Project Proposal - Capstone 1

20th February 2018

Problem and Client

The city of Phoenix, AZ is the 5th largest city in the United States. Over the last 6 years the population of Phoenix has increased. With the increase in population there is the potential for an increase crime. *Does it make sense for the city of Phoenix to hire more police officers to support the population increase or can we use historical data crime data to determine where to allocate resources more efficiently and not have to hire new officers?* The client for this project would be the Phoenix Police department. They can use the findings to allocate resources(officers, etc.) and make budgetary decisions.

Data

The city of Phoenix publishes an updated crime incident list at 11am daily (https://phoenixopendata.com/dataset/crime-data). The list contains crime incident data from November 1st, 2015 forward through 7 days prior to today's posting date. The data provided includes; Date/Time of Incident, UCR crime type, Block Address, Zip code and Premise Type. In addition, I will append demographic data for Phoenix to help answer our question which is also provided by the city of Phoenix.

Approach and Deliverables

The approach will be to use the historical crime data in combination with the demographic data to predict “hot spots” for crime. The type of machine learning technique has yet to be determined. The “hot spot” prediction will likely be presented as the Block Address or Zip code and the type of crime listed out to show here is *where* to put officers and the *type of crime* they should be looking out for. The deliverables for this project will be all the code, a report detailing the work completed and a slide deck providing the story and answers.