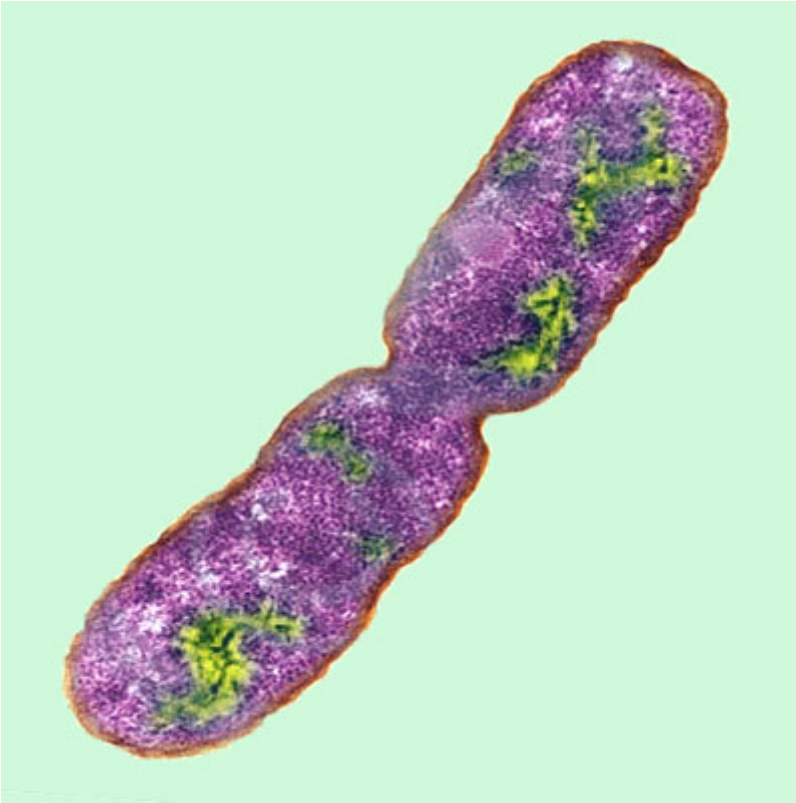


Plot.ly Homework - Belly Button Biodiversity

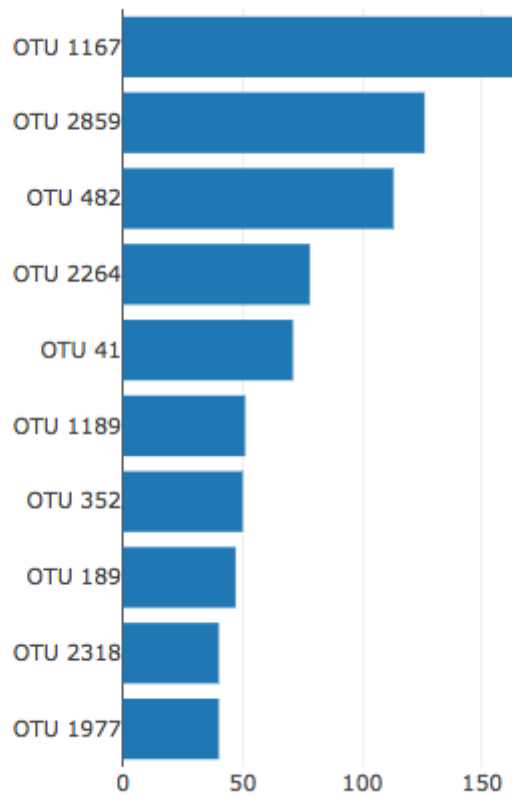


In this assignment, you will build an interactive dashboard to explore the [Belly Button Biodiversity dataset](#), which catalogs the microbes that colonize human navels.

The dataset reveals that a small handful of microbial species (also called operational taxonomic units, or OTUs, in the study) were present in more than 70% of people, while the rest were relatively rare.

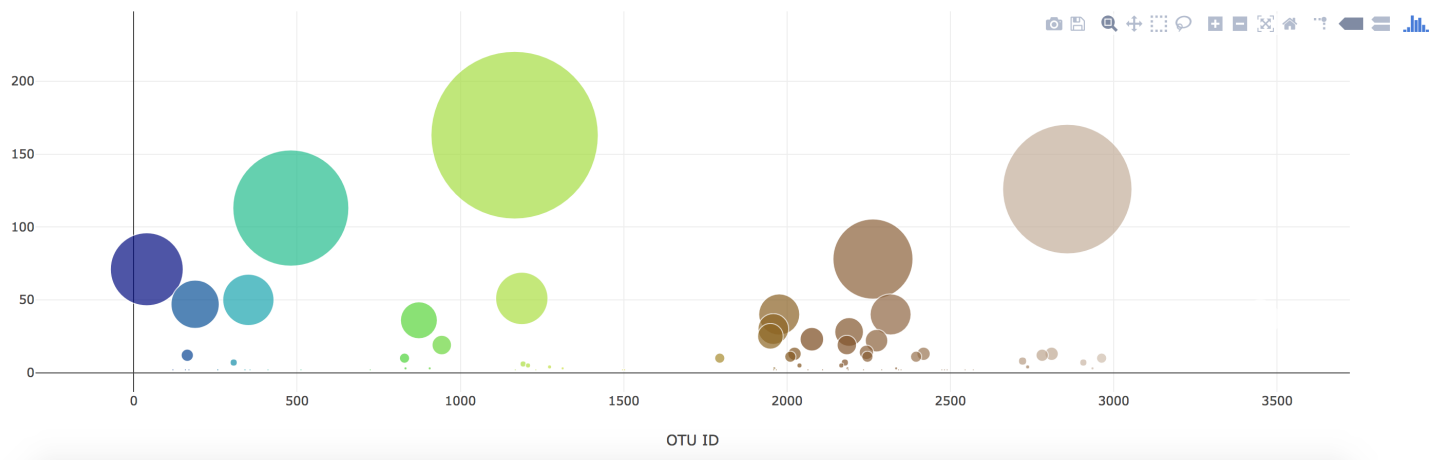
Step 1: Plotly

1. Use the D3 library to read in `samples.json`.
 2. Create a horizontal bar chart with a dropdown menu to display the top 10 OTUs found in that individual.
- Use `sample_values` as the values for the bar chart.
 - Use `otu_ids` as the labels for the bar chart.
 - Use `otu_labels` as the hovertext for the chart.



3. Create a bubble chart that displays each sample.

- Use `otu_ids` for the x values.
- Use `sample_values` for the y values.
- Use `sample_values` for the marker size.
- Use `otu_ids` for the marker colors.
- Use `otu_labels` for the text values.



4. Display the sample metadata, i.e., an individual's demographic information.

5. Display each key-value pair from the metadata JSON object somewhere on the page.

Demographic Info	
id:	940
ethnicity:	Caucasian
gender:	F
age:	24
location:	Beaufort/NC
bbtype:	I
wfreq:	2

6. Update all of the plots any time that a new sample is selected.

Additionally, you are welcome to create any layout that you would like for your dashboard. An example dashboard is shown below:

Belly Button Biodiversity Dashboard

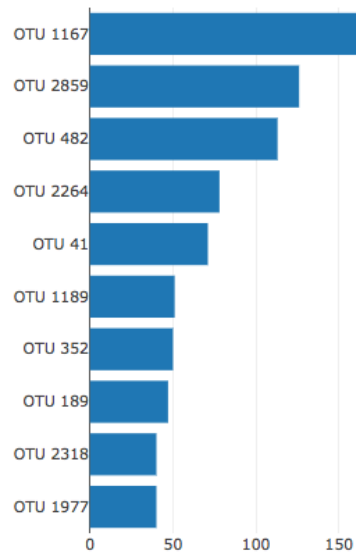
Use the interactive charts below to explore the dataset

Test Subject ID
No.:

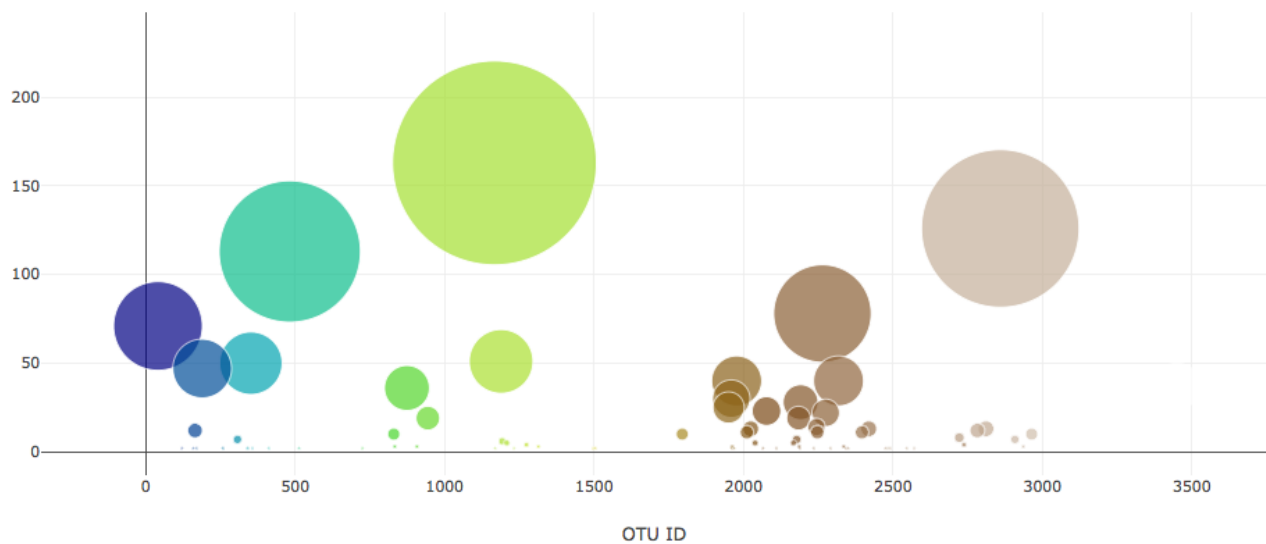
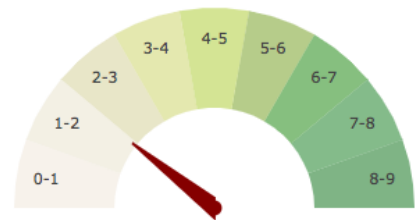
940

Demographic Info

id: 940
ethnicity: Caucasian
gender: F
age: 24
location: Beaufort/NC
bbtype: I
wfreq: 2



Belly Button Washing Frequency Scrubs per Week

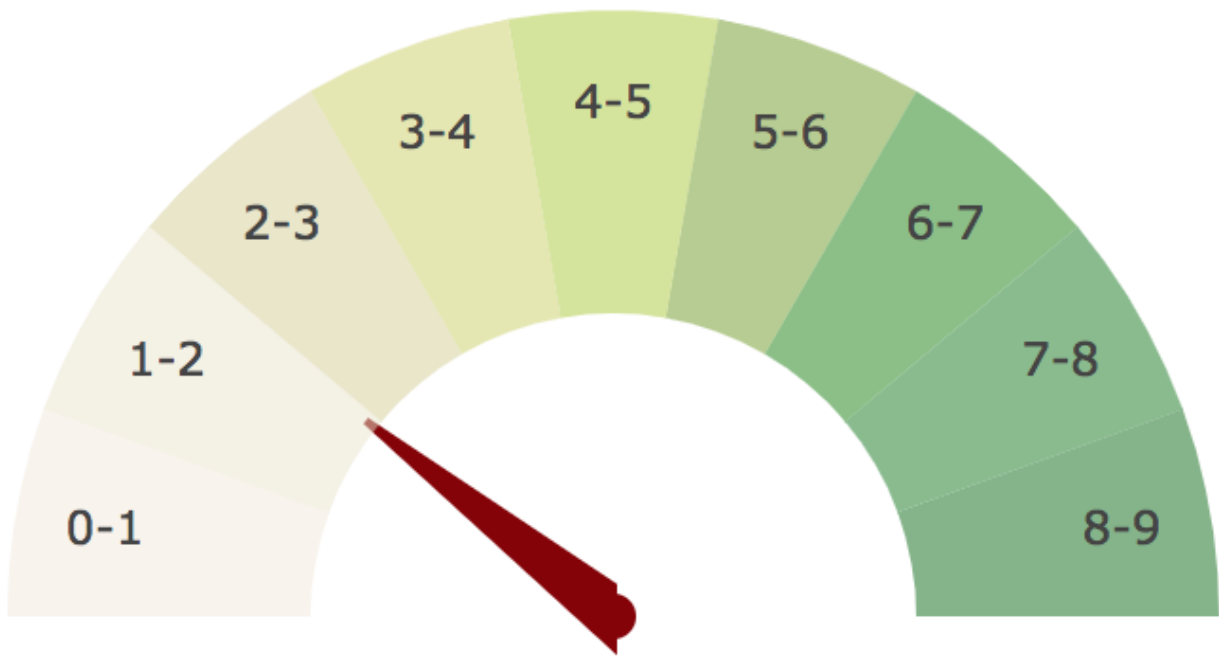


Advanced Challenge Assignment (Optional)

The following task is advanced and therefore optional.

- Adapt the Gauge Chart from <https://plot.ly/javascript/gauge-charts/> to plot the weekly washing frequency of the individual.
- You will need to modify the example gauge code to account for values ranging from 0 through 9.
- Update the chart whenever a new sample is selected.

Belly Button Washing Frequency Scrubs per Week



Deployment

Deploy your app to a free static page hosting service, such as GitHub Pages. Submit the links to your deployment and your GitHub repo.

Hints

- Use `console.log` inside of your JavaScript code to see what your data looks like at each step.
- Refer to the [Plotly.js documentation](#) when building the plots.

About the Data

Hulcr, J. et al.(2012) *A Jungle in There: Bacteria in Belly Buttons are Highly Diverse, but Predictable*.
Retrieved from: <http://robdunnlab.com/projects/belly-button-biodiversity/results-and-data/>

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