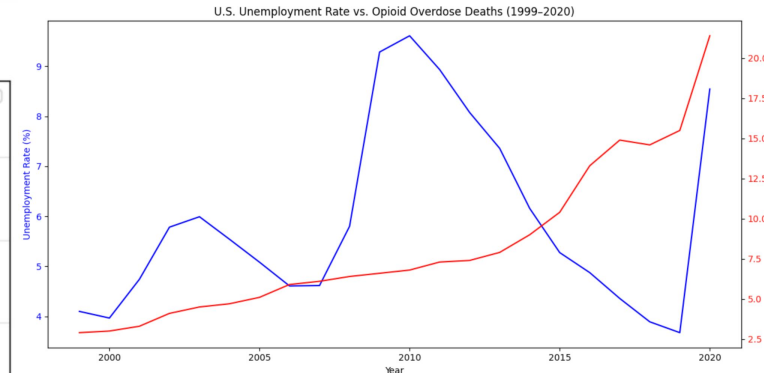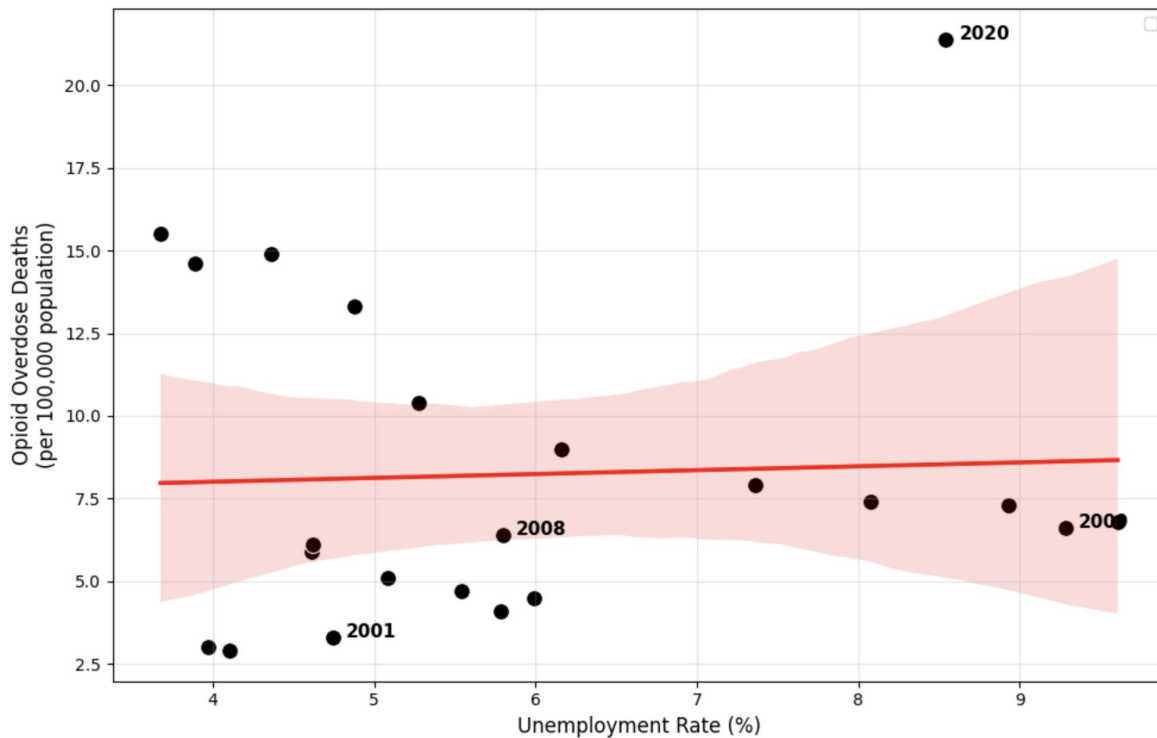# Unemployment Rates and Opiate Overdose Rates in the US (1999-2020)

Does higher unemployment rates cause a higher rate of opiate overdoses in the US?

- OLS Regression: Opioid deaths per 100k = $\beta_0 + \beta_1 \times$ Unemployment Rate
- Estimated slope on unemployment: +0.12 deaths per 100k for each 1-point rise

- p-value = 0.842 → fail to reject the null hypothesis (no relationship, $p > 0.1$)
- R-squared = 0.002 (unemployment explains only 0.2% of variation in opiate overdose rates)

U.S. Opioid Overdose Deaths vs. Unemployment Rate (1999–2020)
Simple OLS Model — No Statistically Significant Relationship

Opioid deaths rose steadily from ~3 to ~21 per 100k population while unemployment fluctuated in cycles.

The best-fitting line is essentially flat (slope = 0.12, p = 0.842).

There is no evidence that unemployment shocks fueled the opioid crisis.