



DRUG OVERDOSE DEATHS IN THE US

CHRISTINA CIMINI | IRONHACK 2024



DATA COLLECTION

01. Monthly Provisional Drug Overdose Death Counts report

02. US Census Data

Poverty, insurance, and educational attainments (high school, associate's, bachelor's, professional degree) rates

03. US Department of Housing

Rates of homelessness

04. Cannabis legalization status

Recreational, medical, and/or decriminalized

05. US Regional Economic Analysis Project

State GDP, adjusted per capita



XGBREGRESSOR MODEL

Features

- State
- Year
- Poverty %
- Uninsurance %
- Homelessness %
- Education % (High school, Associate's, Bachelor's, Master's, Doctorate)
- Cannabis (Full legalization, medical legalization, decriminalization)
- GDP per capita

TABLEAU



HYPOTHESIS TESTING

Significantly correlated

- Education above high school
- Cannabis legalization for recreational use
- Rates of uninsurance (negative correlation)
- Rates of poverty (negative correlation)

Not significantly correlated

- High school education
- Cannabis decriminalization and legalization for medical use
- GDP per capita
- Rates of homelessness



POLICY IMPLICATIONS

01

Cannabis Legalization

Roll back legalization of cannabis
for recreational use (but can
uphold decriminalization and
legalization for medical purposes)

02

Drug Safety in Higher Education

Implement drug safety training and
awareness throughout all levels of education,
supplemented by other safeguards such as
safe injection sites and drug testing strips



THANK YOU