Data Visualization
Assignment 4: Final Project

Requirements:

- We will finish this class by giving you the chance to use what you have learned in a practical context, by creating data visualizations from raw data.
- Choose a dataset of interest from the City of Toronto's Open Data Portal (https://www.toronto.ca/city-government/data-research-maps/open-data/) or Ontario's Open Data Catalogue (https://data.ontario.ca/).
- Using R **and** one other data visualization software (Excel or free alternative, Tableau Public, Python, any other tool you prefer), create **two distinct visualizations** from your dataset of choice.
- For each visualization, describe and justify with course content or scholarly sources:
    - What software did you use to create your data visualization?
    - Who is your intended audience?
    - What information or message are you trying to convey with your visualization?
    - What design principles (substantive, perceptual, aesthetic) did you consider when making your visualization? How did you apply these principles? With what elements of your plots?
    - How did you ensure that your data visualizations are reproducible? If the tool you used to make your data visualization is not reproducible, how will this impact your data visualization?
    - How did you ensure that your data visualization is accessible?
    - Who are the individuals and communities who might be impacted by your visualization?
    - How did you choose which features of your chosen dataset to include or exclude from your visualization?
    - What 'underwater labour' contributed to your final data visualization product?
- Your final submission document should include:
    - Two data visualizations
    - Written descriptions for each data visualization
    - Link to your dataset of choice
    - Complete and commented code as an appendix (for your visualization made with R, and for the other, if relevant)
- This assignment is intentionally open-ended - you are free to create static or dynamic data visualizations, maps, or whatever form of data visualization you think best communicates your information to your audience of choice!
- Total word count should not exceed (as a **maximum**) 1000 words

Why am I doing this assignment?:

- This assignment tests your ability to apply the skills and knowledge acquired throughout the class and assesses learning outcomes 1, 2, and 3:
    1. Develop ability to create and customize data visualizations start to finish in R
    2. Build an understanding of general design principles for creating accessible/equitable data visualizations in R and other software
    3. Build an understanding of data visualization as purposeful/telling a story (and the ethical/professional implications thereof)

Rubric:

Component	Scoring	Requirement
Data visualizations	/10 (/5 each)	• Data visualizations are distinct from each other • Data visualizations are created with two different softwares/tools (clearly identified) • Images of data visualizations are clear and high-quality, or (if hosted online) accessible via link • Data visualizations follow best practices of accessibility
Written explanations	/10 (/5 each)	• All questions from assignment description are answered for each visualization • Explanations are supported by course content or scholarly sources, where needed
Code	/10	• All code is included as an appendix with your final submission • Code is clearly commented and reproducible
Citation and word count	/5	• Datasets, information from scholarly sources, and course slides are referenced consistently using a reference style of choice (suggestion: APA style) • Both in-text citations and a final Works

		Cited section are included ● Submission does not exceed maximum word count; Works Cited are not included in word count
Creativity	/5	● Data visualizations make significant use of new skills and knowledge learned in the class ● Data visualizations are appropriate for your identified purpose/message and audience
Total:	/40	