

UNEMPLOYMENT & CRIME IN THE U.S.

INTRODUCTION

Economic downturns often ripple into the fabric of society, influencing more than just financial well-being. This project explores whether rising unemployment rates correlate with increased crime across U.S. states. By applying real-world data and statistical modeling, we examine the extent to which unemployment may predict variations in both violent and property crimes. Our findings offer evidence to support informed policymaking at the intersection of economic development and public safety.

OBJECTIVE

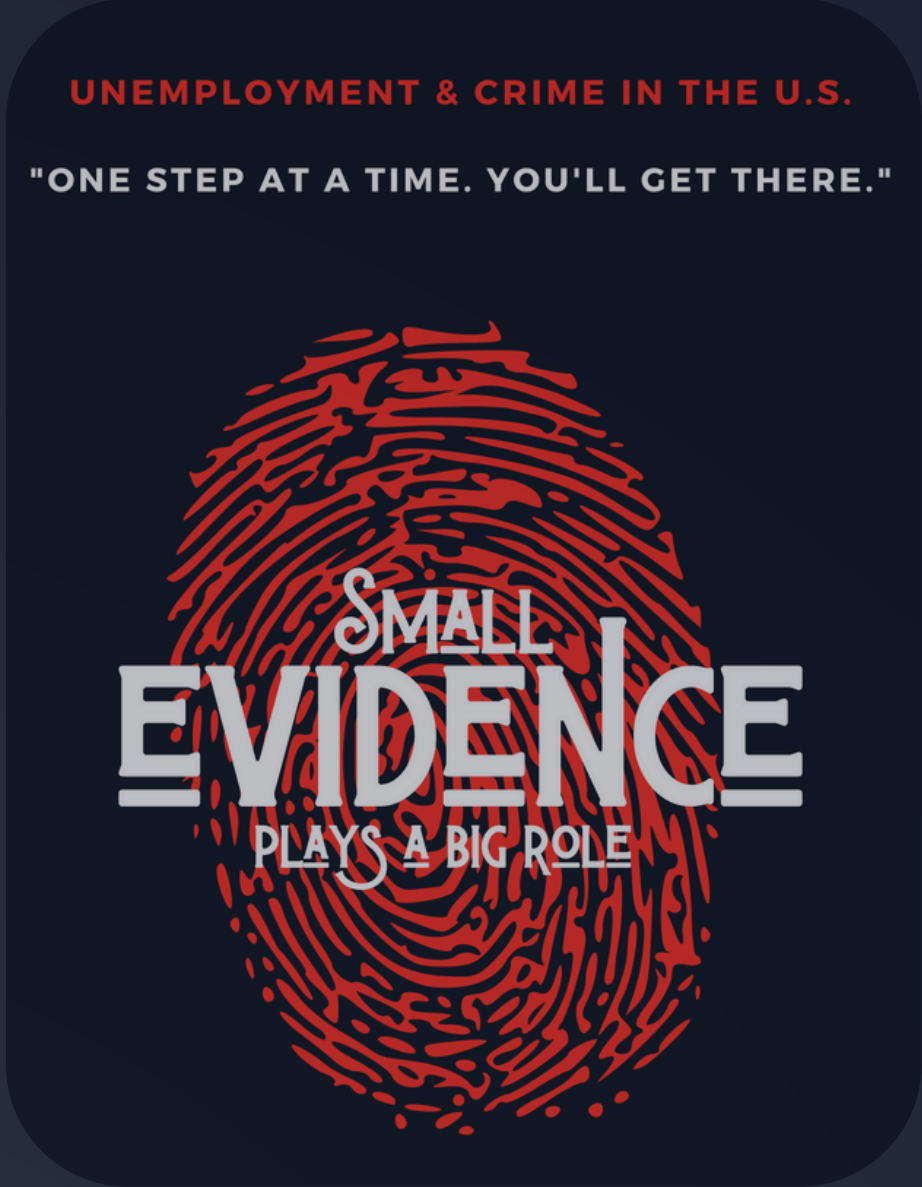
To examine how unemployment rates relate to various categories of crime — specifically violent and property crimes — across U.S. states. The study aims to uncover statistically significant patterns that could guide the development of targeted crime prevention strategies and informed employment policies. Additionally, it seeks to contribute empirical insights to the broader discourse on economic conditions and social stability.

HYPOTHESIS

H_0 : (Null Hypothesis): There is no significant difference in violent crime rates between states with high and low unemployment.
 H_1 : (Alternative Hypothesis): States with higher unemployment have significantly higher violent crime rates.
Property Crime vs Unemployment,
 H_0 : (Null Hypothesis): There is no significant difference in property crime rates between states with high and low unemployment.
 H_1 : (Alternative Hypothesis): States with higher unemployment have significantly higher property crime rates.

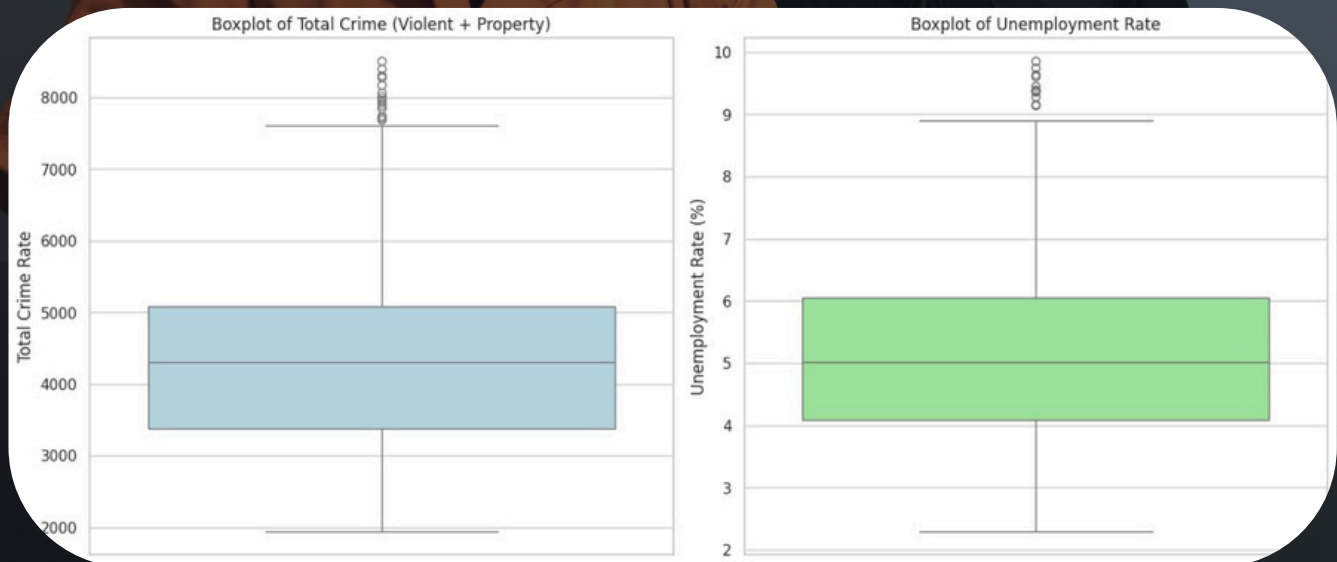
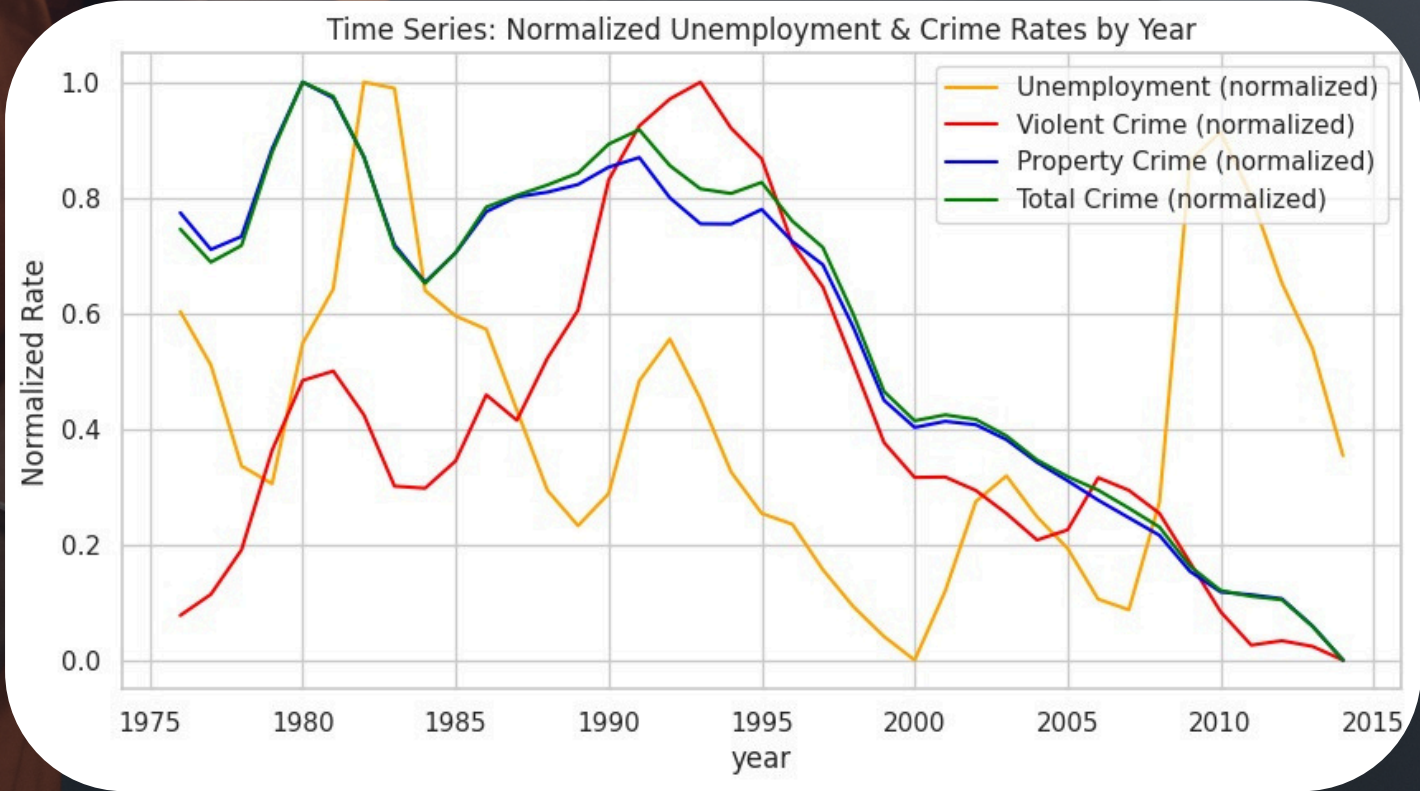
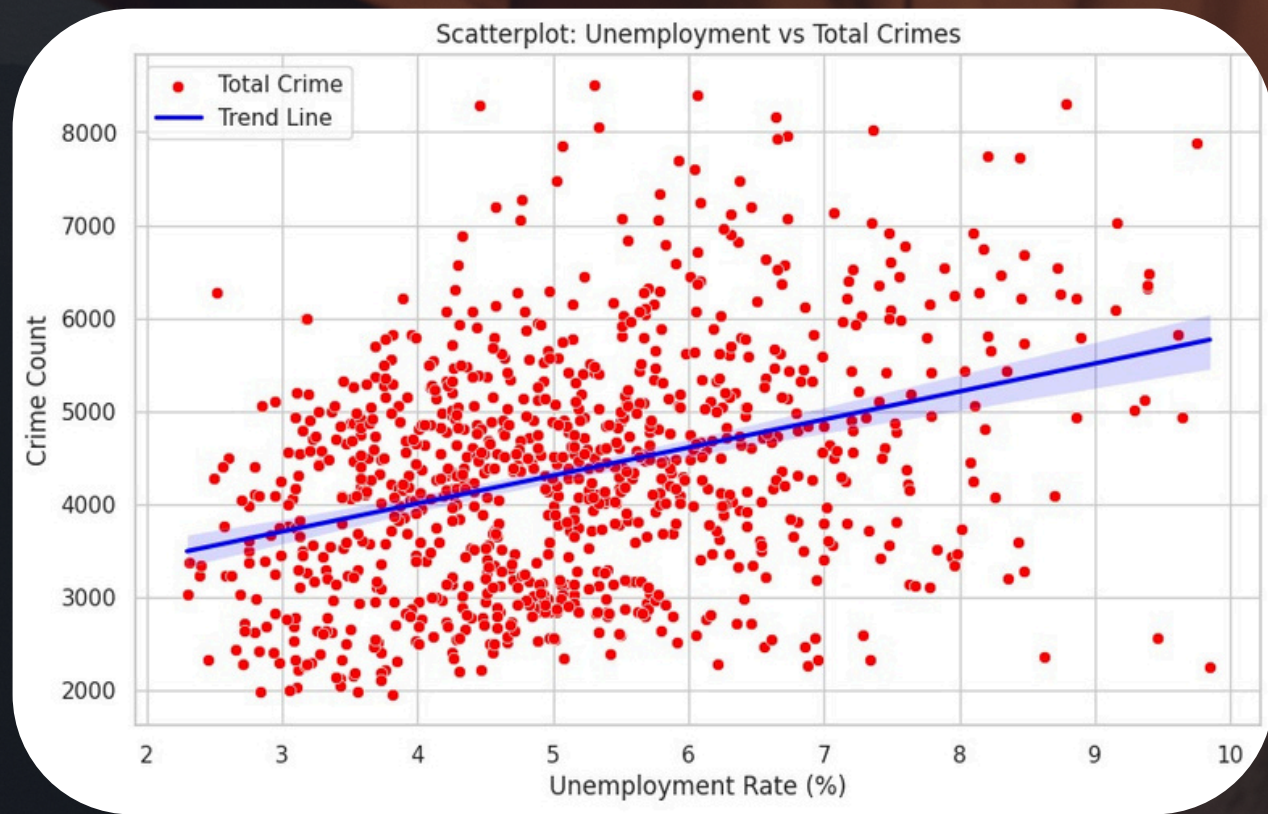
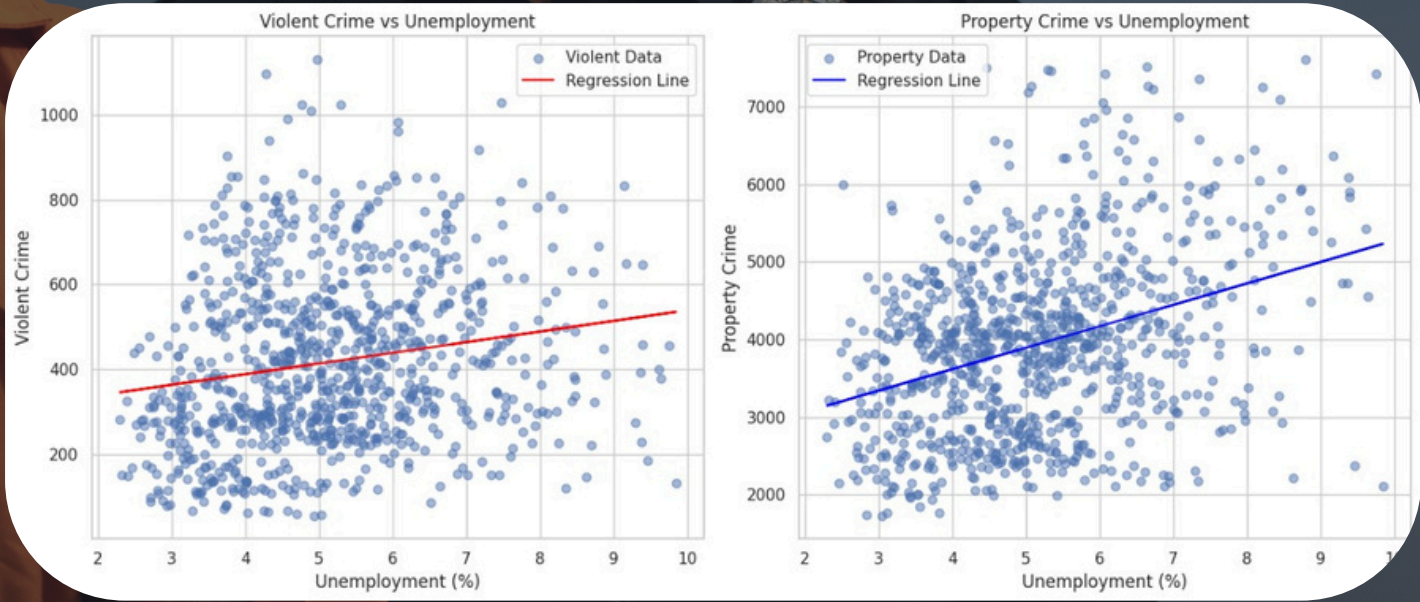
RESEARCH QUESTIONS

- Is there a statistically significant relationship between unemployment and crime rates across U.S. states?
- How do violent and property crimes respond differently to changes in unemployment?
- Do regional or temporal trends, such as those during economic crises or the pandemic, influence the unemployment-crime relationship?
- What actionable public policy recommendations can be derived from the observed statistical trends?



ANALYSIS

We explored the relationship between unemployment and crime using scatterplots, regression models, and statistical tests. The analysis showed a clear positive association between unemployment rates and both violent and property crimes. Linear regression models confirmed that as unemployment increases, crime tends to rise. Outliers were removed to improve the accuracy of the models, and visualizations like boxplots and time series helped reveal regional and temporal trends, strengthening the evidence of a consistent pattern across the dataset.



CONCLUSION

The data reveals a modest but consistent link: higher unemployment is associated with increased crime rates. While correlation doesn't confirm causation, the trend suggests that economic instability may play a role in crime dynamics. These findings support the integration of employment initiatives within crime prevention strategies. Future research should explore causal mechanisms, including policy impacts and time-lagged effects.