

Neil Bhutada

10th April 2022

Portfolio- 3

Portfolio-3

The visualization I made is about understanding and analyzing world happiness scores around the world. There are three major questions that my visualizations address. One, the histogram (fig. a) describes how the distribution of the world happiness score looks like. Two, the Plotly world map (fig. b) describes how the world happiness scores are distributed geographically; for example: what regions have similar happiness scores? Three, the data table (fig. c) describes how various factors have influenced the happiness score of a country; for example, how did the GDP per Capita, perception about corruption, etc. affect the world happiness score of that country.

The user can brush the histogram to select a range of happiness scores from the histogram. The countries with the happiness scores brushed by the user will be highlighted in the world map. Similarly, the data table will show the break-down of the happiness scores based on various factors such as GDP-Per Capita, Social Support, etc.

There were both surprising and obvious conclusions from the visualizations. Obvious conclusions were the Europeans and Pacific Island countries like New Zealand countries were regions that had happiness scores compared to the world. Surprising conclusions were that despite the US being the biggest economy in the world, it was not a country with one of the highest happiness scores. Even India having one of the lowest happiness scores because of lack

of social support and lower life expectancy was quite surprising. As an overall analysis, African countries generally have lower happiness scores, Asian and South American countries have lower to mid-level happiness scores, and the other regions of the world (such as European and North American countries) have higher happiness scores.

There were two data sets I used for this portfolio. One, the happiness score report for the year 2022, and the second was a vector/shape file from the 'spData package' that has the polygon shapes for all the countries in the world. In terms of data manipulation, I had to change the country names in the happiness score report to match the country names in the shape file. For the histogram, I added the brush input and relayed "overview + detail" by shading the selected points on the histogram with a darker shade. The 'geom_sf' object was wrapped in a 'ggplotly' object. The countries with the happiness scores selected in the histogram had higher values of alpha; this was done to show "overview + detail." The data table was filtered to countries that had happiness scores selected in the histogram.

