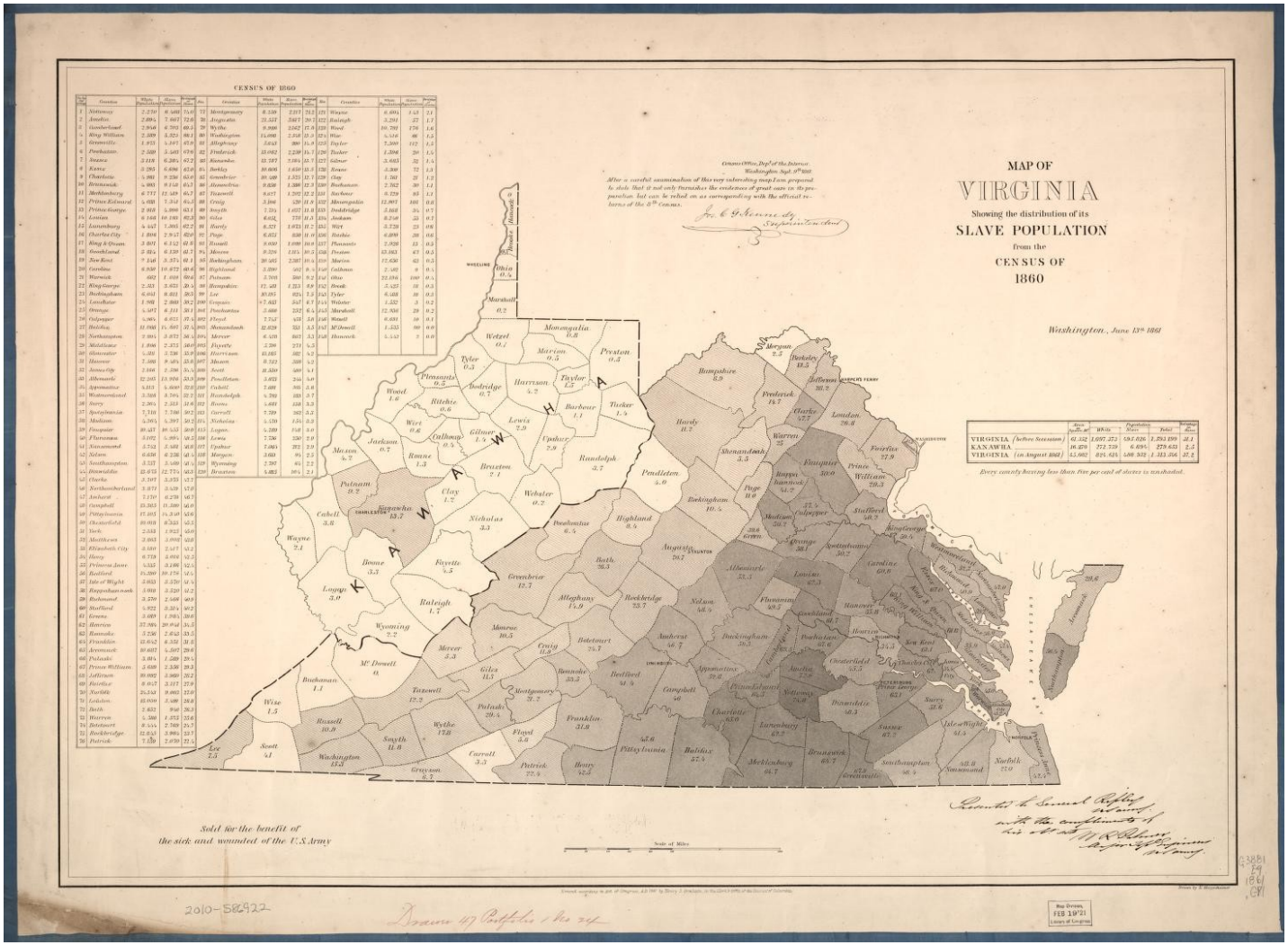
DSI Dataviz Assignment #3

Example One: Map of Virginia Showing the Distribution of its Slave Population from the Census of 1860 (Henry, 1861)



For larger version, please refer to online file; link in citations list

Even though this visualization was created long before the existence of computers, it's relatively reproducable because it provides the user with the raw data set. Conceivably, I could manually create a csv file and then generate a similar map. In terms of accessibility, this map is again, not too bad. The gradient used is accessible to users with colourblindness and I'm assuming the paper has yellowed over time so the contrast would have been even stronger when it was original made. As well, the original size of the document (48cm x 69cm) is relatively large so the fonts would be quite legible and the penmanship is excellent and easy to read – perhaps it was a typical italicized "font" for that time.

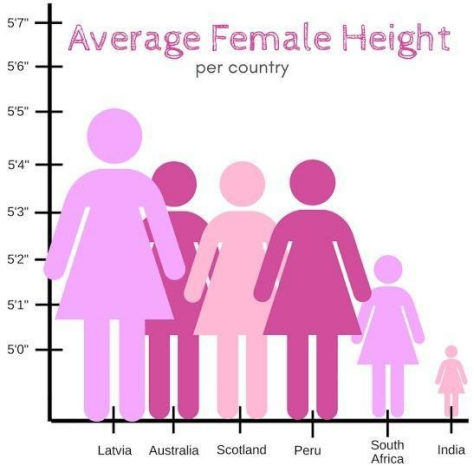
Obviously, as an online document, this dataviz is not nearly as accessible as it could be. Visually, the contrast could be much stronger although it is of a high enough resolution we can zoom into the image for greater legibility. The font would also be more readible if it was san-serif (Zogheib, 2023). There is a basic level one description provided, "Map of Virginia : showing the distribution of its slave population from the census of 1860" and the site provides a great deal of "metadata" included in the map, but the kind of descriptive and interpretive text that users with visual impairments would find most helpful are absent. In terms of web accessibility, when I right-click the image in Chrome and use the option "Inspect Accessibility Qualities," 8 flags are raised. A number of elements do not meet WCAG standards for keyboard accessibility – meaning the website can be navigated entirely with a keyboard which is important for those with physical disabilities and/or require assistive devices (Initiative (WAI), 2021). As well, there is no alt-text for the image.

In terms of equity, I wrote about how the words used to segment the population in Assignment #2 are problematic from a racial lens.

Possible Improvements

1. Fix keyboard accessibility and write alt-text with descriptive and interpretive elements which are reported to be most helpful (Zogheib, 2023).
2. Increase visual contrast and use a readable font like Helvetica (Zogheib, 2023).
3. Manually create data array and reproduce map by using code.

Example Two: Average Female Height Per Country (Ibrahim, 2020)



This crude graph appears to have been created by some kind of graphics software so it is not reproducable. There are no accurate figures, and I imagine you would have to write code from scratch to reproduce the skirted figures.

In terms of accessibility, this was sent out in a tweet without alt text. Twitter's platform is ever-changing in ways that affect historical tweets so this makes the author and reader dependent on a corporation now run by an erratic billionaire for barrier-free usability – it would be better to publish this dataviz independently where one has more control. As for the image itself, the orchid and baby pink colours do not have much of a contrast and will likely be difficult to differentiate if the viewer has colour blindness (Zogheib, 2023). The title font could also be solid for better contrast.

In terms of equity, I wrote about how this image is gender essentialist in Assignment #2.

Possible Improvements

1. Use code to plot image with rectangle bars instead of symbols.
2. Use one colour for the bars that contrasts well the graph's background and use a readable font like Helvetica (Zogheib, 2023).
3. Add alt-text with a description of stats (country at extremes, any outliers) and any trends (countries in certain regions report taller heights), levels of description that are most helpful (Zogheib, 2023).

Bibliography

Henry, G. (1861). *Map of Virginia : showing the distribution of its slave population from the census of 1860*. Library of Congress, Washington, D.C. 20540 USA. https://www.loc.gov/resource/g3881e.cw1047000/?r=0.045

Ibrahim, S. (2020, August 6). *https://twitter.com/reina_sabah/status/1291509085855260672*. Twitter. https://twitter.com/reina_sabah/status/1291509085855260672

Initiative (WAI), W. W. A. (2021, February 5). *Keyboard Compatibility*. Web Accessibility Initiative (WAI). https://www.w3.org/WAI/perspective-videos/keyboard

Zogheib, C. (2023). *Data Visualization: Visualization with Purpose: Accessible Data Visualization.* [PowerPoint slides]. Data Science Institute, University of Toronto. https://github.com/UofT-DSI/07-visualization/blob/main/lessons/DSI_DataViz_5_AccessibleDataVisualization.pdf