**Visualization One:**

In the first visualization, our group was working to use python to show look further into quantitative country data to further see how highly they rate privacy and security when looking to buy new technologies. This was really interesting to look into because not only were we able to look at how the different measurements that were presented within the comparison but we were also able to tailor the visualization to be interactive in a way that could support our data. (talk more about how we made it interactive)

Our design process consists of a few different steps until we landed on our final visualization. We first started with sketching the visualizations on paper, we chose to do this to start to create a method where we could fail fast through quick tests and trails and then work through the dataset to see the gist of the data easily and then once you can start to see what is happening within the data you will be able to create the necessary filters that will allow the person interacting with the visualization to start to see the patterns and trends that the visualization holds. If you hover over a certain dot you will be able to see the specific values the dot represents.

Our visual leverages different perceptual mechanisms in the design. One perceptual mechanism used is Separability. The colors in this visual utilizes separability because it allows people to search for one response at a time. They can just select a few of the possible responses to the security question and see only the filters they have chosen which is represented by different color dots. Position is another perceptual mechanism used in the visual. Position is used since the responses with highest number are at the top of the graph. People will easily be able to understand how the dots are placed on the graph.

**Visualization Two:**

As we jumped into our second visualization, we started by actively brainstorming new questions that incorporated categorical variables. During this process we landed on the categorical variable, Country, and wanted to see which countries were the most “tech savvy.” Since this graph incorporates a categorical variable with a wide range of countries, we didn't want to stretch the complexity of our visualization. We were more focused on conveying a message in a simple way so that our audience could gain insight quickly.

Each bar in our visualization represents a different country, and when you hover over a specific bar, a text box will appear indicating that country's name and their corresponding number of “tech savvy” individuals. We found that France, Germany, and Italy all have a higher population of “tech savvy” people than the United States, putting us in fourth place across all the countries in the data set.

To allow our viewers to comprehend our visualization quickly we were focused on incorporating the perceptual mechanism gist. At a quick glance, it is easy for the viewer to process which countries have more tech savvy individuals compared to others (smaller bars). For example, the big blue bar quickly stands out as the biggest box. Therefore the viewer will most likely hover over that bar first. We also wanted to integrate separability into our plot because the use of color in the visualization allows the viewer to look for one visual channel at a time. The differing colors within the more distinguished countries will allow the viewer to associate various countries with their corresponding colors. In summation, the perceptual mechanisms within our visualization are not complex, but allow the view to come away with insights quickly and retain those insights.

**Team roles for each individual:**

Lanea worked on the visualization that was coded in python with Priya to get an interactive visualization that would function and be able to give the viewer different kinds of data. Lanea also worked on part of the write up for the ReadMe.

Priya worked on the first visualization on python with Lanea to create an interactive visualization that gives viewers a different insight into the dataset. Priya also worked on part of the write up for the ReadMe.

Jake explored visualizations using ggplot and plotly in R because he had more experience in that language from other CU courses that use R. Jake also brainstormed ideas and completed the write up for the second visualization.

Edgar created the bar chart in D3. Without prior experience in Javascript, HTML, and D3, he was able to successfully create the visualization with help from the workshop in class on Halloween and online tutorials.

**How to run your project:**

To run this project you will want to download the zip file to your local machine. Once this is done you will want to open a terminal and go place the path to the zip file within your zip file (on some machines you can also use cd then drag and drop the file onto your terminal). Once this is done open up a local server to run the documents on, with many machines you will use the command ‘python -m http.server’, once the server is up and running you will go to a browser and type in ‘localhost:8000’ this will open your personal server and from there you will be able to view all of the visualizations and their associated programs.