**Belly Button Biodiversity Dashboard**

The goal of this assignment was to build an interactive dashboard that allows users to explore the dataset by visualizing the top bacteria found in each sample, and by displaying each sample’s demographic metadata.

**Features**

* **Dropdown Menu**: Allows users to select a test subject ID and updates both charts and metadata.
* **Horizontal Bar Chart**: Displays the top 10 OTUs found in the selected individual using sample\_values as values and otu\_ids as the labels.
* **Bubble Chart**: Visualizes all OTUs found in the selected individual. The otu\_ids are plotted along the x-axis, sample\_values on the y-axis, and otu\_ids are used to set the bubble colors.
* **Sample Metadata**: Displays demographic information for the selected sample by looping through the metadata object.

**Technologies Used**

* **D3.js**: Used for rendering the interactive dashboard, creating the dropdown menu, and processing the data for both charts and metadata.
* **Plotly.js**: Used to create the interactive bar chart and bubble chart.
* **HTML**: Basic layout of the dashboard.
* **CSS**: Basic styling using Bootstrap for a clean and responsive design.

**Plot Descriptions**

* **Bar Chart**: Displays the top 10 OTUs for the selected individual. The OTU IDs are displayed as horizontal bars, and the chart shows how many sample values were recorded for each OTU.
* **Bubble Chart**: A bubble chart representing the diversity of bacteria in the sample. The size and color of the bubbles correspond to the sample values and OTU IDs, respectively.
* **Metadata Panel**: This panel displays various pieces of demographic information about the sample, such as age, gender, ethnicity, and location.