Project idea 1: Predict the types of hospitalizations that will occur seasonally.

- Datasets: Climate data and Health Data
- Description: Utilize climate information to determine if health problems occur more frequently during certain types of weather. For example, it would be expected that asthma would act up during high pollen times. Determine which other conditions or procedures are affected or scheduled differently due to climatic events.

Project idea 2: Predict the type of brain development someone will have during their lifetime given their nutritional habits.

- Datasets: <u>Health and Nutrition Survey</u> and <u>Alzheimer's/Healthy Data</u>
- Description: Health and Nutrition vary by region and demographics. For example, different foods are primarily eaten by different cultures. Here I propose using information from the Health and Nutrition Survey to, such as where someone lives and what their income levels are, to predict the incidence of Alzheimer's Disease in various regions of the U.S.

Project idea 3: Predict seasonal air quality given the location.

- Datasets: <u>EPA environmental data</u>
- Description: Utilize timeseries analysis to find trends in the environment for a specified area. For example, temperature data would likely have a sinusoidal trend that would lend for prediction in future years given an area and time of interest. This concept could be applied to predict information for air quality or greenhouse gasses.