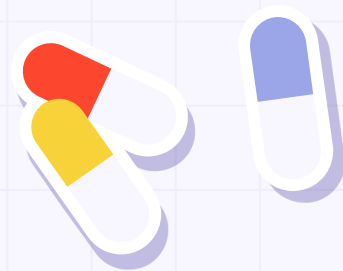


Drug Seizure Analysis



Mari Zena, Michelle Minkowitz, Dara Adesina, Paola Roman

BACKGROUND

The Data

- Drug Seizures annually since 1970s
 - {Region, Country, ISO Code, Drug Group, Drug, Year, KG Equivalent}
- World Development Data
 - {Country, electricity_access, gdp, gdp_capita, labor_rate, labor_force, land_area, life_expectancy, adult_literacy, water_access, air_pollution, population_density, population, alcohol_consumption, unemployment_rate, social_support, freedom, generosity, income_class, cpi}
- US Presidents Data
 - {President, Years in Office, Party}

BACKGROUND

Key Terms

- **CPI (Corruption Perceptions Index)**
 - Transparency International
 - Index on a 100 Scale based on assessments and citizen opinion data
 - 100 = least corrupt
 - 0 = most corrupt
- **Income Class**
 - World Bank
 - Classification of either low, lower-middle, upper-middle, and high income
 - Uses Gross National Income per capita for the measurement

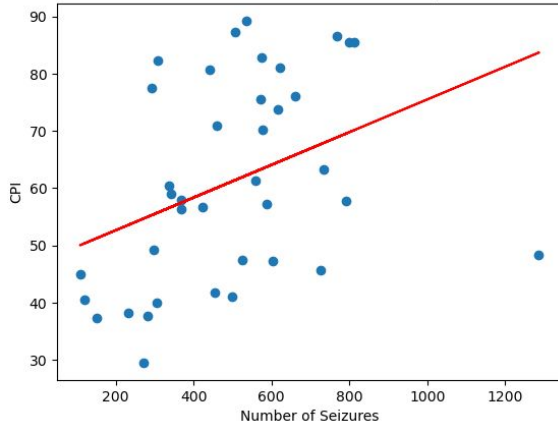
International Drug Seizures

Hypothesis:

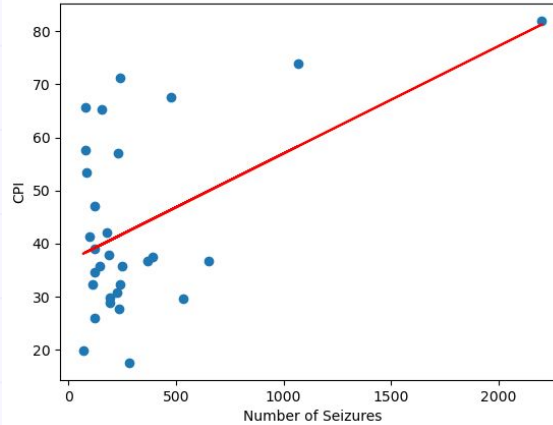
Countries with a high CPI will have more drug seizures throughout history.

CPI vs Number of Drug Seizures

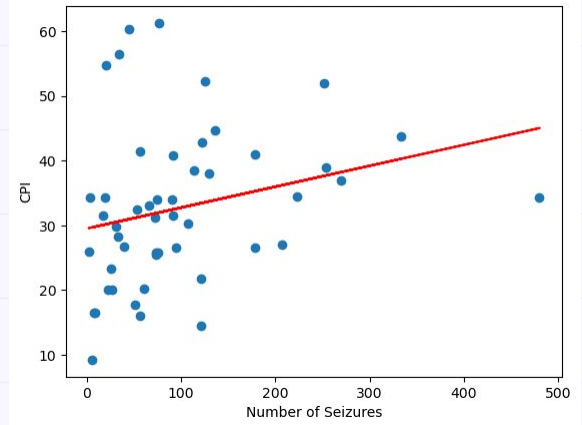
CPI vs Number of Seizures: Europe



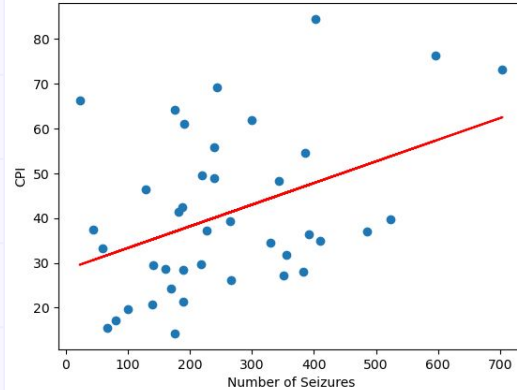
CPI vs Number of Seizures: Americas



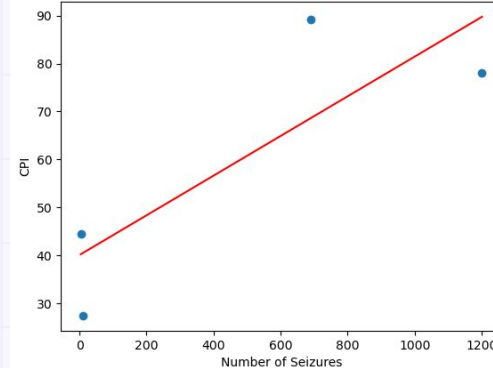
CPI vs Number of Seizures: Africa



CPI vs Number of Seizures: Asia

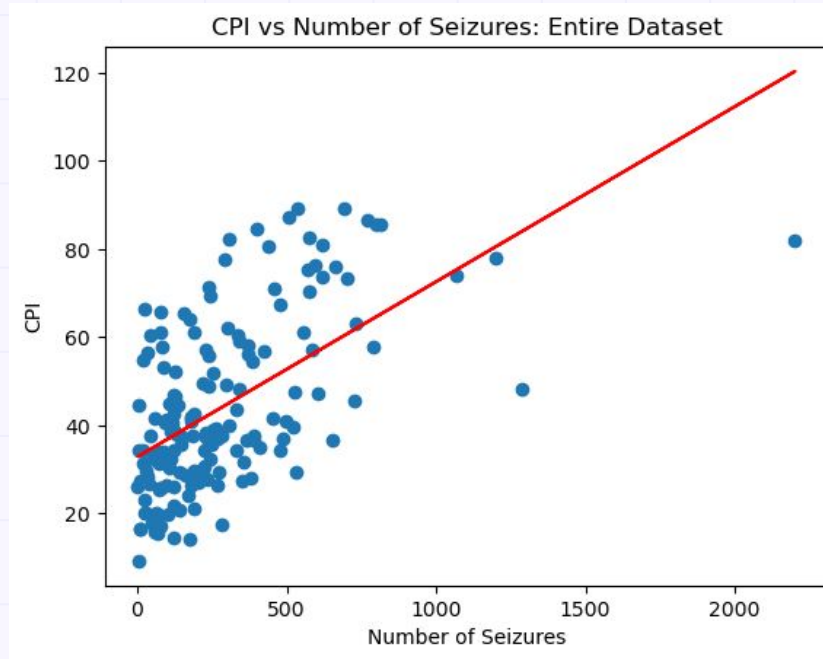


CPI vs Number of Seizures: Oceania

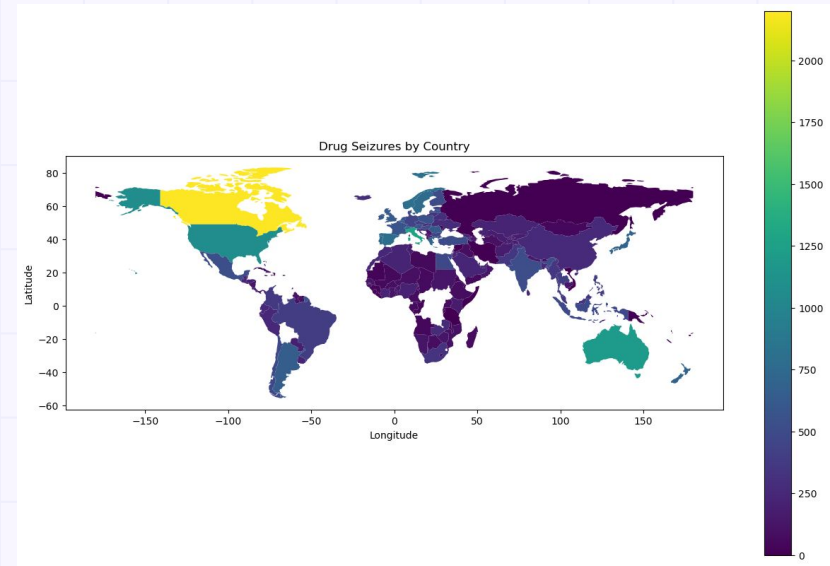
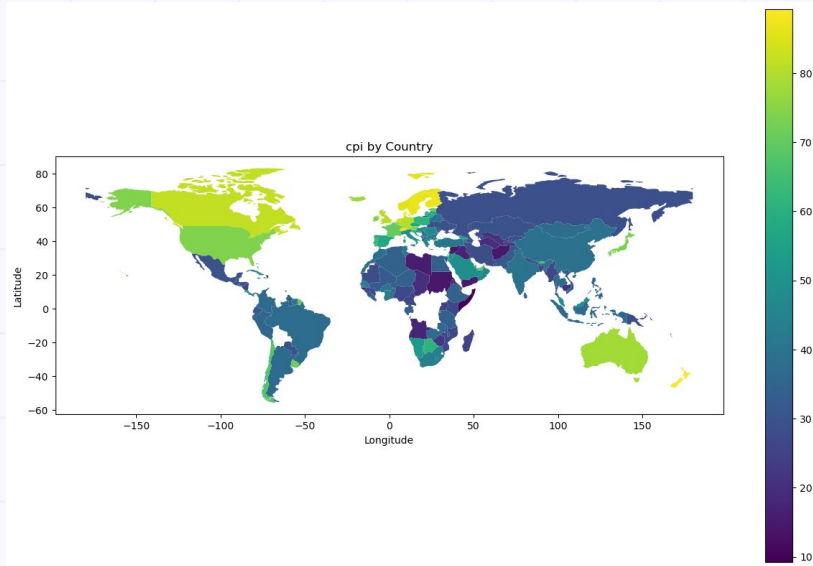


CPI vs Number of Drug Seizures

- Correlation coefficient: 0.58
 - Moderate correlation
- Hypothesis:
 - Countries with a high CPI will have more drug seizures throughout history.



CPI vs Number of Drug Seizures

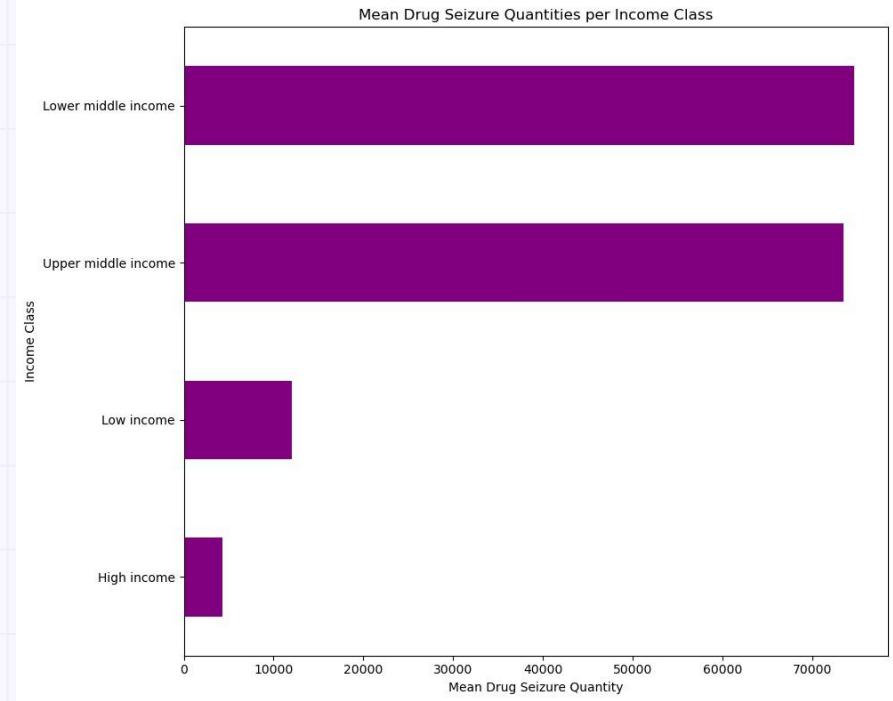
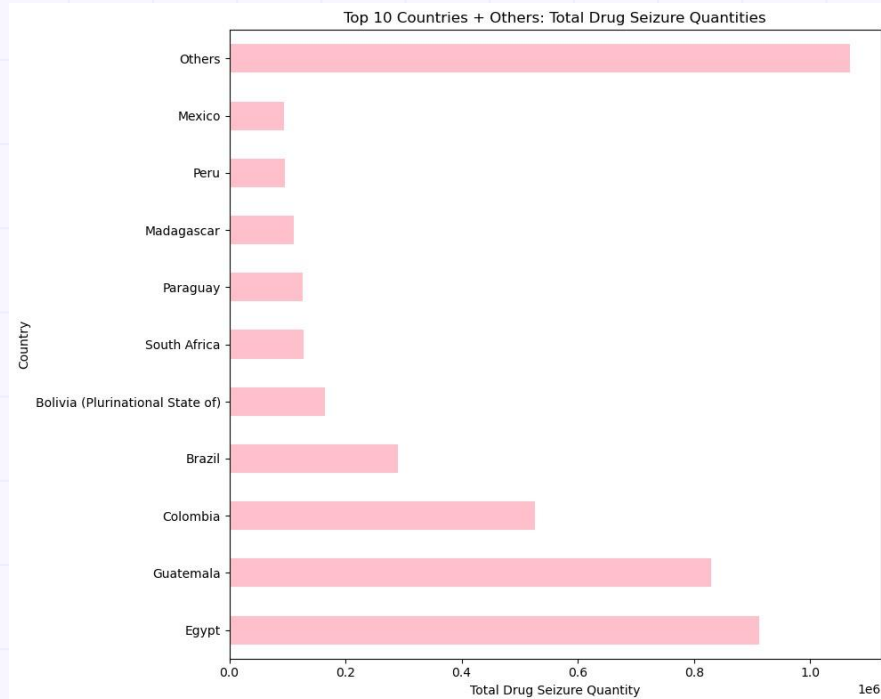


International Drug Seizures

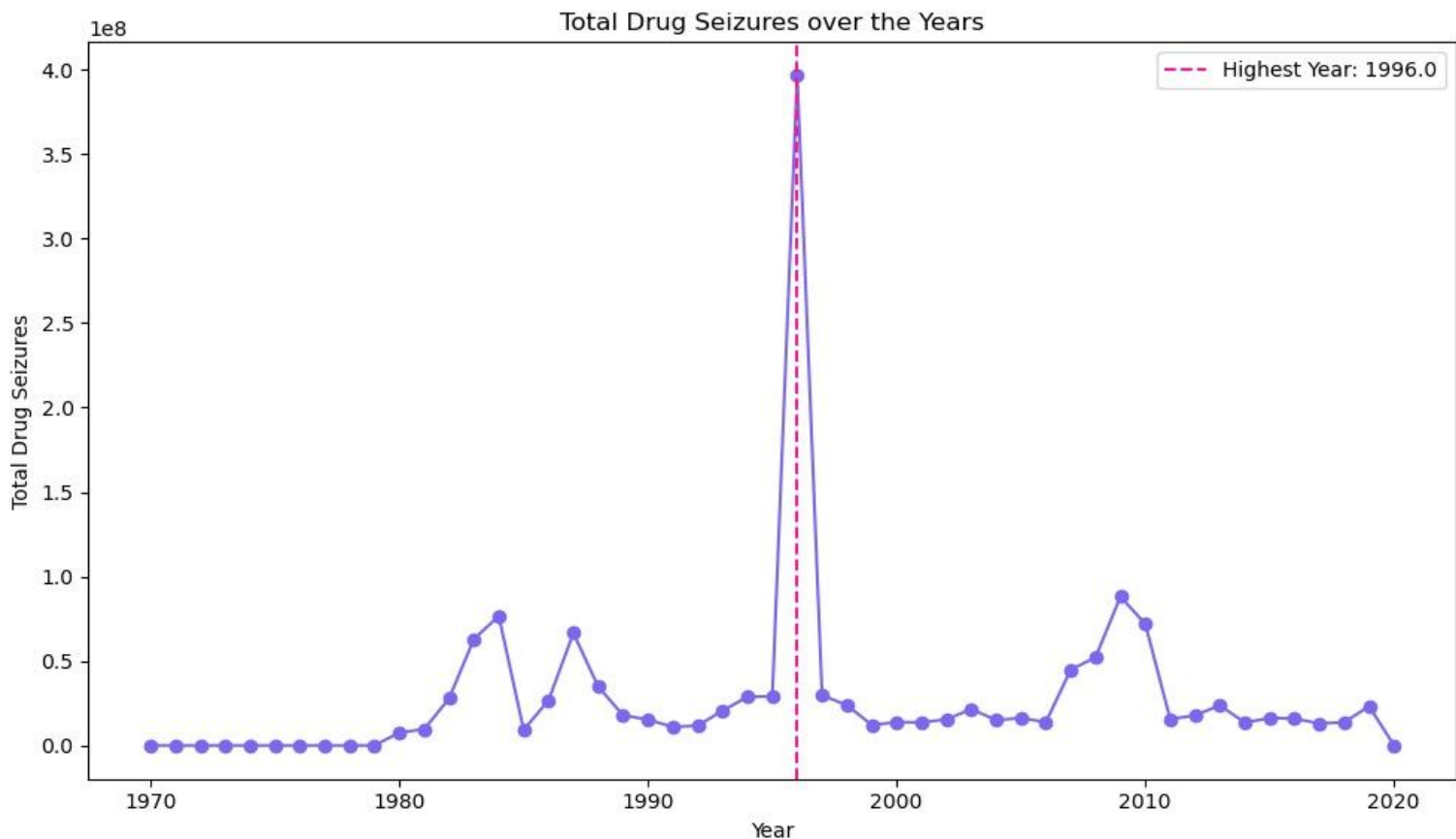
Hypothesis:

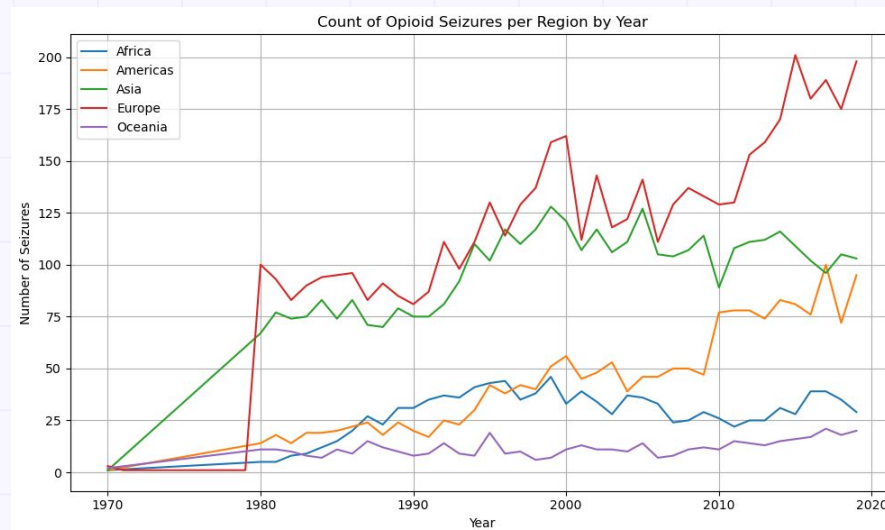
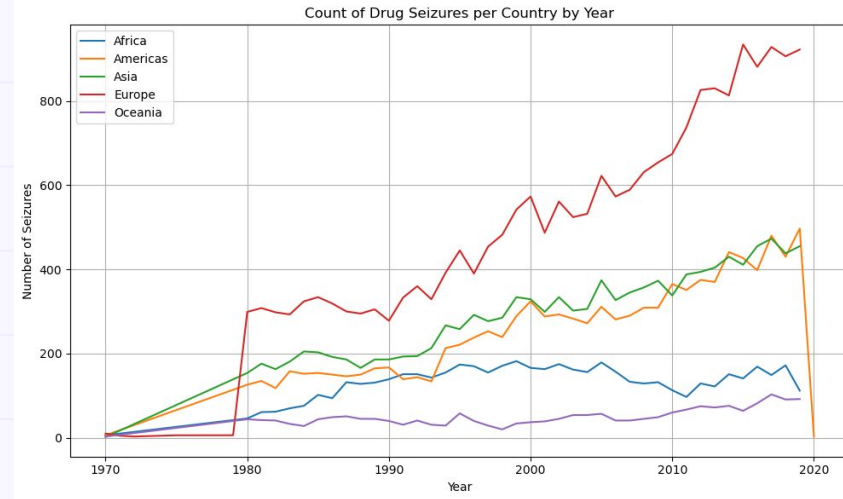
Countries with lower income classes will have a higher rate of drug seizures.

Hypothesis: Countries with lower income classes will have a higher rate of drug seizures.



Conclusion: Lower middle income class has the highest rate of drug seizures.





Opioid Use in the USA

Secondary Hypothesis:

Republican Presidents will have more drug seizures than Democrat Presidents.

Opioid History in the USA

1980s:

Initial use of opioids for pain relief in medical settings.

1990s:

Introduction of prescription opioids leading to rising usage.

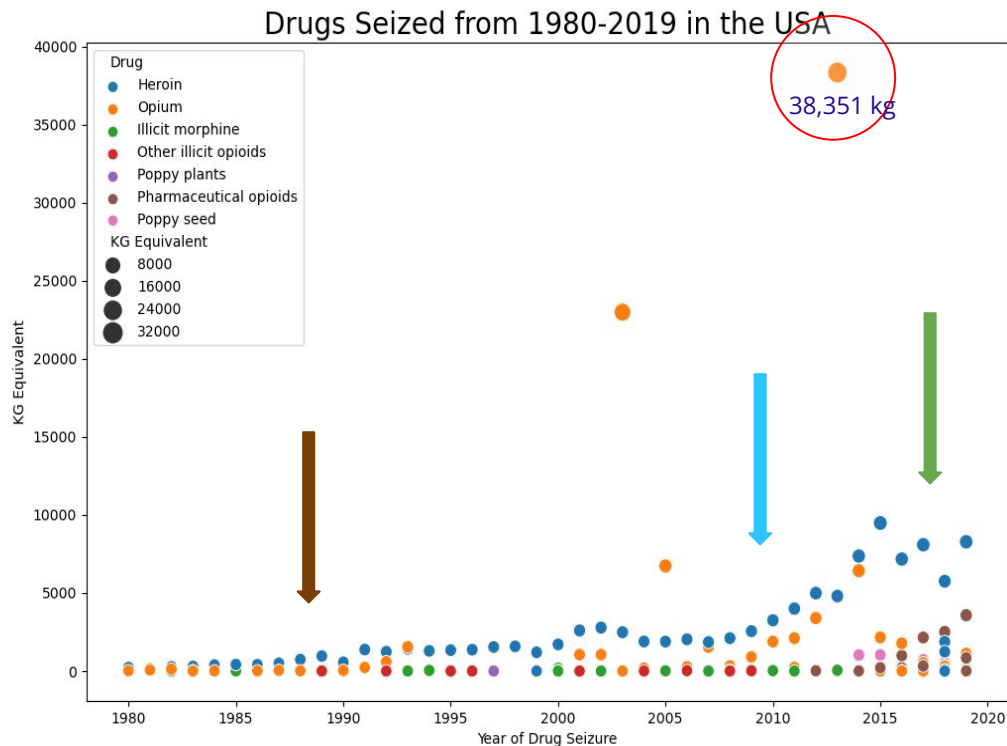
2000-2010:

Surge in opioid prescriptions, escalation of addiction, and overdose deaths.

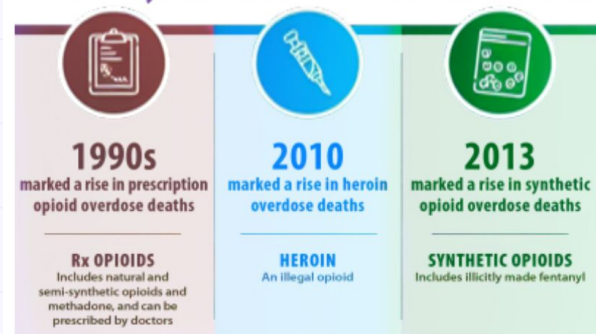
2010-2019:

Transition to illegal opioids, especially heroin and potent synthetics like fentanyl.

Opioid Waves



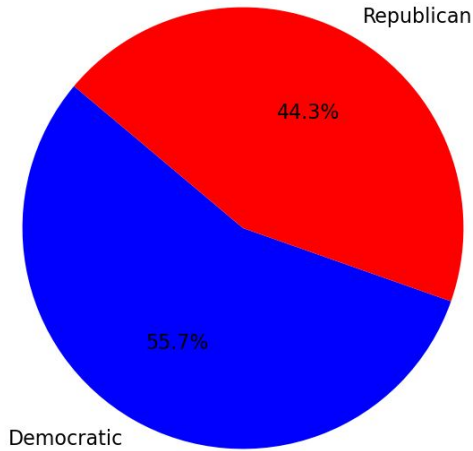
A Multi-Layered Problem in Three Distinct Waves



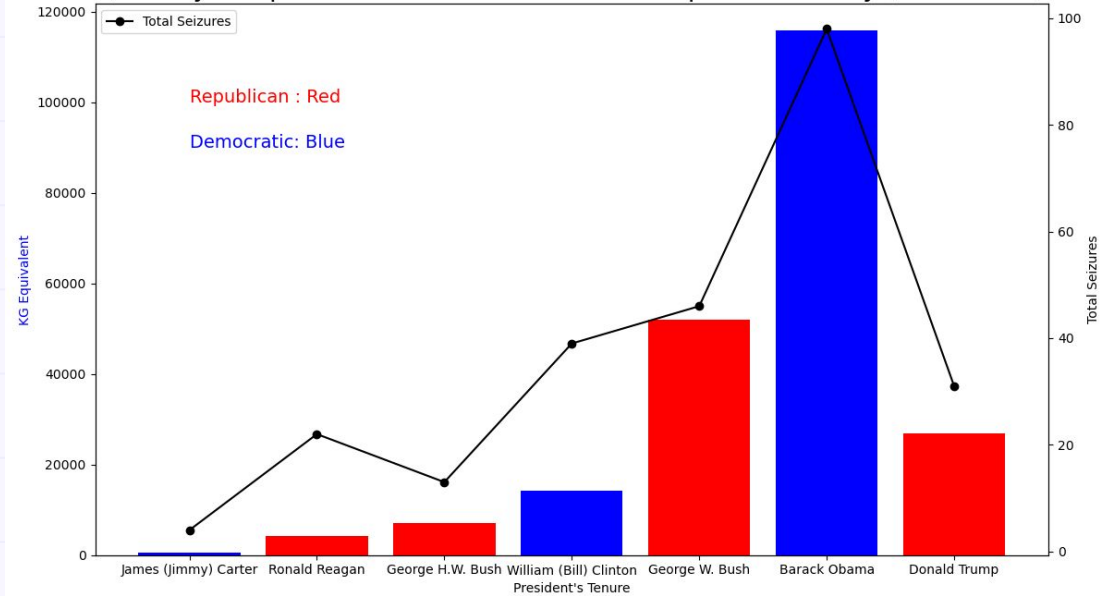
Learn more about the evolving opioid overdose crisis: www.cdc.gov/drugoverdose

Opioids and US Politics

Number of Drug Seizures: Republicans vs Democrats



Quantity of Opioids Seized and Total Seizures per Presidency (1977-2019)



DATA CLEANING AND LIBRARIES

- Matplotlib
- Pandas
- scipy
- Numpy
- **Seaborn**
- **Geopandas**
- Requests
- linregress
- pprint
- merge

QUESTIONS?

Research Resources

- [History.com](https://www.history.com)
- [NIDA \(National Institute for Drug Abuse\)](https://www.nida.nih.gov)
- [CDC](https://www.cdc.gov)
- [Obama Whitehouse Archive](https://www.whitehouse.gov/the-press-office/2017/01/20/17-0120-speech-vice-president-pence)

