

Project 02: Homelessness Correlations

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Problem

Homelessness is a complicated problem with many different related variables. By comparing different metrics across US states over several years, I should be able to gain insights into the factors that contribute to the rate of homelessness in the US.

Goals

1. Show the relationship between homelessness and explored variables.
2. Create a model to predict rate of homelessness based on a given set of input values.

Milestones

I. Minimum Viable Product (MVP)

An MVP would show the relationship between the total rate of homelessness and income inequality. This would then be expanded to include housing cost, poverty rate, unemployment rate, and other variables shown in the Data table.

II. Stretch Goals

Other variables to consider and add to the MVP would be: rate of mental illness, number of people with criminal histories, and health insurance coverage. I would also want to break the HUD data down by city to get a better model for homelessness in major cities, and consider different demographics among homeless people to gain a better understanding of more specific contributing features.

Data

| Independent Variable | Source | Type | Dimension |
|----------------------|---|--------------------|------------------------|
| Income Inequality | census.gov | Continuous (float) | Gini Index |
| Poverty Rate | census.gov | Continuous (float) | People in poverty |
| Average Income | census.gov | Continuous (int) | Inflation-adjusted USD |
| CoCs* | hudexchange.info | Continuous (int) | count |
| Total Population | census.gov | Continuous (int) | individuals |
| Cost of Living | numbeo.com | Continuous (float) | index |
| Education Budget | https://www2.ed.gov/about/overview/budget/history/index.html | Continuous (int) | USD |
| Unemployment Rate | bls.gov/data/#api | Continuous (float) | Percentage |
| Dependent Variable | Source | Type | Dimension |
| Homelessness | hudexchange.info | Continuous (int) | Individuals |

*CoC = Continuum of Care, which represents a community-level program to assist homeless persons, with the goal of long-term stability.

Data notes:

All data will be iterated by year and US state.