STAT 001 Introduction to Statistics and Data Science

Instructor: Wei Wang

Summer Session 1: May 24 - June 30, 2021

 Class hours: Mondays and Wednesdays, 7pm - 8:50pm (EDT)
Office hours: by appointment

TA: TBD
Office hours: TBD

Course description:
In this course, we will learn introductory statistics using R with a focus on the application of statistical thinking to business problems. We will learn basic statistical concepts such as mean, variance, quantiles and hypothesis testing, and basic R programming for data management and analysis. We will work with traditional R's data.frame structure as well as the modern tibbles structure.

Prerequisite:
Percentages, average, powers, exponential, linear equation of a line, polynomials.

References:
Statistics: concepts and controversies. D. S. Moore and W. I. Notz
Statistical thinking in business. J. A. John, D. Whitaker, and D. G. Johnson
Essential statistics for public managers and policy analysts. E. Berman and X. Wang
Business analytics for managers. W. Jank
R programming for data science. R. D. Peng
R for data science. H. Wickham and G. Grolemund

Software: We will use the free statistical computing software R (http://www.r-project.org/) frequently in class. No previous programming skills necessary. You will apply what you learned in class to solve your homework and final project problems.

Homework: There will weekly assignment, 5 assignments in total. Without a convincing reason, late homework will not be given full credit (15 points off every 24 hours). If you are not sure about your situation, ask the instructor in advance. No last minute notice unless it's an urgency.

Grading: 60% of homework + 40% of final project (take home)

Format:
You are strongly advised to type your work into a single file with relevant R code attached. Word or pdf files are preferred.

Plagiarism: You can study together for your homework, but answers must be in your own words. Independent work is expected for the final project without discussion or communication with other people. Otherwise, it will be considered cheating.