CPSC 583 W2021 PROGRAMMING ASSIGNMENT 1

In programming assignment 1, you will create an information visualization from tabular data.

The goal of the assignment is to put into practice what you have been learning about visual variables and principled use of space, and to demonstrate your ability to computationally produce effective visualizations.

UNDERSTAND THE DATA

The file "unemployment.csv" contains various information pertaining to employment rates in different countries in the years 1995-2004.

1 **Explain** the data. For each variable, state whether it is a dimension or a measure, and the data type (nominal, ordinal, quantitative-interval, or quantitative-ratio).

2 Do you note any **challenges** you expect to encounter in visualizing this data?

MANIPULATE AND VISUALIZE THE DATA

3 **Sketch** the data using the 5+5 method. You may use a sketchable subset for this stage.

4 **Visualize** the information. Make sure to include all data at this stage, and pay careful attention to the choices you are making regarding visual variables and use of space. You may choose the tool you will use for your visualization. I advise Tableau or D3, but you may use any visualization tool as per your preference and skillsets.

REFLECT ON YOUR VISUALIZATION

5 **Explain your** choice of visual language. You should refer to Bertin's description of visual variables and Mackinlay's ranking of encoding effectiveness.

6 **Explain your** use of space. You should refer to Tufte's integrity principles.

7 **Explain what your visualization shows** about unemployment rates in different countries, across the provided demographics and years. Note any trends or outliers.

SUBMISSION

Submit your hand-in as a single pdf. Although you are not required to, you can put any programming code in an appendix.

DEADLINE

Sunday February 21, 11:59pm Calgary time.

NEXT STEPS

You will receive marking on your assignment in D2L from Zahra or Emma.