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Crime\_Plotters

### **Team Members**

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### **Background**

The impact of the COVID-19 pandemic on crime rates in major metropolitan areas. (As we saw yesterday, there's a lot of data for these cities—Chicago, New York, LA.) The scope of our work could be March 2017 - March 2020 and then March 2020 - March 2023.

### **Hypothesis/Null Hypothesis**

* Crime rates increased during and after COVID19 pandemic
  + March 2020 - present (as recent as possible) vs. equal time pre covid
  + Analyzed by types of crimes
  + Analyzed by rich vs poor populations (by zip?)

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### **Motivation**

Analysis of the impacts to society having gone through a global pandemic

### **Questions to answer**

Possible questions we can investigate from there (building off what we discussed yesterday):

* Is there a change in the geographical concentration of crime?
* Is there a change in the types of crime?
* Is there a change in the policing of crime?
* Is there a change in crime rates in certain neighborhoods (we can compare socioeconomic conditions)
* Is there an increase in crime in all neighborhoods or only certain zip codes?

### **Tools/Modules to use**

* Python
* Pandas
* Matplotlib
* NumPy
* SciPy
* etc.

### **Data sets to use**

List all possible databases you’ll use

* US Census
* Crime Data
* data.gov

### **Tasks Breakdown**

Analysis wizard: Primary -Abe, Contributor -

§ responsible for written analysis including: § discussion of the results (positive/negative/no correlation, etc) and theories as to why § summary of major findings § discussion of limitations in the data and its impact on the result

Query commander: Primary - Katrina, Contributor -

§ responsible for finding answers to interesting questions posed by the group via data analysis techniques learned in class § analysis code and jupyter notebook used to answer questions

Data whisperer: Primary: Mary, Contributor - Abe

§ responsible for API data request(s) and downloading results to json format file § code and description of process used in jupyter notebooks

Cleanup master: Primary: Marco, Contributor -

§ responsible for taking the json file and, using pandas, clean data set(s) for analysis § cleanup process, code in jupyter notebooks

Graphics guru: Primary - Aye, Contributor -

§ responsible for creating 6-8 visualizations of the data (2 per question asked of the data (charts, maps, graphs, etc) using matplotlib, etc. § discussion of why certain types of visualization chosen § code in jupyter notebooks

### **Tasks and timeline**

|  | **Date** | **Task** | **Notes** |
| --- | --- | --- | --- |
| **Seg-1.1** | **2/28/23** | (I assume you’ve started ..) |  |
| **Seg-1.2** | **3/1/23** | (Still a good time to start ..) |  |
| **Seg-1.3** | **3/2/23** | Neural Networks Day-2 | Normal Class |
| **Seg-1.4** | **3/3/23** | (Start now ..) |  |
| **Seg-1.5** | **3/4/23** | (Go Back 3 Spaces ..) |  |
| **Seg-1.6** | **3/5/23** |  |  |
| **Seg-2.1** | **3/6/23** |  | Group Roster and Project Idea Proposal Due |
| **Seg-2.2** | **3/7/23** |  |  |
| **Seg-2.3** | **3/8/23** |  |  |
| **Seg-2.4** | **3/9/23** |  |  |
| **Seg-2.5** | **3/10/23** |  |  |
| **Seg-2.6** | **3/11/23** |  |  |
| **Seg-3.1** | **3/12/23** |  |  |
| **Seg-3.2** | **3/13/23** |  |  |
| **Seg-3.3** | **3/14/23** |  |  |
| **Seg-3.4** | **3/15/23** |  |  |
| **Seg-3.5** | **3/16/23** |  |  |
| **Seg-3.6** | **3/17/23** |  |  |
| **Seg-4.1** | **3/18/23** |  |  |
| **Seg-4.2** | **3/19/23** |  |  |
| **Seg-4.3** | **3/20/23** |  |  |
| **Seg-4.4** | **3/21/23** | Mock Presentation |  |
| **Seg-4.5** | **3/22/23** |  |  |
| **Seg-4.6** | **3/23/23** | PROJECT PRESENTATION | 4th Segment and  Self Assessment Due |
| **Seg-5.1** |  |  | All submissions Due |

### **Presentation**

Divide your presentation steps to tasks and assign it to members.

Suggested by:  
Khaled Karman