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Pursuit of Happiness: An Analysis of the World Happiness Report 2015-2020

Summary Write-up:

Our study was based on the World Happiness Report dataset. The World Happiness Report is a landmark survey on the state of global happiness that intended to use happiness indicators to inform policy making decisions. With a sample size of 1,000 people per country, this publication from the UN Sustainable Development Solutions Network using data obtained from Gallup polling, saw participants take equally weighted ratings of their lives based on different life factors such as GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity, and perceptions of corruption. With this data we were able to examine the intersectional relationships between these factors and happiness. Since our last project, the World Happiness Report released their 2020 data set which we added into our original dataset. Since 2020 was such an unprecedented year across the global, we were very interested in the impact it would have on the data. That is why we decided to focus our visuals and analysis on the data from only the year 2020.

We used HTML and bootstrap to create a web visualization design which created the foundation for our landing page, and additional pages for each of our visualizations. Our landing page has a link to our PowerPoint presentation; ensuring easy access to all of the necessary information on our project in one place.

In order to best illustrate our findings, we felt that a world map highlighting the happiest countries and least happiest countries would be the strongest visual. We decided to build our map using the JavaScript library from Google Charts: GeoChart Visualization. We adjusted the code to fit within our dataset using D3. The map allows for the user to easily notice regional trends for happiness score. Additionally, users can easily zoom into specific regions to see breakdowns by country. When looking at the map one can quickly see that Europe, North America and Australia are the happiest continents.

Next, we used D3 and Plotly to create an interactive bar chart. Since Happiness Score is an aggregate measure, we created a drop-down menu that allows the bar chart to display Happiness Score, as well as the factors for GDP per capita and trust score.  The bar chart also has a click and drag zoom function that allows the user to focus on specific areas of the chart. This visual makes it easy to compare multiple Happiness Score factors among the countries in the dataset.

In the end, we would have liked to add more functionality and incorporate more of our data into the visualizations. For our Geochart visualization, we would have liked to showcase more data on the country labels, in addition to Happiness Score. When it comes to the bar chart we would have liked to be able to show a year over year comparison, for one of the variables.