Unit 4: Single-Variable Data Analysis Assignment

You will create a short assignment about some data of your choice. You will apply the techniques discussed in class to visualize, analyze and interpret a statistic of one variable (points per game, crime rate, birth rate, etc.). You will hand in your findings as a slideshow (one file).

p 244 #1,2, 6-8; p308 # 1-10

Requirements

Your presentation will be divided into 5 parts:

1. Introduction
2. Averages
3. Spread
4. Analysis of a Data Point
5. Conclusion

It must include the following calculations, graphs and discussion:

❏ Presentation of your data in a table and a bar graph, correctly sourced
❏ Mean, median and mode(s); plus which is most relevant
❏ A box and whisker plot, related calculations, percentile, analysis
❏ Standard deviation, a z-score, analysis
❏ A conclusion that addresses assumptions, reliability, validity, bias in your findings
❏ Calculations may be done by hand/calculator, by Google Sheets/Excel, or both. Include images of your calculations in your presentation.   can walk you through the key features.)

GOOD

LUCK

(The rubric is on the next page.)

Scoring Rubric

Presentation of the Data	**/4**
Format (name, date, title, etc.)	
Data table (including title, units, names of years/players/provinces etc.)	
Bar graph (including title, labels, units, etc.)	
Source line (For example, *Source:* https://www150.statcan.gc.ca/n1/daily-quotidien/200827/t001a-eng.htm)	
Averages	**/4**
Mean, median, mode(s)	
Which best represents the average of your data set? Why?	
Spread	**/8**
Quartiles, IQR, extremes, outliers	
Box and whisker plot	
Standard deviation of the dataset	
How spread out is the data? What does that mean?	
Analysis of a Data Point	**/5**
z-Score for one notable piece of data (e.g., an extreme, an outlier, a favourite player, Canada, etc.)	
Percentile of that notable piece of data	
How do the z-score and percentile compare? What do these statistics say about the relationship between your piece of data and the dataset overall?	
Conclusion	**/4**
Use at least 2 of these words ("assumptions", "reliability", "validity" and "bias") correctly and intelligently regarding the data. Who could use this data? What are the limitations?	
What have you discovered or concluded about your data?	
Identify one key finding from your analysis using the statistics determined here	
TOTAL	**/25**