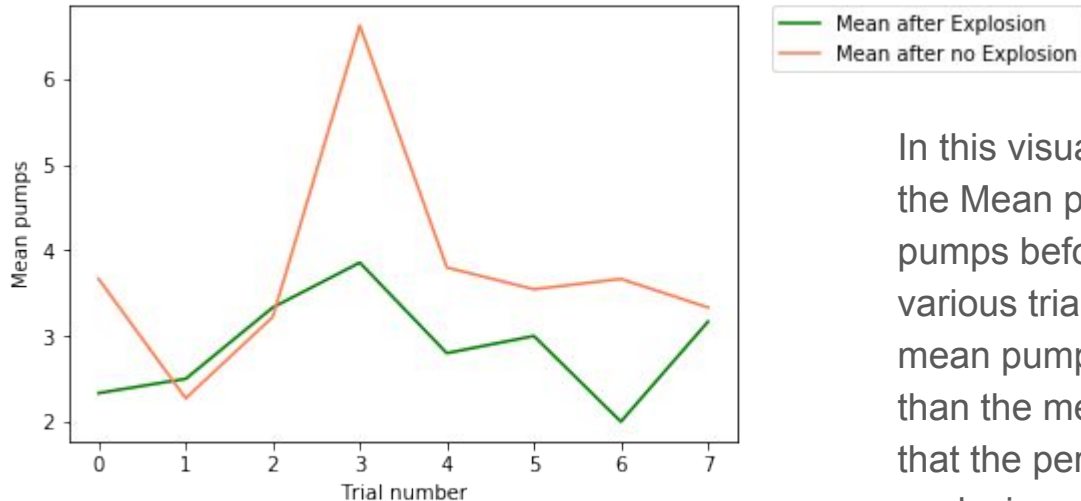# INFO 5555 Assignment 1

Utsav Vakil (uuv2)

Tools Used

- To create the visualizations based on the data received, I used Jupyter Notebook, to write the code in Python, and used the matplotlib library in particular to make the graphs.
- To read the CSV files, pandas library was used. The csv library was also used to read one of the CSV files.

BART - 1

In this visualization, a comparison is made between the Mean pumps after an explosion and the Mean pumps before an explosion are compared over the various trials. From this, we can clearly see that the mean pumps after no explosion were much higher than the mean pumps after an explosion. This shows that the person is much relaxed if there's no explosion, and is willing to risk pumping a few more times in the next try.

BART - 2
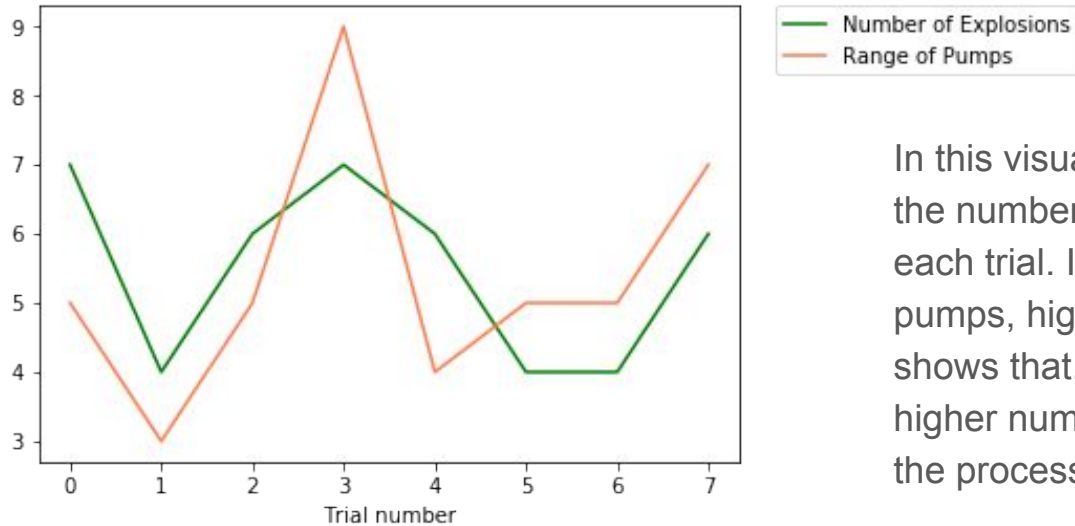
In this visualization, a comparison is made between the number of explosions and the range of pumps in each trial. It is seen that the higher the range of pumps, higher is the number of explosions. This shows that, with the user taking higher risks to get higher number of pumps, the number of explosions in the process is consequently becoming higher.

BART - 3
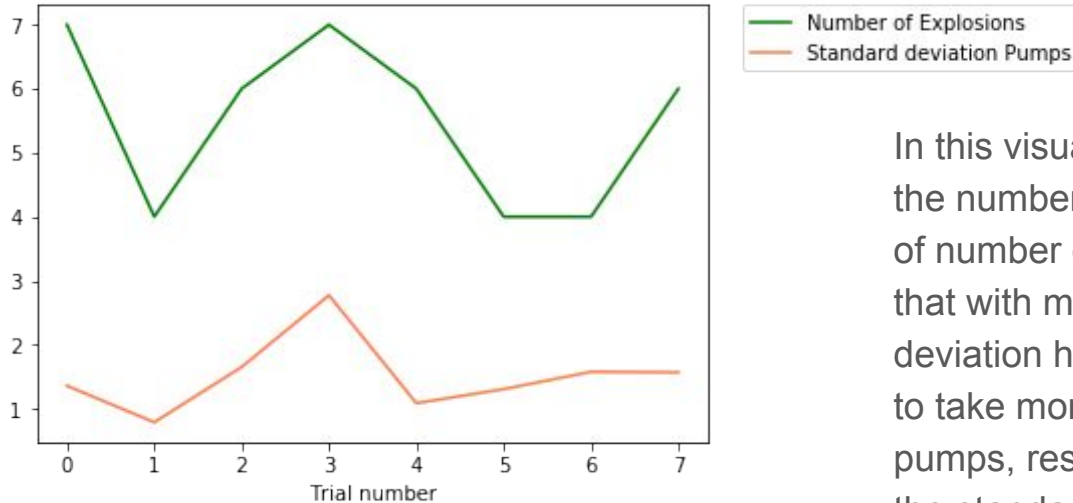
In this visualization, a comparison is made between the number of explosions and the standard deviation of number of pumps for each trial. We can clearly see that with more number of explosions, the standard deviation has increased. This is because the user tries to take more risks, by trying for higher number of pumps, resulting in an explosion. Thus, this increases the standard deviation of the number of pumps.

Go /no go - 1
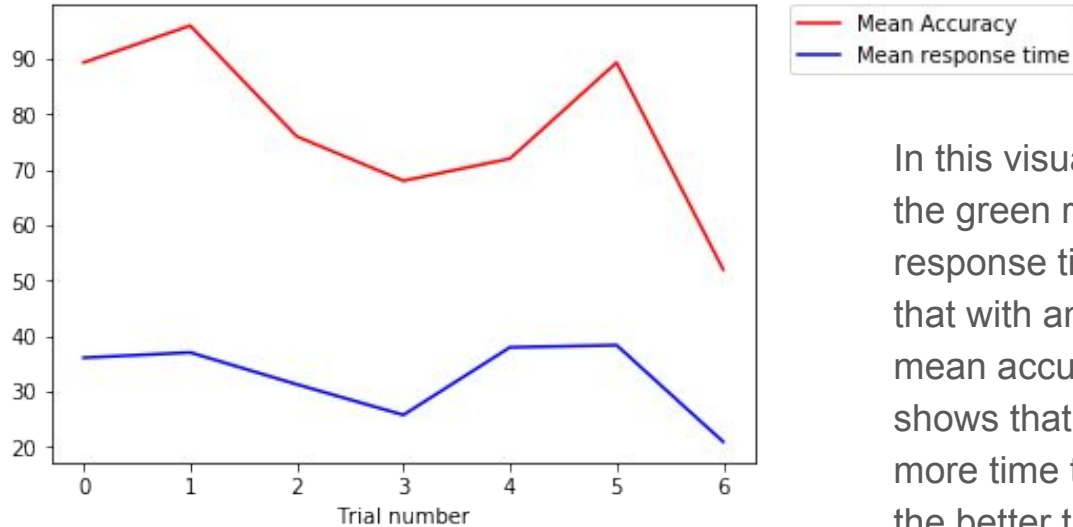
In this visualization, the mean accuracy of choosing the green rectangle is plotted along with the mean response time of the exercise for each trial. It is seen that with an increase in the mean response time, the mean accuracy is correspondingly increasing. This shows that the more patience the user has, and the more time the user takes in tapping on the rectangle, the better the accuracy is.

Delayed Discounting - 1
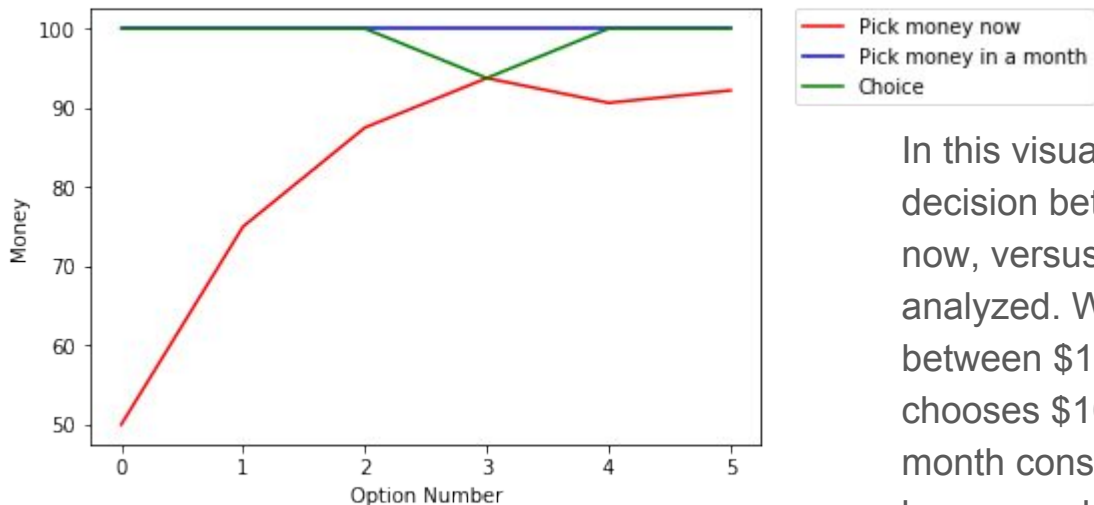
In this visualization, for a single trial, the user's decision between taking a certain amount of money now, versus taking a larger sum of $100 in a month is analyzed. We can see that initially, when the choice is between $100 in a month versus $50 now, the user chooses $100. Similarly, the user chooses $100 in a month consistently, until the sum to be taken now becomes close to $100. This is when the user actually thinks of choosing a smaller some in the present.This shows that the user weighs the options of immediate gain versus long term gain carefully.

Delayed Discounting - 2
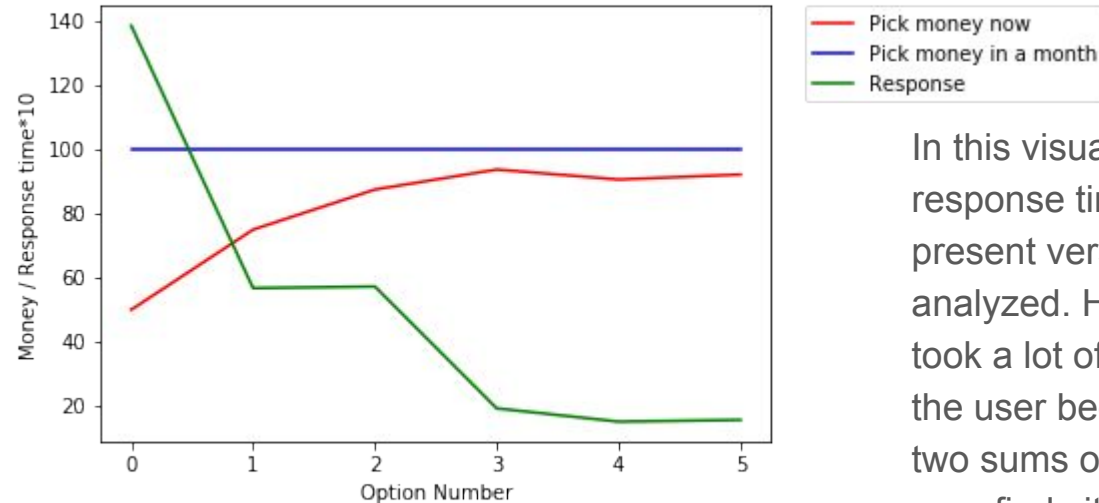
In this visualization, for a single trial, the user's response time in choosing a small amount in the present versus choosing $100 in a month's time is analyzed. Here we see that in the beginning, the user took a lot of time in choosing an option. Consequently, the user begins to make quicker decisions. When the two sums of present and future become closer, the user finds it easier to make a decision, which is seen be a drastic drop in the response time.