# Detailed information for the project

General information:

In 2016, NOPD was selected as a participant in the Department of Justice’s Violence Reduction Network. The Network is comprised of cities that are experiencing an outbreak of violent crime with the purpose of bringing innovative solutions to the challenge. At the same time, NOPD is working to improve how quickly the Department responds to emergency calls for service, reducing violent crime, and increasing the level of community-oriented policing. Instrumental to improving these three components is more efficient and effective allocation of strained resources. NOPD would like to consider specifically when arrests or traffic/pedestrian stops reduce violent crime and conversely, when these activities are less effective. The knowledge gained from this research would help determine where best to spend the limited available time to pro-actively patrol or focus on solving specific cases. In addition, better understanding how and when quality of life issues impact crime including the resolution of those complaints would be instrumental in helping the City understand the prioritization of specific quality of life complaints as they related to crime reduction. NOPD and the City of New Orleans have been leaders in the dissemination of Open Data. These datasets include NOPD Calls for Service, NOPD Stops and Search, NOPD Crime data, and a slew of quality of life related concerns tied to various City Departments. NOPD needs support in analyzing the existing Open Data to understand the relationship between different seemingly disparate datasets to help create an operational understanding of violent crime.

The project will include an analysis of the existing Open Data for the City of New Orleans. The analysis could utilize machine learning techniques to accommodate the dynamic environment in which NOPD works. The analysis should include the ability to apply the methodology in an ongoing manner with the live Open Data as well as an understanding of the historical context of the efficacy of various approaches to reduce violent crime. Following the analysis, the project should include recommendations for how the Police Department could effectively reduce violent crime

The open data utilizes an API. Therefore, you could start with data back in 2013 or 2014 to “train/investigate” then try to unleash the model on all the data slowly, and then eventually unleash it to real-time data. The data feed is updated every 24 hours.

Generally speaking, we will want to look at windows of time to see the impact of field interviews conducted in an area for X amount of time prior has on violent crime in a subsequent time period. The same would apply for quality of life issues, however, for quality of life issues, it may be that quality of life issues that are resolved has one impact while those that are reported have another. Potentially, resolved quality of life issues could reduce violent crime while reported quality of life issues could be a leading indicator of further violent crime. Thus, an outcome of a model like this would to help inform which quality of life issues the city should prioritize.

Specific information on datasets

* Call for Service data
  + Purpose: This dataset reflects incidents that have been reported to the New Orleans Police Department.
  + Link:
    - Homepage for all datasets: <http://nopdnews.com/transparency/policing-data/>
    - Find each individual year located there.
  + Key information
    - Look only at calls with a disposition of “RTF” (Report to Follow)
      * This is a very good proxy for the crime actually occurring
    - Use the XY or the address or the “Beat” designation to locate the call in a small geographic area
    - We are concerned with violent crime. See the attached spreadsheet for the list of calls for service and their designation.
    - Depending on the success of the work, we could expand to other crime types.
    - The open data utilizes an API. Therefore, you could start with data back in 2013 or 2014 to “train/investigate” then try to unleash the model on all the data slowly, and then eventually unleash it to real-time data.
    - The data feed is updated every 24 hours.
* Field interview cards
  + Purpose: A subset of data collected when individuals are interviewed by NOPD Officers (including individuals stopped for questioning and complainants).
  + Link:
    - Data: <https://data.nola.gov/Public-Safety-and-Preparedness/Stop-and-Search-Field-Interviews-/kitu-f4uy/data>
    - Homepage: <https://data.nola.gov/Public-Safety-and-Preparedness/Stop-and-Search-Field-Interviews-/kitu-f4uy>
  + Key information:
    - Each row represents each individual subject. Therefore, it is possible that one field interview (as designated by one field interview ID) could have multiple people. This would need to be incorporated when doing a count of the data (a distinct count of the field interview ID may be needed for example).
* Other QOL indicators
  + General location of datasets: <https://data.nola.gov/>
  + Datasets to consider:
    - Streetlights: <https://data.nola.gov/Transportation-and-Infrastructure/City-Streetlights-Retrofitted-with-LED-Technology-/thvj-m69y>
    - Code enforcement
      * Abatements: <https://data.nola.gov/dataset/Code-Enforcement-Abatements/xv8z-gn8b>
      * All violations: <https://data.nola.gov/Housing-Land-Use-and-Blight/Code-Enforcement-All-Violations/3ehi-je3s>
      * There are many more Code Enforcement datasets
    - 311 Calls: <https://data.nola.gov/City-Administration/311-Calls-2012-Present-/3iz8-nghx>
  + Key information
    - You will likely have to figure out how to geocode the data.