# Predicting the use of a firearm as a murder weapon

## Dataset:

The dataset I choose to do my project with is Homicide Reports 1980-2014. The dataset originated from the Murder Accountability Project, a non-profit organization that is there to highlight the importance of investigations into homicides in the United States. This organization seeks information from the federal, state and local authorities and is mainly run by ex-law enforcers, investigators and others who have a profession in criminology. The dataset contains murders from the FBI’s homicide report and the Freedom of Information act data on over 22 thousand homicides that were not reported to the Justice Department. It consists of approx. 620 thousand valid homicides data where 440 thousand are solved and 180 thousand remain unsolved.

## Project Proposal

For this dataset I plan to analyse the data and see what features will be important in my result. I plan on performing pre-processing on the data and then performing classifications with various algorithms to see what gives me the highest accuracy based on the features that are ruled as important from my research and my own focus on the data and then to try to tune the algorithm with the highest accuracy developing the best model for my ability possible. I hope to learn more about the thought process when analysing the data and also about machine learning techniques while also strengthening my python skills and familiarity.

## Software

No addition software is needed to run this model. All tools used are imported from the appropriate python API’s.

## Relevant Papers

<https://cseweb.ucsd.edu/classes/wi17/cse258-a/reports/a010.pdf>

<https://www.infoplease.com/us/crime/crime-rate-united-states-1980-2014>

Reference for FBI report format

<https://ucr.fbi.gov/nibrs/addendum-for-submitting-cargo-theft-data/shr>