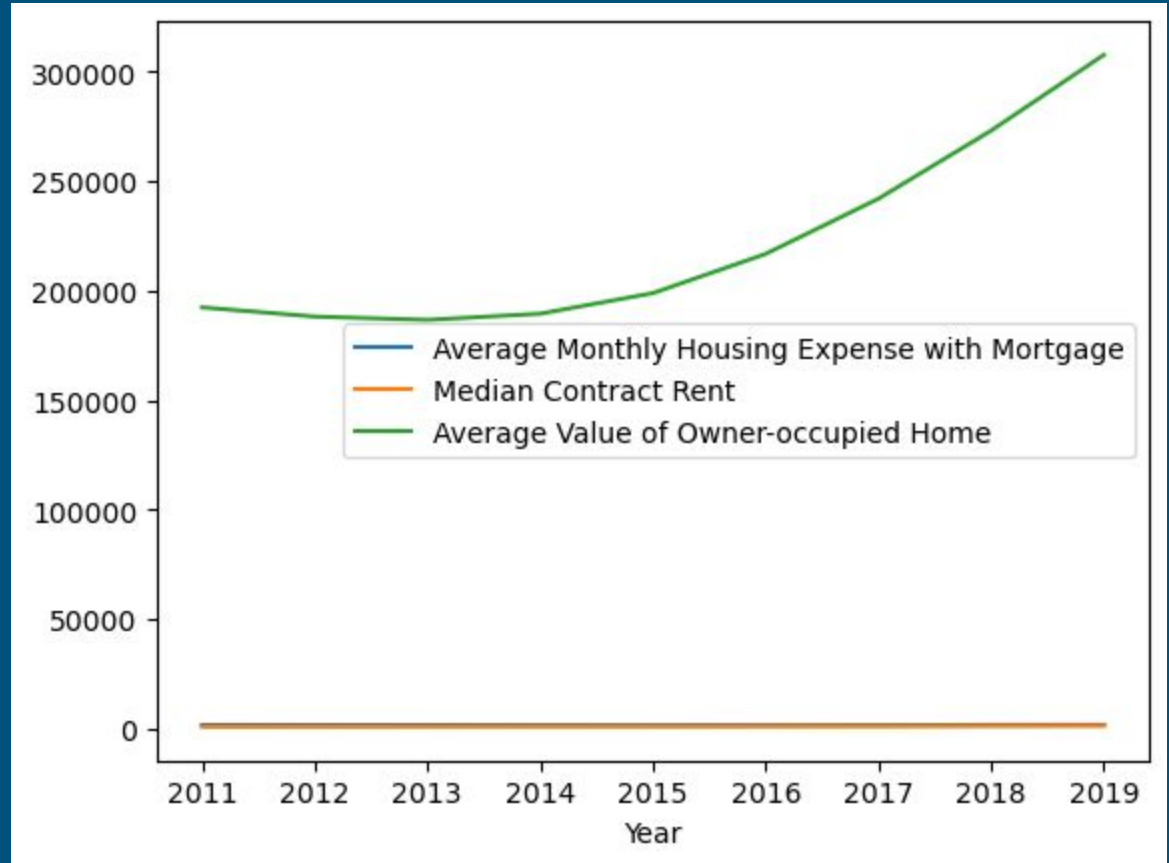
Housing

Is there a correlation between the cost of rent, the value of homes, and the average monthly housing expense with a mortgage?

There is a strong correlation between rents and mortgages, with a moderate correlation between the average home value and rents/mortgages.
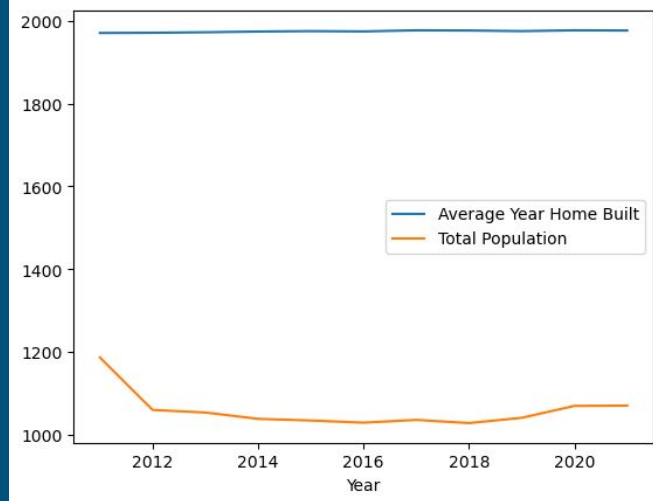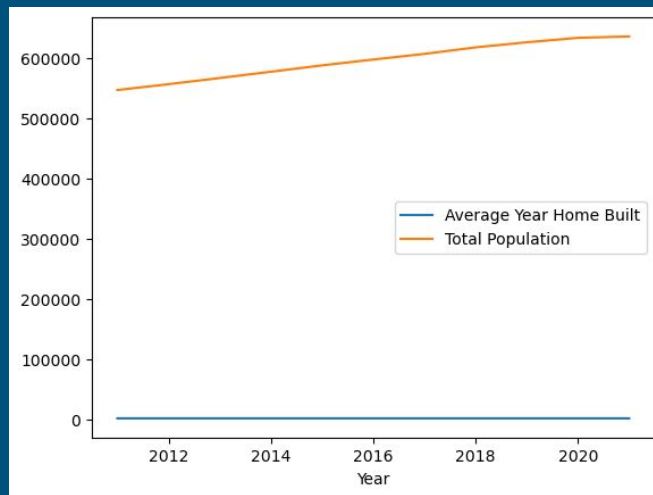
Data source. U.S. Census

Housing

Is there a correlation between the average amount of homes built, the five largest counties in Colorado (Urban) and the five smallest counties in Colorado (Rural), by population.

Urban Counties: A correlation between new home construction and population increase.

Rural Counties: A correlation between current inventory (older homes) and a slight increase in population.
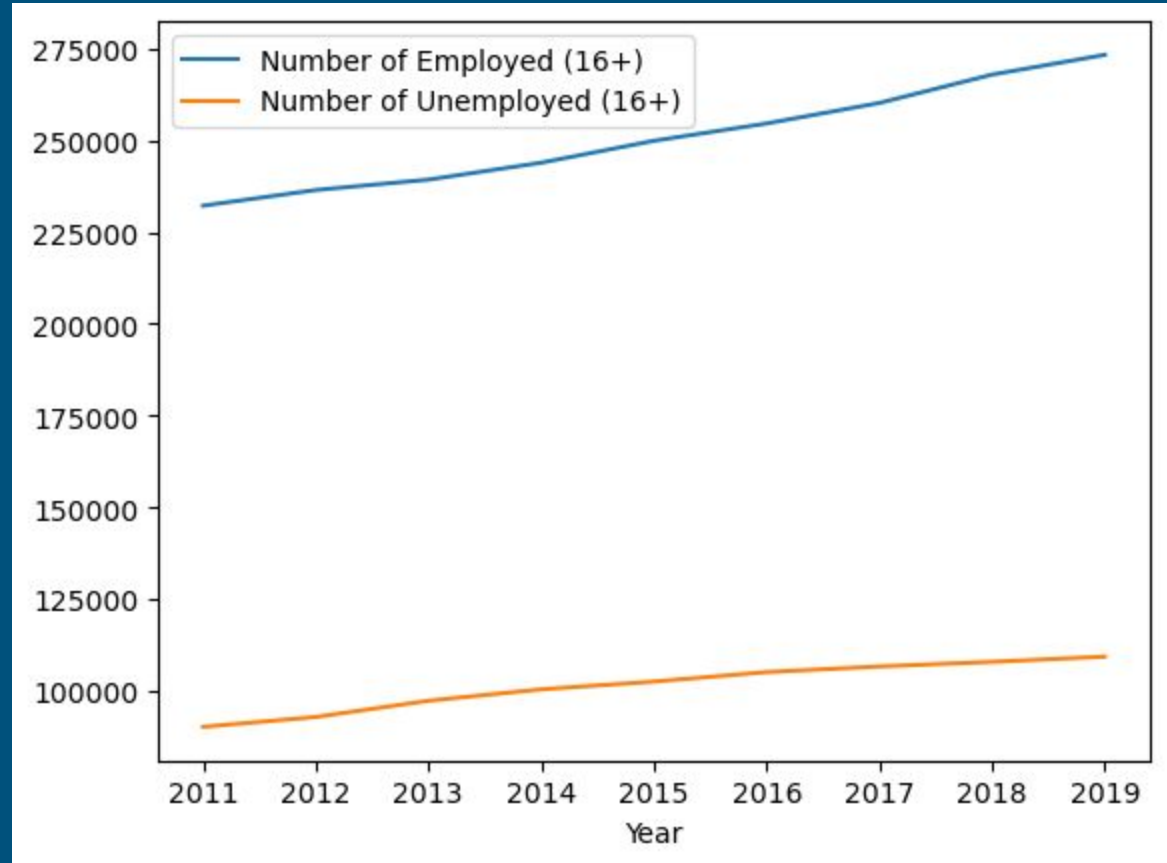
Data source. U.S. Census

Employment

Is there a correlation between employed persons over the age of sixteen and unemployed persons over the age of 16?

The data shows an inverse relationship between Employed and Unemployed: Periods of higher employment rates correspond to lower unemployment rates and vice versa.
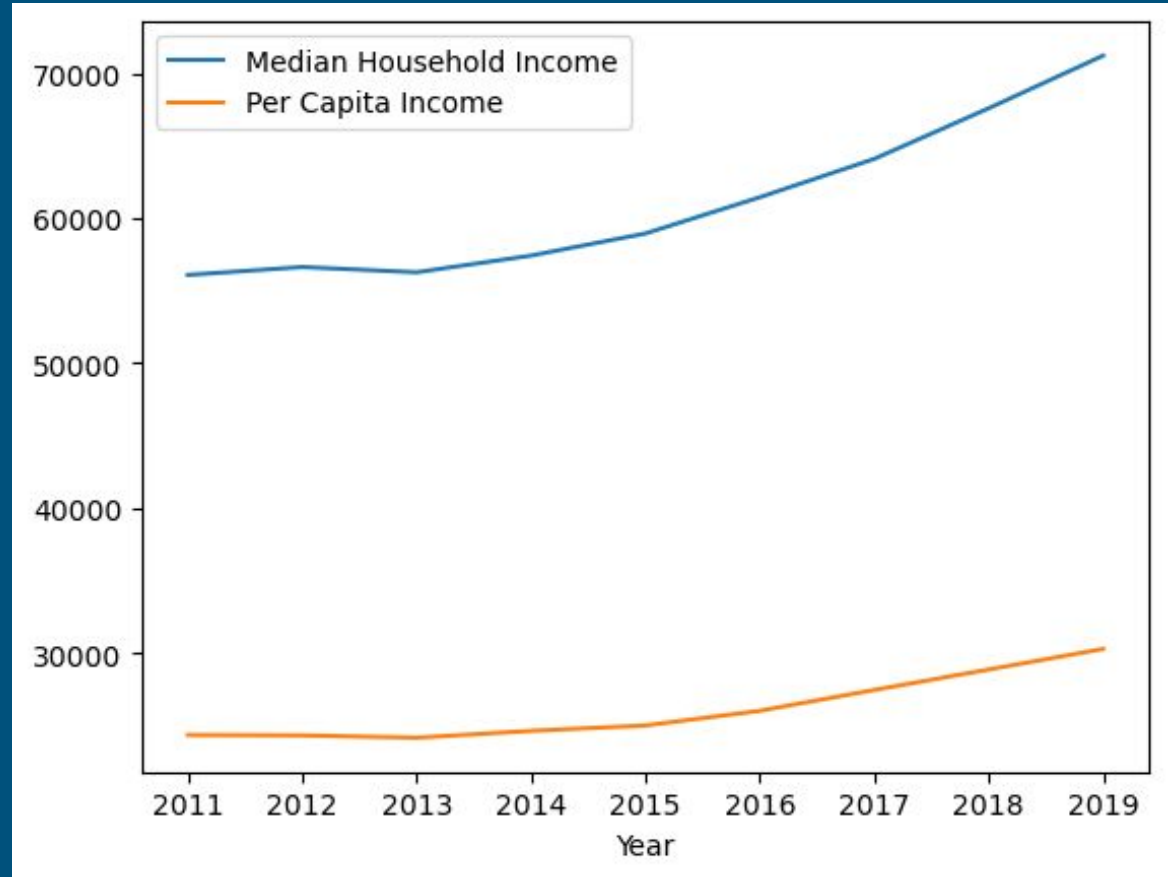

Data source. U.S. Census

Employment

Is there a correlation between median household income and per capita income?

The data shows that there is a correlation. As median household incomes rise, per capita incomes seem to rise as well.
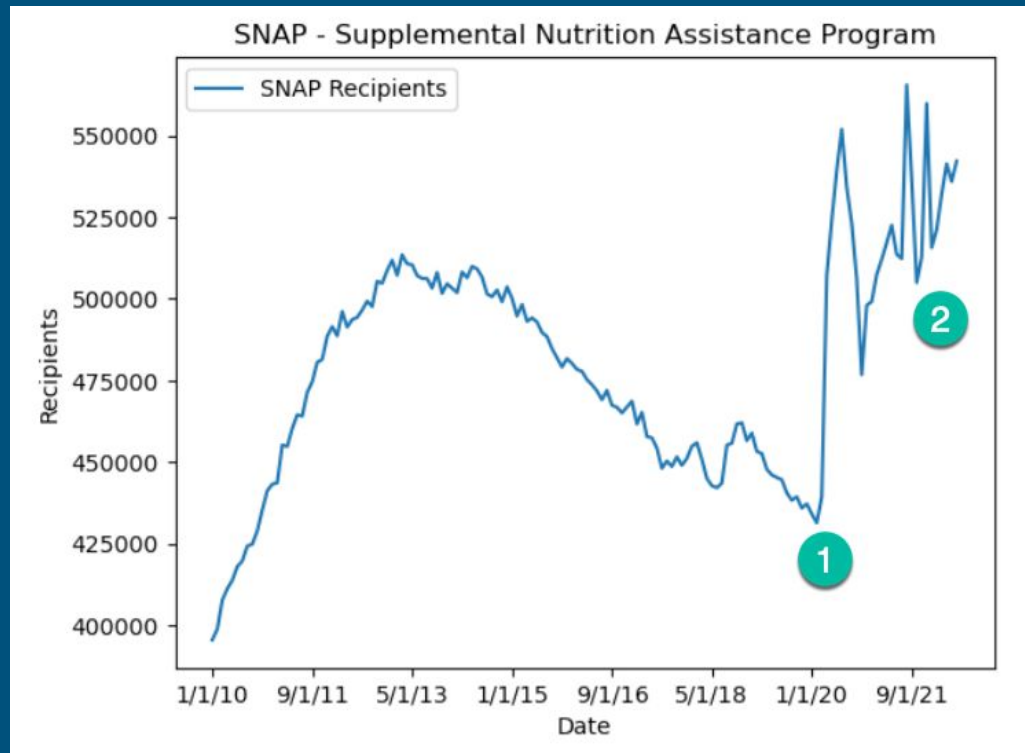
SNAP Recipients

Number of SNAP recipients was Decreasing Prior to Covid.

1 - Covid Outbreak

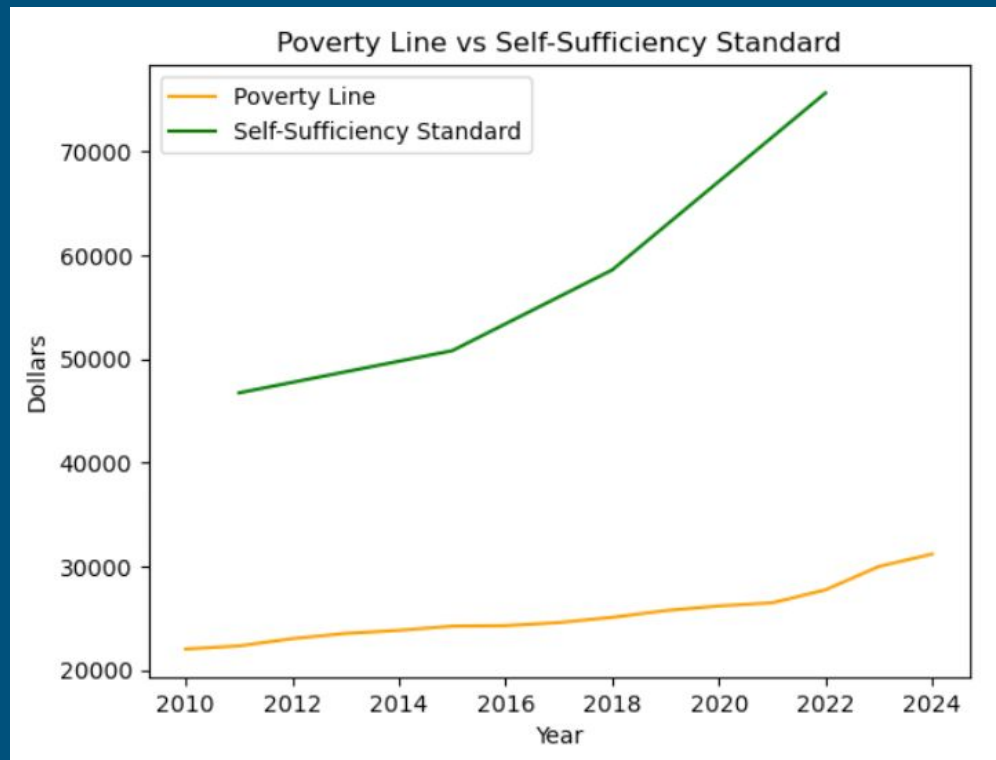2 - Unclear what caused the three spikes

Data Source: Federal Reserve Economic Data (FRED)

Poverty Line vs Self-Sufficiency Standard

Using the 4 Person Figures

Poverty Line is Nationwide

SSS Factors in Local Cost of Living and is Minimum Amount a Working Family Needs to Avoid Public/Private Assistance

Data Source: US Census & Center for Women's Welfare

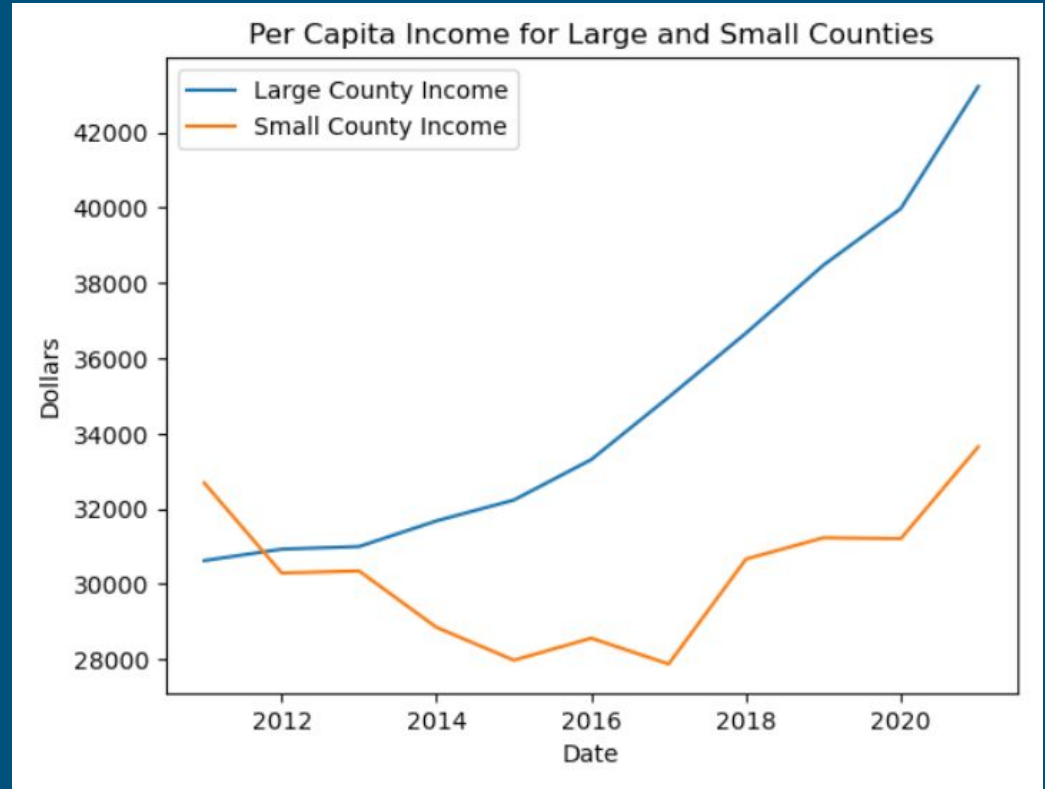# Per Capita Income for Large and Small Counties

Five Largest Counties:

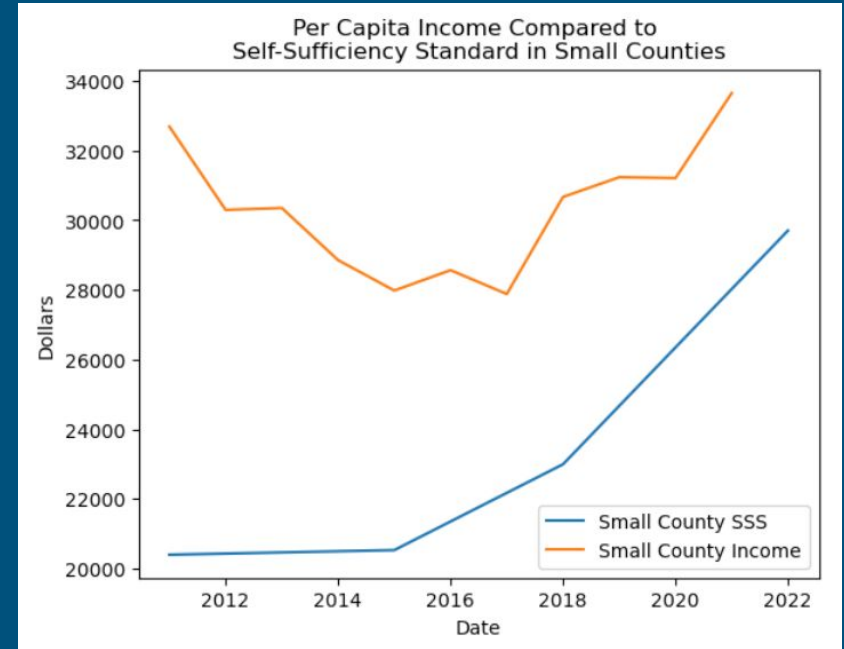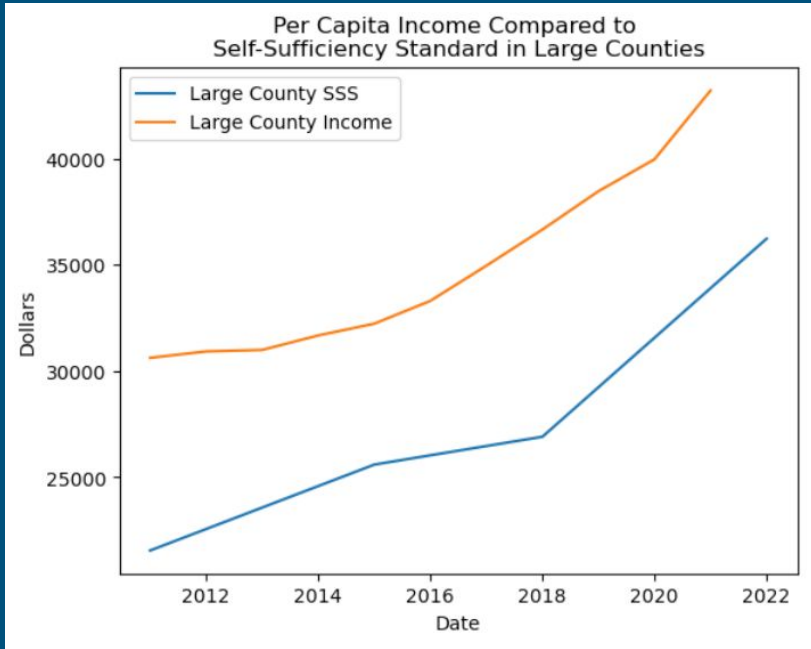El Paso, Denver, Arapahoe, Jefferson, Adams

Five Smallest Counties:

Jackson, Kiowa, Hinsdale, Mineral, San Juan

Data Source: US Census

Income vs SSS by County Size

Data Source: US Census & Center for Women's Welfare
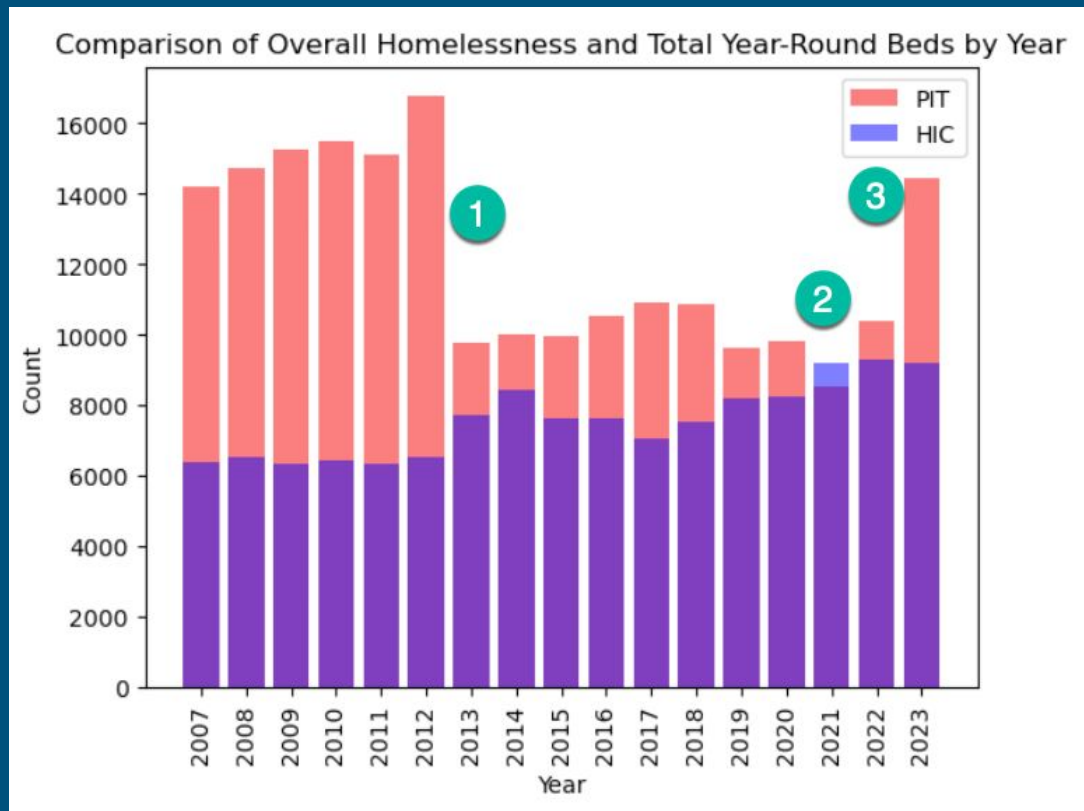
Overall Homeless vs Available Beds

Point in Time Count

Housing Inventory Count

1 - Change in PIT Methodology

2 - Covid-19

3 - Unclear

Data Source: HUD Exchange

Comparison of Overall Homelessness and Total Year-Round Beds by Year

Conclusions

Two Stories in the Data: Before Covid and During/After Covid

Before 2020 Most Indicators were Positive

After 2020 the Data Shows People Need More Help

Important to Understand Methodologies for Collecting Data

Changes to Methodologies Distort Data Analysis

Next Time

Focus on One Category of Data - Housing or Homelessness

Focus on One County or Compare Two Counties

Focus on a Shorter Time Period

Use Fewer Data Sets

Use Standard Deviations to Better Understand the Data

Help is Available

Hunger Free Colorado

2 1 1 Colorado

Colorado Coalition for the Homeless

Colorado Department of Human Services

Colorado Department of Local Affairs

Data Sources

US Census Data
https://www.census.gov/en.html

Colorado Department of Education - Homeless Education Data
https://www.cde.state.co.us/studentsupport/homeless_data

Federal Reserve Economic Data (FRED)
Economic Research - Federal Reserve Bank of St. Louis
https://fred.stlouisfed.org/series/BRCO08M647NCEN

HUD Exchange
https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/

Center for Women's Welfare at the University of Washington
https://selfsufficiencystandard.org/colorado/