Crime Rates in LA, Chicago, and Portland Compared to Vancouver

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Introduction

Everybody loves true crime, and most of the stories happen in the US. The country most prisoners that sit behind bars because of the crimes they have commited - but what are the crimes and is there really a lot of crime in the US you may ask? We set out on a quest to find out how do US crime rates compare to their friendly neigbhour from the North - Canada! So, we took three cities from the US - Los Angeles, Chicago, Portland, and one from Canada - Vancouver to compare them with each other to see how different they really are.

Methods used

Data cleaning and preprocessing
Data normalization
Geospatial analysis
Crime density calculation
Sorting and ranking
HeatMaps

Data usage

We mainly used the data to identify crime hotspots in the cities, visualize dangerous areas and crime density with their severity, what type of crime is the most relevant and when does it happen the most.
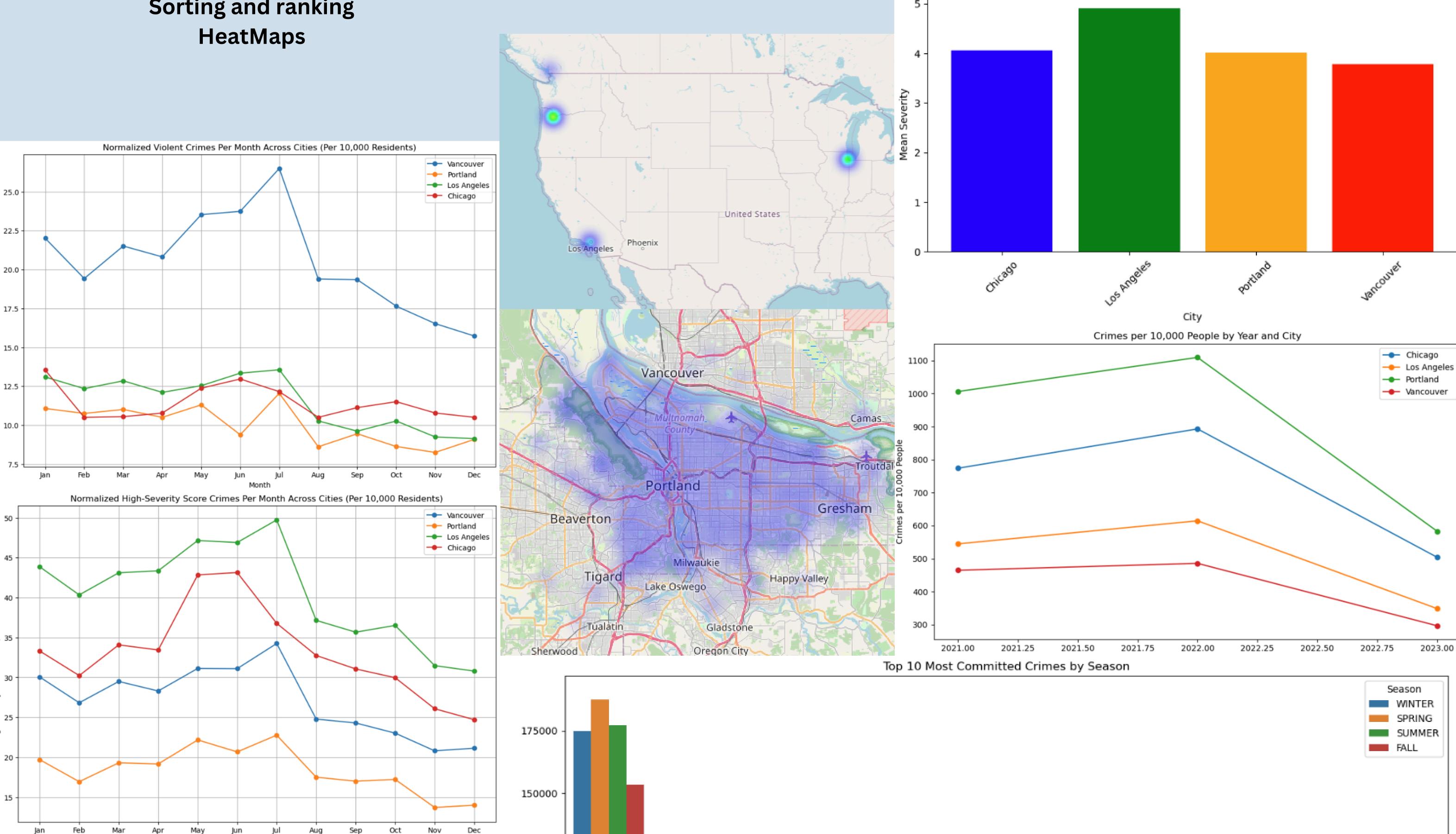
Results and conclusions

Through our data research we have found that Vancouver boasts the lowest crime rates of all the four cities, with a lower mean severity index - meaning the crimes commited there will most likely be on the level of a burglary. We have also concluded that the crime rates in all the cities is going down. The most dangerous of the cities is Chicago with around 614 crimes commited per day. The crime most commited is Theft at 12 AM.

Data

We had 4 datasets to work with that were from Kaggle. So the data was a mix of values seperated by commas, spaces, and tabs. As these were actual reports from the police, the data luckily had somewhat of a logical structure with what we could work with and extract some data for processing.
As Canada and US are two different countries, their police report systems also differ, so there was a lot of data to standardize like - time, coordinates, dates.