(1) Track the public options about COVID-19 vaccine

Background: 2020 is an unprecedented time and the whole world were almost shut down during the pandamic. Recently, two types of vaccines have been approved by FDA and they are like the light in the dark. Hopefully, vaccine can help end the pandemic and we can go back to normal life in 2021. However, there are different options about vaccines. People may welcome, oppose, or be skeptical about Vaccinations. It is important to find what people think.

Approach/data source: I will utilize natural language processing approach in this project. The data comes from the social media, such as Twitter.

Applications:

1. It would help government/companies to decide how many vaccines are needed
2. According to WHO, Community immunity requires at least 80% of the population to be vaccinated. As a result, knowing percentage of people who welcome, oppose, be skeptical is important.
3. It would help the government to decide whether they need to put more effort to persuade people to get vaccination.

(2) Track the depression during the pandemic

Background: During the pandemic, most of people are working from home and need to limit outdoor activities. It is a totally different working and living style that we have never experienced before. Isolated physically from friends, people might feel alone and depressed. During the pandemic, we not only need care about COVID, but also the mental health.

Approach/data source: I will utilize natural language processing approach in this project. The data comes from the social media, such as Twitter.

(3) Image classification (maybe cat)

I have seen other projects for cat vs. dog or human face detection. The idea behind image classification is the same, by using the multi-layer neutral networks approach. But I feel it is a good learning process for beginners like me to start from a scratch to develop neutral networks model to have deeper understandings.