

Data Sources:

[Need 8+ Challenge Points]

I am using two data sources for this project. The first is the Federal Bureau of Investigation's Crime Data Exploration API ([hyperlink](#)), which uses an API key in your HTTP request for authentication [4 Points]. I'll be using this source to pull frequency data on instances of criminal offenses in Michigan (not of fenders) of different categories recent years. The record fields are frequency, year, offense name, FBI-Uniform-Crime-Reporting index ([Part I / Part II designation](#)) (i.e. violent/nonviolent), and percentage contribution to the cumulative records from-which the record was selected.

My second data source is to pull data from the Daily Crime & Fire Log ([hyperlink](#)) of the Department of Public Safety & Security, i.e. a log of daily incidents reported on campus. This is an API that does not require authorization, but we have not used in the course yet [3 Points]. I read the javascript and learned how the page requests data of different days so I can make API calls for a given day, which I will use to aggregate ideally 2-3 years worth of itemized criminal and fire incident reports. [Example Requests: [March 20th, 2018](#), [Feb 14th, 2018](#)] Data record fields can include date, violation type, building / location, narrative data, and CAD#.

My third data source is to scrape The Famous People (.com)'s index of most-famous criminals. Fields in this case would be their name, nationality, reason for notoriety, gender, and birth year. [Web Scrape+Crawling of new page: 4 points.] [[Source](#)]

Challenge Points: [11 Points]

Source	Purpose	Listed Value
FBI CDE API	HTTP Key-Auth API Usage	4
DPSS Daily Crime Data	Unauthenticated API Usage	3
The Famous People: Criminals	Scraping + Crawling New Site	4 **

** The syllabus listed this as 8 points but frankly it's not going to be that difficult so I'm calling it 4. I'm only adding this source because I was at 7 points and have to clear the 8-point threshold.

Presentation Tool:

We haven't covered Flask yet, so by default my current intent is to use Plot-ly.

Presentation Options:

The current presentation options I intend to offer the user are:

- 1) A timeplot showing the total annual amount of FBI criminal records over the years;
- 2) A pie chart illustrating percentile representation of different crime record categories for the most recent year for which FBI API data could be acquired, 2016;
- 3) A chart that uses the local DPSS campus police data to show which campus dormitories have the highest incident rates;
- 4) A chart that shows national origins of the "famous criminals" (from data-source 3)
- 5) A pie chart showing gender contribution to the "famous criminals" list.

Ideally I will do more with campus crime data as time permits, but this is a good draft for now.