COMP 4304 – First Project (20%)

Due: 11:59pm, Mar. 11, 2024

Introduction

You will act as a freelance data visualization specialist.

Your client is the organizer of the Tely 10 Mile Road Race[1]. They have provided race data over a 15 year period, which contains information on each entrant in the race, such as their race category, finishing place, and hometown.

Their broad goal is to answer the question, "How successful has the Tely 10 been over this 15 year period?"

Goal

Create an infographic that addresses your client's goal.

There are many possible avenues that can be highlighted from the data. For example, success may be viewed through the lens of the organizers, the race's sponsors, race participants or the general public. The goal is to tell the interesting stories contained within the data.

Constraints

Your infographic must be created in Python using Matplotlib and other packages within the Matplotlib ecosystem (e.g., Seaborn). You are permitted to take a visualization created in code and apply finishing touches in an image editor, but make it clear that you have made such edits.

The size of your completed infographic must be at least 12 inches in both the width and height. Feel free to expand larger than this. You are free to choose an aspect ratio that works best for your design.

Your infographic must contain at least 3 unique visualizations.

You are welcome to augment your project with additional sources of data that relate in some way to the original data / client's needs.

You can work on the project in partnership with one other student in COMP 4304.

[1] https://www.nlaa.ca/tely10/

Evaluation (100 pts)

Your project will be evaluated on both your infographic / visualizations and the code to create them.

For the coding component (20 pts total), what is important is that data manipulation or pre-processing and the creation of your visualizations are implemented correctly. That is, your code accomplishes what you intend to achieve.

- Correctness for any data pre-processing or manipulation. (8 pts)
- Correctness for creation of visualizations and final infographic. (8 pts)
- Executes without errors or bugs. (4 pts)

Your infographic and the visualizations it contains will be assessed as follows (80 pts total):

Number (5 pts)	Your infographic must contain 3 visualizations. No more. No less. Do not submit 4 visualizations. Do not submit 2 visualizations, unless you include another visualization to make 3 total visualizations. 5 visualizations is right out.
Originality (15 pts)	A highly original design or degree of customization applied to your visualization designs and infographic composition.
Aesthetics (10 pts)	Choices of colours, styles, and sizes of visual elements.
Annotations (10 pts)	Choices around textual elements. Font, size, weight, amount of text, usefulness.
Cohesiveness (10 pts)	How are elements within each visualization and the infographic as a whole positioned and sized to create cohesion.
Clarity (20 pts)	Visual clarity vs visual clutter. How accessible is the intended interpretation of your visualizations and the infographic. Decisions on angle, frame and focus.
Appropriateness (10 pts)	Alignment of each visualization type with its chosen data and intended interpretation.

Submission

Submit one Jupyter notebook that contains everything needed to create your infographic from the original data set.

If you have made any edits of your final infographic using an image editor, make it clear that you have done so, explain what edits you have applied, and include your final edited infographic in your submission.

Late submissions will be subject to a 10% penalty for each 24 hours past the deadline.

Attribution

Submissions should include an attribution section indicating any sources of material, ideas or contribution of others to the submission.

Submissions must represent your independent work.

You are encouraged to use any resources to help with your solution, but your solution must represent independent work. If your submitted work includes unacknowledged collaboration, code materials, ideas or other elements that are not your original work, it may be considered plagiarism or some other form of cheating under MUN general regulations 6.12.4.2 (4.12.4.2 for graduate students) and academic penalties will be applied accordingly.

Avoid academic penalties by properly attributing any contribution to your submission by others, including internet sources and classmates. This will also help distinguish what elements of the submission are original. You may not receive full credit if your original elements are insufficient, but you can avoid penalties for plagiarism or copying if you acknowledge your sources.

Github

I encourage you to store and version your work on GitHub. It is good practice to do so as everyone uses git in the real world.

However, **it is a requirement that git repositories containing assignment material be private.** University regulations (undergraduate 6.12.4.2 and graduate 4.12.4.2) consider it cheating if you allow your work to be copied. There will be zero tolerance for this.