Analyzing the Opioid Addiction Crisis: The Rise in Fentanyl Overdose Rates
Capstone Project Proposal

1. What is the problem you want to solve?

The opioid addiction crisis has created an alarming situation across the United States with death counts rising to an all-time high.

A public emergency has been declared by the president and federal government, new synthetic drugs are infiltrating the system and killing thousands of lives each year. Recently, Fentanyl has been introduced and mixed with heroin, which can lead to devastating consequences. This proposal aims to delve into the problem by looking at the drug overdose data from one state, Connecticut, and conduct several tests, create visualizations, and possibly extract insightful information that can help state and public officials make more informed decisions regarding the epidemic.

2. **Who is your client and why do they care about this problem? In other words, what will your client DO or DECIDE based on your analysis that they wouldn't have otherwise?**

The explosion in fentanyl deaths and the persistence of widespread opioid addiction have swamped local and state resources. Communities are complaining of their budgets being strained by additional needs required as a result of the crisis—resources including increased police presence and medical care to cover the cost of naloxone distribution. In addition, fentanyl overdoses are resulting in several children who have lost their parents and therefore need to be put in a foster care system, resulting in more money and resources that need to be budgeted to help care for them. In conducting extensive data analysis, I hope this proposal can reach the public and help them form creative and well-informed solutions to the addiction crisis that is currently killing thousands every year and continuing to get worse. Many people have a perception that drug addiction overdose occurs in a select few states that have a past history in drug use; however, in choosing a state like Connecticut, with not much of a previous history of drug use and overdose, I hope this proposal will convince ALL states to pay attention to their data because addiction and overdose rates are increasing at staggering levels each year, which amounts to a higher death toll.

3. What data are you going to use for this? How will you acquire this data?

Data:
Data and references (to name a few, more to come later) can be obtained from these sources:

* Connecticut Open Data: Fentanyl Related Deaths 2012-2016
https://data.ct.gov/Health-and-Human-Services/Fentanyl-Related-Deaths-2012-2016/yr5i-4u34
* A major reference source: https://www.nytimes.com/interactive/2017/09/02/upshot/fentanyl-drug-overdose-deaths.html
* National Center for Health Statistics, Centers for Disease Control and Prevention

4. In brief, outline your approach to solving this problem (knowing that this might change later).

Approach:
1. Extract the data

2. Check for missing values and clean the data so that it can be used for further analysis
3. Analyze and decipher new insights that have not previously been uncovered And/Or confirm findings from previous studies
4. Create visualizations and models to show the trajectory of overdose
5. Provide conclusions and insights and their level of importance.

5. What are your deliverables? Typically, this would include code, along with a paper and/or a slide deck.
1. Code - Jupyter notebooks
2. A report
3. Slide deck
4. Personal blog post on process of performing analyses