Website link: <https://christineag24.github.io/final_ds4200/>

Repo link: https://github.com/christineag24/final\_ds4200

As instructed by Professor, we have included a Google Drive link to our Jupyter Notebook as gradescope did not permit us to upload it due to its size: <https://drive.google.com/file/d/197Pzvsyig2AcrBXlcnfv0froo6LcZvqr/view?usp=drive_link>

Additionally, our second interactive was also too large to upload and has been linked:

<https://drive.google.com/file/d/1trr1FTHJsOZ7x-Gl-rRp_M_cMiAJLhH0/view?usp=drive_link>

Visualization #1: Comparative Bar Plot

This is a bar plot that compares two different countries for all the various mental illnesses average percentages we have access to. There is a dropdown option below the graph. The user is able to choose from any of the countries, sorted alphabetically, to compare to the United States. This is a useful visualization in order to show an exact number for each country to see head-to-head comparisons. We selected United States as our starting country since we all currently reside in the United States, as well as the fact that the United States is one of the most powerful countries and we are all familiar with it. This was made using Altair. In using Altair, we designed separate bar graphs for each illness. Each bar graph used the average percentage of that illness. From there, we combined all the bar graphs together.

Visualization #2: World Map

This is an interactive world map made using geopandas and folium explore. On the side, there is a layers option. The user can select between 1990 and 2015 . This allows to the user to compare the distribution over time. Then, the user can select for the time frame, what mental illness they would like to see a choropleth map of. By looking at this plot, users can look overall at how the different countries’ populations are affected by the mental illness they have selected. They can then toggle to the other date to see how this distribution may have changed over the next or past 25 years. Additionally, as this is a color map, there is also a tooltip function that allows the user to see what country they are hovering over as well as what the exact percentage in that year was for the illness they are currently looking at. We were able to create the different years by splitting the dataframe into one for 1990 and one for 2017. We then created separate maps for each and combined them all into one layered map.

Static #1: Line and Scatter Plot

This is a scatter plot that simply plotted the percentage of the world’s population affected by mental illnesses on the vertical axis and on the horizontal axis, it plotted the year that percentage measurement is representative of. Our dataset had a measurement for each year that represented the world. We were able to use that to create this plot.

Static #2: Line and Scatter Plot

This is a set of subplots that mimic the plot above. Instead of the vertical axis representing the percentage affected by any mental illness, each plot’s vertical axis represents a different mental illness being plotted over time to show any changes in time. Our dataset had a measurement for each year that represented the world for each specific illness. We were able to use that to create this plot.

Static #3:

This graph was made with D3. It is a scatter graph to show if there was a relationship between the percentage of the population affected by depression and those affected by alcohol use issues.

Static 4: Bar graph

This is a bar graph that shows the most recent data, 2017, for the United States and the percentage of the population affected by a range of mental illnesses. We were able to do this by selecting the 2017 data points for the United States for each illness.