Lecture 2: Review of Basic R

Prof. Wei Zhu

Department of Applied Mathematics & Statistics
State University of New York
Stony Brook, NY 11794, USA

LOGO

Survey

- We have realized that some of you have not taken AMS 597 Statistical Computing yet; which means you will need a refresher with R and some routine data analysis procedures. That is quite alright. We had anticipated this.
- This and the next week we shall review the most basic ingredients of R for statistical analysis in class. For those of you who are already proficient in R, please start to read the textbooks to expand your knowledge in machine learning, beginning with:
- An Introduction to Statistical Learning with Applications in R. (2017). Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani. Springer.

Review & Study Plan

- We shall first learn/review:
  - Basic R commands
  - Basic Statistical Analysis with R

https://sphweb.bumc.bu.edu/otlt/MPH-Modules/BS/R/R-Manual/index.html

  - The above will include linear regression & logistic regression;
- Please review my AMS 572 (Data Analysis) lecture notes for basic statistical methods:

http://www.ams.sunysb.edu/~zhu/wei/Teaching_Fall2013.html

- Then we shall continue on to other statistical learning methods:

https://tdg5.github.io/stats-learning-notes/

Team Project:

- Please also start to get to know each other and form teams – the team project will account for 20% of the grade.
- We will form teams of 10 members each, hopefully from as diversified a background (different programs/tracks), as possible. There will be 8 teams.
- Presentation (PPT) will start in mid April.
- Each team, please elect a team leader, and send me the team roster with member name, ID and track information.
- How to? You can organize yourselves and/or I can randomize you into teams using zoom.