

# 40-Year Crime and Safety Analysis of US Cities

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# Objectives: Study Overall Crime and Analyze by City

## Overall Crime

Per our data set, crime began increasing in the late 1980's and peaked in the early 1990's.

For most major cities, crime has gone down since the peak in the early 1990's and has bottomed out per our most recent data.

Relative to other regions, on a per capita basis, the Midwest crime rates were surprisingly high.

## Crime by City

Miami: one of the most violent cities in 1990's, but has decreased it's violent crimes by over two-thirds per our most recent data.

Wichita: while their overall violent crimes are low, relative to other major cities, their violent crimes have steadily increased over our time periods

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## Crime Index Rankings

Top 5 Safest cities

1. Virginia Beach, Virginia
2. Honolulu, Hawaii
3. Austin, Texas
4. San Jose, California
5. Mesa, Arizona

# Data Visualizations Techniques/Usability

## Leaflet Heat Map

Learning and implementing how to use a local plug-in for Leaflet.

Add eventlistener to use the drop-down to update the map.

Structure the code to display the yearly data in HTML format.

## Seaborn Line Graph

Learning and implementing Seaborn to run a linegraph for each respective city in our dataset.

Installing a drop-down to isolate each city.

Structure the code to display the cities in HTML format.

## Folium Map

Learning and implementing Folium to create a crime index.

Crafting a top 5 legend for safest cities to help the reader digest the map better.

Creating an average crime rate per city legend per 1,000 people.

## Flask Server Page

Learning and implementing how to compile information from multiple different html (and other program) files to create an interactive web page.

Implemented functions that respond to user input to display information.



# HTML Link

<http://127.0.0.1:5000>

# Conclusion

Overall, our analysis of crime data provides a comprehensive look at how crime has evolved over time, the regional disparities in safety, and the factors that contribute to these patterns. By examining these key insights, we can better understand which areas have made significant progress in reducing crime and which continue to face challenges, offering valuable guidance for policymakers, families, and communities looking to improve safety and quality of life.

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# Implementation