Coding Assignment 2 Report

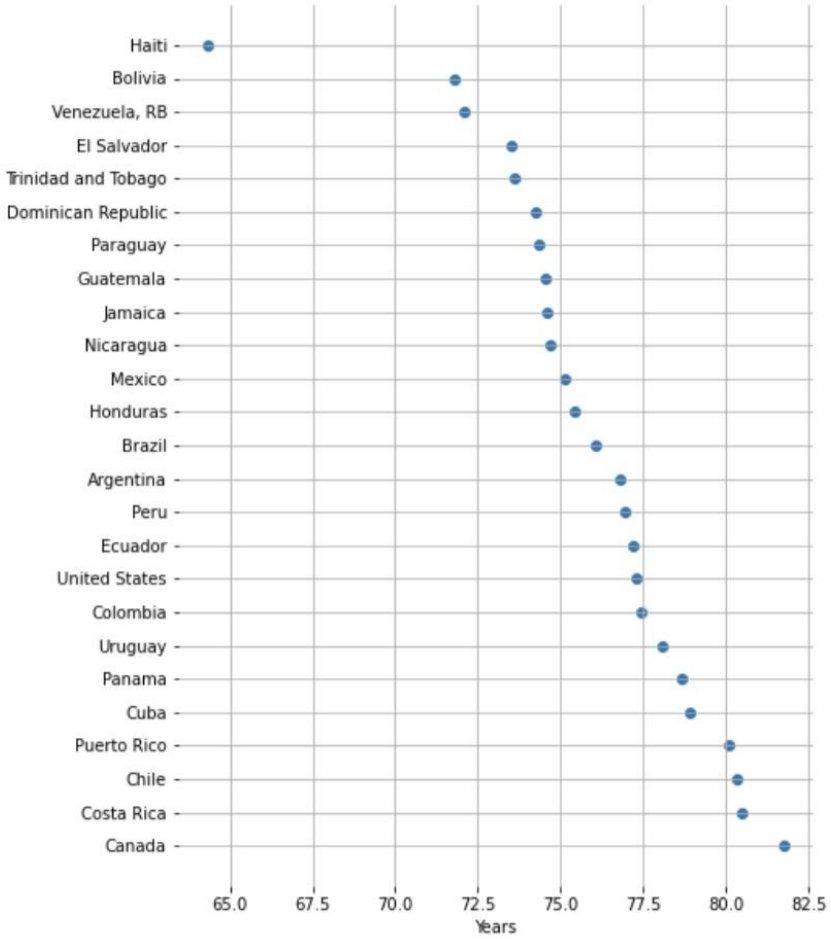
October 22, 2022 by Zikang Xiong

This report aims to improve the data visualization accessibility of a dot plot using the five methods:

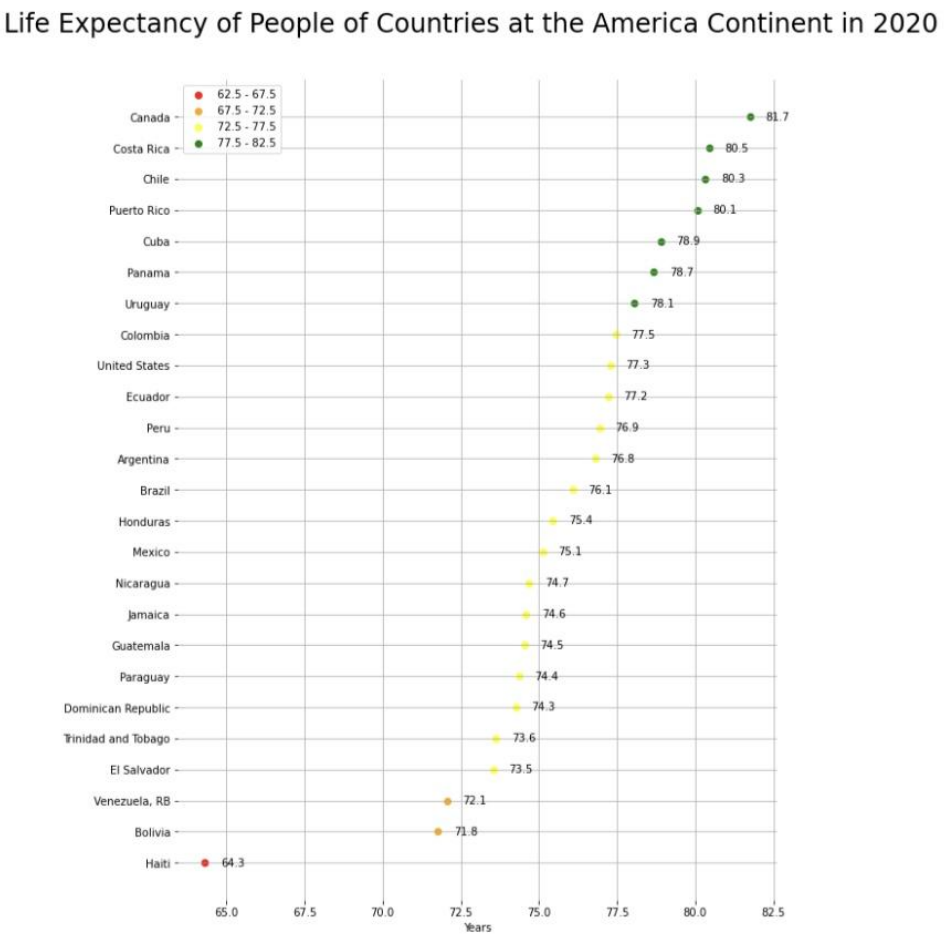
1. Add alternative text
2. Empoly a takeaway title
3. Label data directly
4. Check type and color contrast
5. Use white space

Data is adopted from the world bank, and it dictates the life expectancy of countries in the America Continent in 2020.

THE ORIGINAL GRAPH



IMPROVED FOR ACCESSIBILITY GRAPH



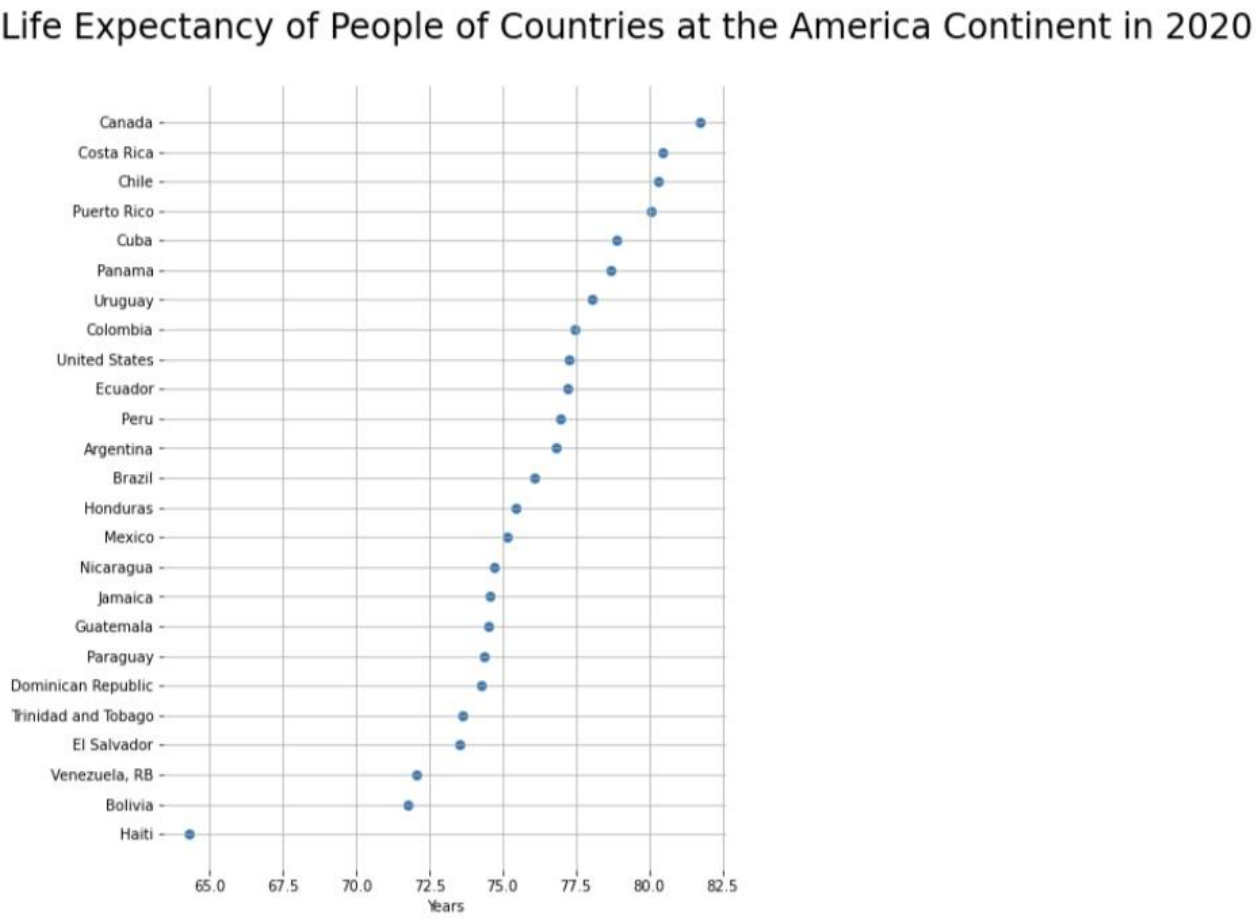
Add Alternative Text

For alternative text, I need to clarify the type of data, the chart type and the key takeaway. The type of chart is a dot plot. From the graph we can see that most of the countries have the life expectancy between 72.5 and 80, and Haiti has the lowest life expectancy which is 64.3. Thus, I wrote the alternative text like this:

"Grid colored dot plt indicating the life expectancy of people of various countries at the America Continent in 2020. Canada has the greatest life expectancy of 81.7, and Haiti has the fewest life expectancy of 64.3. Most of the life expectancies of countries(80%) fall between 72.5 and 80, and Haiti is the only country that has the expectancy less than 70."

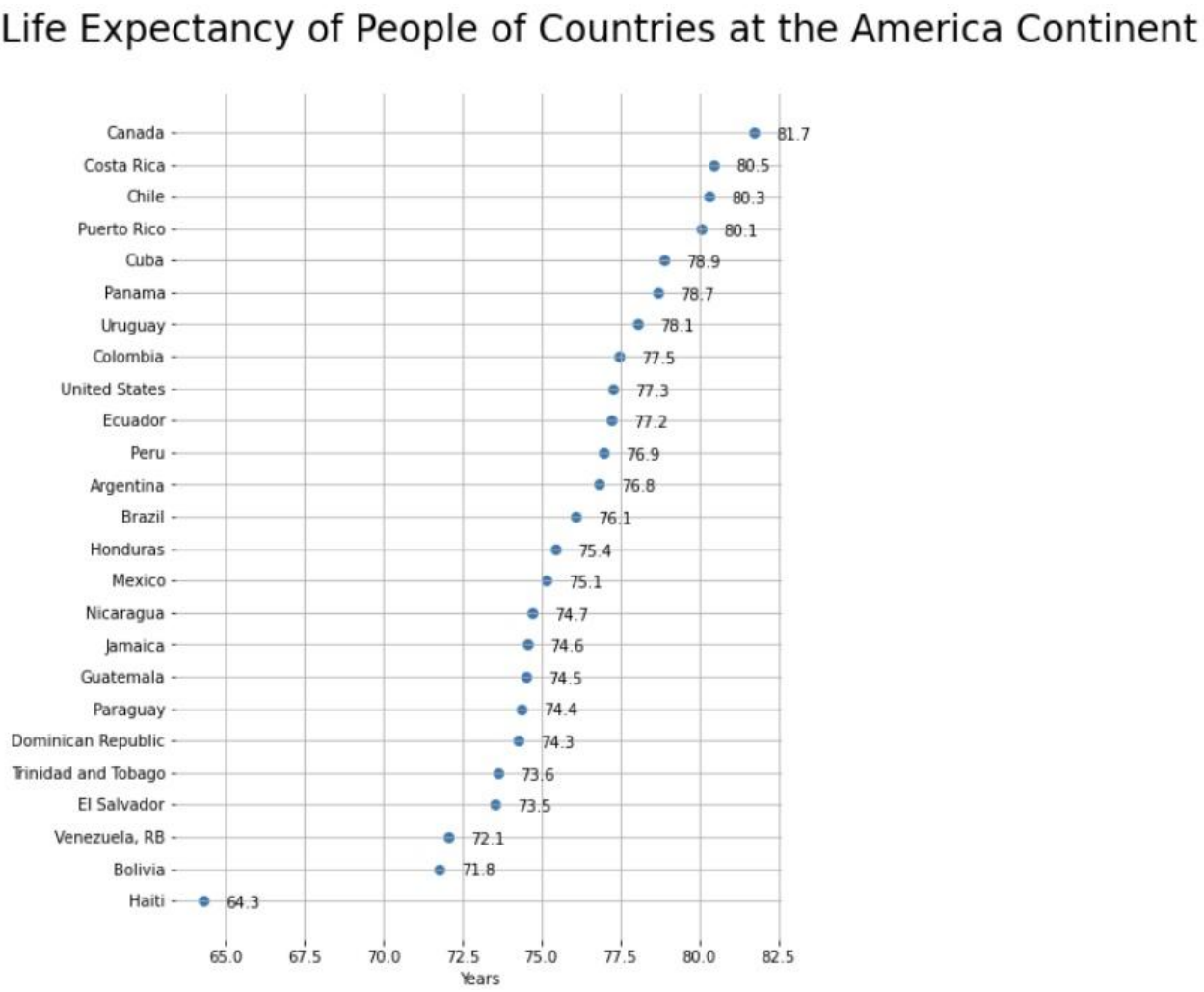
Employ a Takeaway Title

The keytake away title summarize the content of data. Raw data includes the life expectancy of countries in different years, so I added the year of data to make it more accurate.



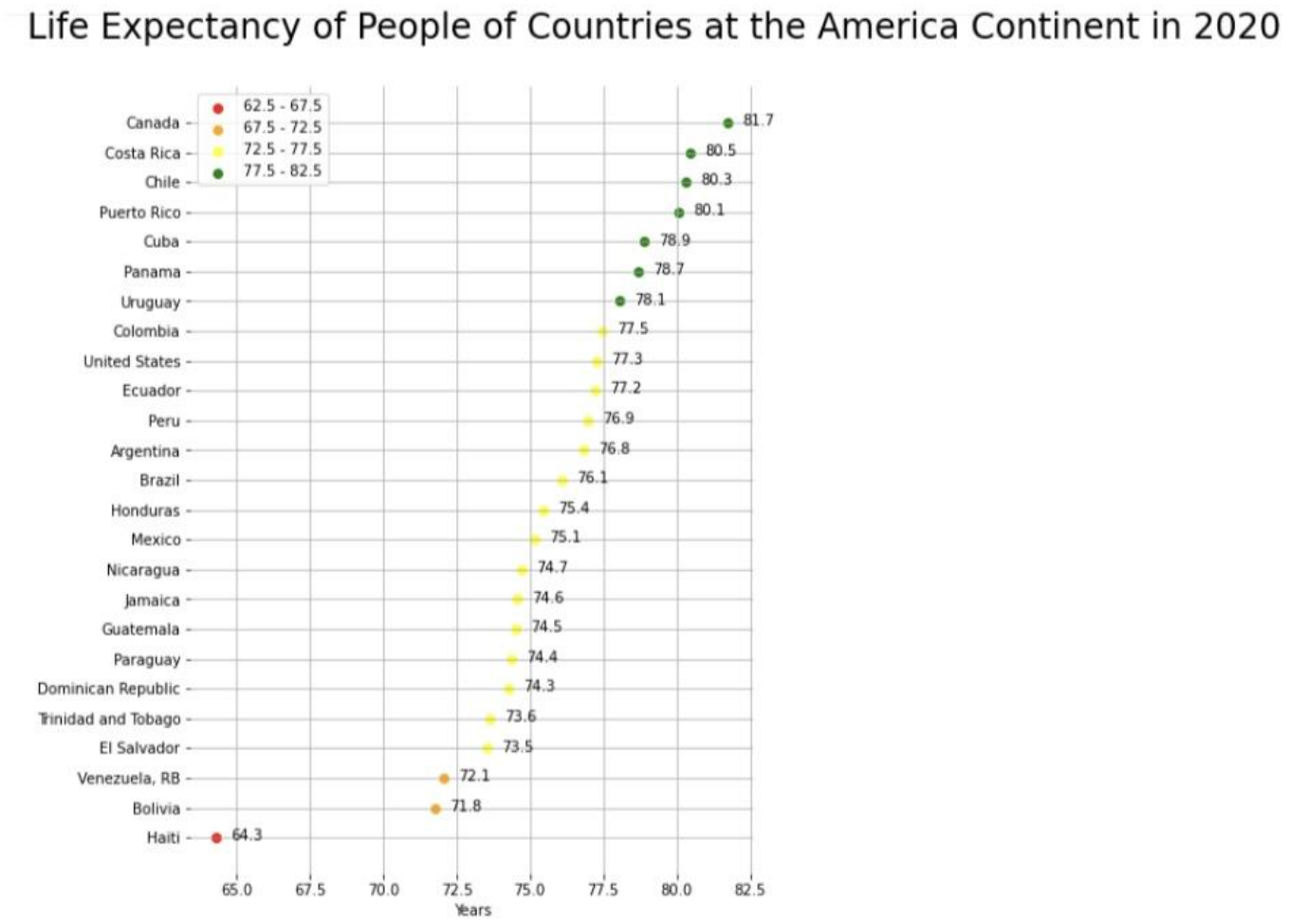
Label Data Drectory

From the original graph we can see that if readers want to check the life expectancy for canada, they may have to first locate the dot, and then scan to the x-axis to find the corresponding data. To prevent this, I directly labeled the data to the dots to make it more accessible.



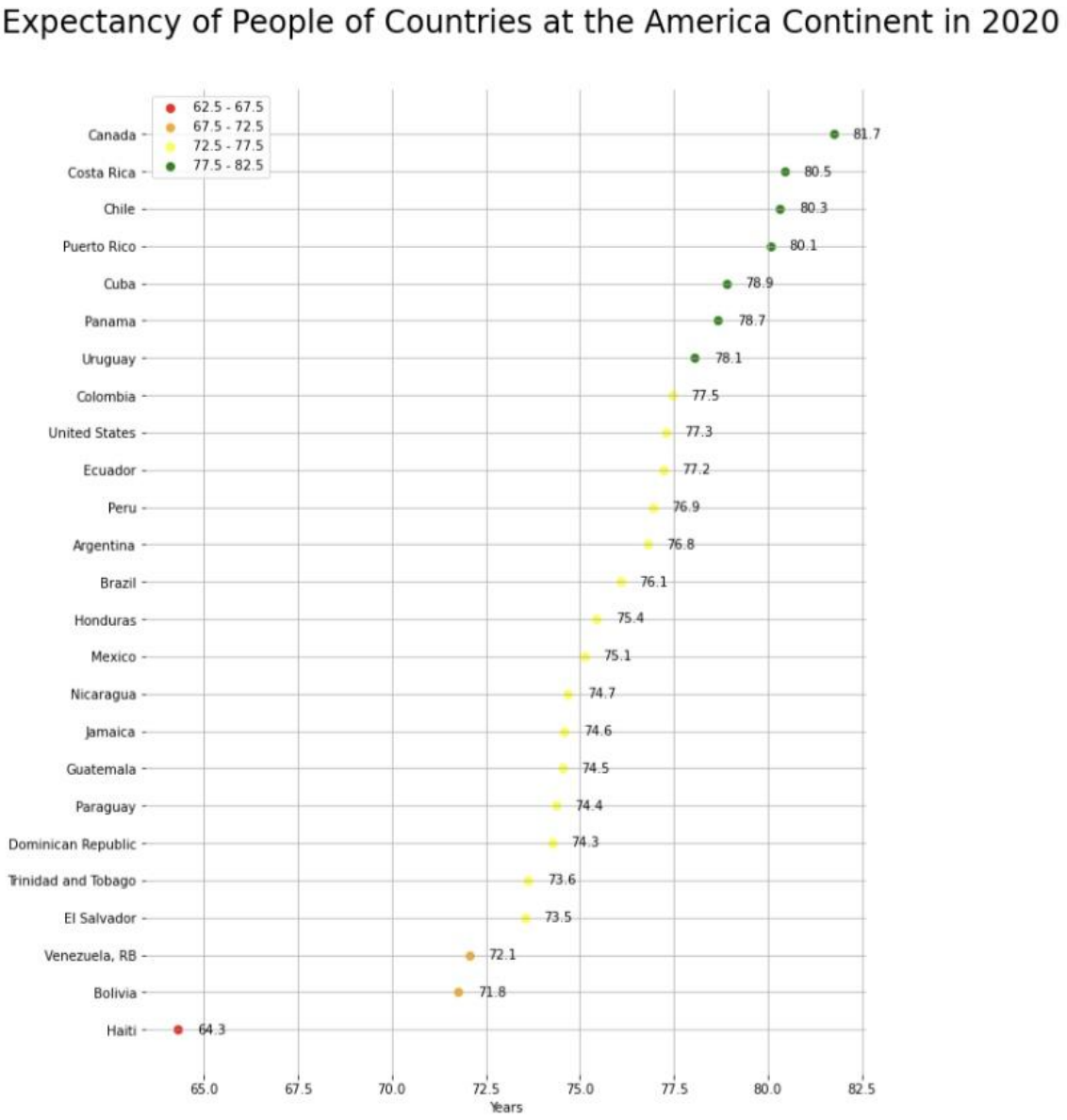
Check Type and Color Contrast

Even though the data are now correctly labeled, it's still a bit ambiguous for readers to grasp the key information of data. Thus, I added the contrast of color on each dot to make them clearer. Here is what I did: I changed the color of dots that are greater than 77.5 to green, which indicates that these countries have the highest life expectancy. (Green is always used to represent healthy.) Then I gradually changed the color of dots for every 5-year expectancy, and the color finally goes to red (which represents warning color).



Leverage White Space

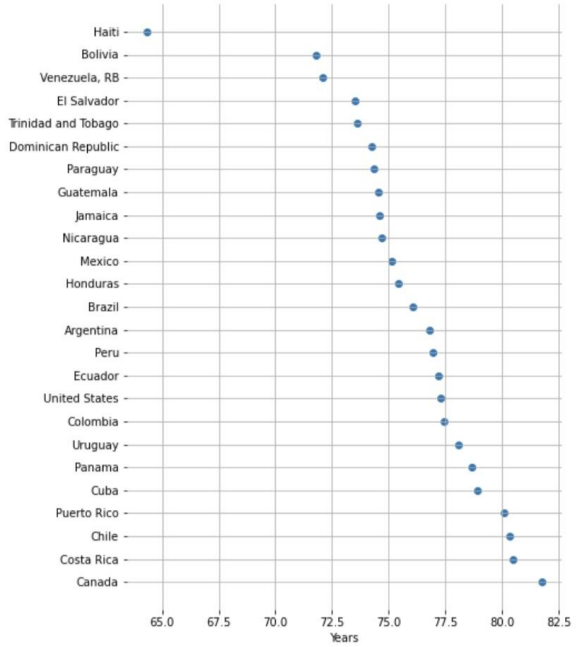
The graph still seems a little bit congested, and it's hard to recognize which dot belongs to which country. I made the country names and dots to be more scattered to make the graph more accessible.



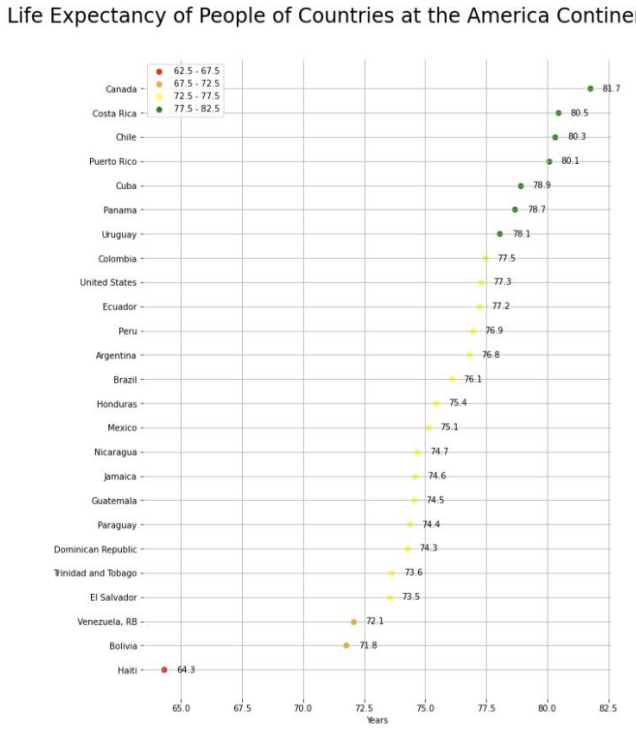
Final thoughts

Here are the comparison between the graphs:

THE ORIGINAL GRAPH



IMPROVED FOR ACCESSIBILITY GRAPH



There are still some changes I could make to the graph. For example, I would like to bold the “Life Expectancy” and “America Continent” on the title to drag the readers’ attention. Also, I may label the percent of each color set on the graph to indicate the portion of countries of each color.