Homework 1

Quantitative Reasoning II

due: **1/15/25**

Instructions: There are two parts to this homework. The first are free response questions on readings and course material. The second is a computing tutorial to be completed and submitted on our computing site. Please submit solutions for the first part on Populi, written professionally and saved as a `pdf`. Note: The first part may involve some local R computing work as well.

1. Free Response

Problem 1: Choose a concept you found interesting from *The Art of Statistics* introduction and chapter 1. Describe the concept and find an example of it in the news cycle from the past week. Cite your source.

Problem 2: This problem will confirm you have R and RStudio up-and-running! Load the `cars.csv` data into your local R workspace.

a. Describe what this data set contains?

b. How many observations and how many variables exist?

c. Provide a summary of the variable ranges.

d. How many cars are all-wheel-drive (AWD)?

e. What is the average horsepower across all cars?

Please turn in answers to these questions and an R script (.R file) containing your code used to produce these answers.

2. Computing Tutorial

Problem 1: Complete Tutorial 1, Activities A.1–A.8. Scroll to the bottom of the page, collect your answers, and submit them using your UATX email address.[1]

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[1]Note the following instructions in the Preface of the computing site:

> When you close a tutorial or exercise document, your work will be erased. So it's very important to submit your work before closing the document. If you come back to the document later on, you can submit your work in that session to augment your previous submission(s).