Project Proposal

# Purpose and goals

The purpose of this project is to investigate Baltimore crime / arrests and provide statistics and predictions for Baltimore police department to increase their effectiveness.

# Project strategy

The students will retrieve he data via Baltimore police department API[1][2] and process the data using python and display several statistical graphs using Flask, Jinja 2 templates and javascript.

The students also plan to use machine learning to predict future crimes in the city.

# Scope

The data retrieved has 36,000 entries of arrests as of 20th September 2018. The data spans up from 1st January 2017 to August 2018.

# Deliverables

A flask-based web-application displaying statistics and predictions in html format.

# Functional interfaces

The web-application will attempt to contain the following features:

* Heat-like map of Baltimore showing where crime is most common.
* Various graphs demonstrating the data
* Prediction of crime occurrence in the city for the following months.
* Suggestions on preventing crime.

# Standards

The python code will follow the pep-8[3] standard.

# Reference/research documents

[1] BPD Arrests | Open Baltimore | City of Baltimore's Open Data Catalog. 2018. *BPD Arrests | Open Baltimore | City of Baltimore's Open Data Catalog*. [ONLINE] Available at: <https://data.baltimorecity.gov/Public-Safety/BPD-Arrests/3i3v-ibrt>. [Accessed 20 September 2018]

[2] Socrata Developer Portal | Socrata. 2018. *Socrata Developer Portal | Socrata*. [ONLINE] Available at: <https://dev.socrata.com/foundry/data.baltimorecity.gov/icjs-e3jg>. [Accessed 20 September 2018]

[3] Python.org. 2018. *PEP 8 -- Style Guide for Python Code | Python.org*. [ONLINE] Available at: <https://www.python.org/dev/peps/pep-0008/>. [Accessed 20 September 2018]