Capstone project 1 ideas:

1. Analyze career change of people with advanced degrees (Ph.D.):

I am interested in this because the trend is clear that more and more people with advanced degrees are changing their fields in job searches (especially for people in biology, physics and chemistry etc). This analysis will reveal the underlying supply and demand mechanism regulating the job market and how universities and even the country should gear toward producing better graduates to accommodate the ever changing job market. The data will potentially come from scraping Linkedin website or by searching online in different places.

2. Predict the result of NBA games

As a long time basketball fan since the early 90s, I have always been interested in the NBA especially when Michael Jordan was in his prime. Using NBA player, coach, and team data from 1985 to 2016, I can analyze the relationship between all available stats of players and the winning percentage. Maybe multiple factors will affect the results of the games. The data has been downloaded as separate CSV files containing data from 1985 to 2016, so they are ready to go.

3. Predict crime type in Chicago and visualize different crime rates on a map

The Chicago crime data since 2001 is readily available and has been downloaded as a single CSV file. It contains over 6M crimes reported to the police. Analyses can include but not limited to: what types of crimes are most common, where most crimes happen by street, what day and time of the week sees the highest crime rates, and whether arrests were made the most in certain areas can be done. The information can then be used to predict what type of crimes will happen when a crime is reported from a certain location and whether it’s severe enough to warrant an arrest. This will be useful to the police department as to where to send more patrols and how many officers should be dispatched for a certain area.