IBM Data Science Capstone Project
Does post-secondary education affect the rate of crime in cities?

An investigation of the relation between the increase in the number of academic centers and libraries and a decrease in the rate of crime in American cities.

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2. Data
2.1. Crime rate in American cities
To determine the rate of crime in American cities, a Wikipedia article on the list of a selected United States cities by crime rates, was used. In this article, there is a table containing about 90 most populous American cities along with their crime rates per 100,000 people based on Federal Bureau of Investigation (FBI) Uniform Crime Reports (UCR) statistics from 2017. Both violent crime data including murder and nonnegligent manslaughter, rape, robbery, aggravated assault, as well as property crime including burglary, larceny-theft, motor vehicle theft, and arson were included. The FBI has used the 2009 population estimate in this table (1).

2.2. Geographic coordinates of the selected most populous American cities.
In order to determine the geographic coordinates of the selected most populous American cities, we used the geopy.geocoder library to convert the name of the cities into their corresponding coordinates.

2.3. Number of post-secondary schools in American cities
To get detailed information about the cities post-secondary schools we used Foursquare, which is a location data provider website. So, we constructed some URL to make Foursquare API calls to search the cities for universities and colleges. Then, we received the json file of the corresponding detailed information upon calling get request.

References

1. List of United States cities by crime rate - Wikipedia: https://en.wikipedia.org/wiki/List_of_United_States_cities_by_crime_rate