Capstone Project Proposal Maria Meza:

The project I have decided on is the Parkinson's disease progression prediction project. The purpose of this project is to identify the proteins that may play a part in the progression of Parkinson disease, and to become able to predict the progression of Parkinson's disease based on protein abundance. Success will be determined by accurately identifying the key proteins that cause Parkinson's disease and accurately predicting the progression of the disease. The results of this project will be presented as a report.

A major constraint for this project is time. It will take time to assess the results from this project when implemented in a real study since it takes time for Parkinson's disease to develop. It would take time to asses if the disease developed as predicted in the initial stages of implementing the results from this project. This data set will make it easier to understand which proteins have a key role in the progression of Parkinson disease. Since proteins play a key role in the overall function of the human body, the results from this data will be useful to AMP medical practitioners and researchers who want to help those with Parkinson disease. It will also be of help to the government since Parkinson's disease inquires a social cost of $80 billion. This project will analyze data that has been collected over the years from patients' cerebrospinal fluid that has been analyzed with spectrometry technology. This project will help us to better understand Parkinson disease. This project can help in identifying Parkinson disease in patients, in moving on to the next step to finding a cure or making the lives of people easier and reducing the high social cost of Parkinson's disease. The stake holders include the government, AMP, Foundations of National Health Institute, while AMP is providing the data as well.

Finally, to accomplish this project I will first perform exploratory data analysis (EDA). During this step I will create a dataset useful for prediction and model training. Then I will create a simple baseline model to train my data. Lastly, I will try to create a machine learning model.