Good visualization: **Coffee and Climate Change by Katherine Pillsbury**1

Reasons:

This data visualization describes the impact of climate change on Arabica coffee bean which is sensitive to temperature. The first reason why I consider it as a good visualization is that it presents the data by both graphs and narratives which can guide the audience through the data in a logical flow2. After walking through all the data by both narratives and visualizations, the urgency of how Arabica coffee bean is affected by climate change gets emphasized, and the conclusion at the end about how to deal with this issue from various aspects sounds logical2. The second reason is that the composition of this data visualization is relatively concise, where it shows necessary graphs with clear legend without overwhelming the audience3. And at the same time, we can know more information about the data points that we are interested in by hovering our cursor to them. Together, the cognitive load of the audience is not too heavy3. The third reason is that at the bottom, there is a reference list to allow the audience to go back to the original sources. This could facilitate the trust of the audience to the data visualization4.

Potential improvements:

Although the graphs are relatively simple and clear, some of them are not common graphs and this could take the readers more time to figure out the logic3. For example, the coffee bean graph showing the loss of coffee bean production looks interesting, but it would be more straightforward if it is a bar graph with bars representing the minimum and maximum loss. This is also the case for the horizontal bar-like graph showing the price difference between Arabica and Robusta coffee beans. But we also need to think of the balance between how to make the data visualization look interesting and the complexity of the graphs. The second potential improvement could be that, to make the storytelling more complete, at the beginning, a brief description can be added to introduce what this visualization is about and why this is important, so that the readers will have an idea about what to expect2.

Bad visualization: **The African Water Crisis by Ashely Pierre**5

Reasons:

The first reason of considering this as a bad visualization is the lack of clear labels. This visualization lacks important labels such as title in the graphing area (only on the webpage) and caption or description to explain what the graph is about and how the readers can explore the graph. Title and captions are important components of a figure where they can tell the readers what the data visualization is about and what information the author is trying to convey6. Secondly, the cognitive load of this visualization is relatively heavy. Although this graph is a map which is a common chart type, due to the lack of clear title, caption, region names on the map, as well as the confusing numbers in the legend area on the right-hand side, this visualization is more like an exploratory environment3. In this case, it might take more time for the readers to first navigate different parts of the map and then finally realize what they are looking at. Lastly, there is no reference list stating the sources of the data. In this case, the readers may not be able to go back to the primary sources to verify whether this data visualization is accurate, and this could decrease the possibility that the readers will trust what they are seeing4.

Potential improvements:

To improve this visualization, important and basic components such as clear title and labels should be added6. For example, title can be added to the graphing area, not just on the webpage, and the legend part can be clearer such as changing 0.4000 and 1.0000 into 40% and 100%. In addition, region names such as continent names can be added to the map. Another potential improvement could be to make this data visualization tell a story. This can be done by dividing the visualization into three parts2. First, apart from the basic title, a brief description can be added at the beginning to explain what this visualization is about and why this is important2. And then the graph can be put in the middle part and some detailed information can be added so that the readers know how to navigate the graph2. After the graph is presented, at the end, a summary section can be added to highlight the urgency of the crisis and what can we do to improve the situation2. By doing this, the message that the author tries to convey will become clear and the readers are more likely to agree with the author. Lastly, reference should be added so that the readers are more likely to trust what is being presented4. In addition, if they are interested in using the original data for other purposes, they know where the sources are.

References:

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