Statistics

Latest Update: 01/29/2021

Hengchao Chen

2021/1/30

In the real world, we often collect a series of data. For statisticians, we think data are generated in a stochastic manner. Methods and theories are put forward to address the problems arising in the data analysis.

1 Applied Statistics

1.1 Courses

- Course website is https://utstat.toronto.edu/reid/html/sta/sta2101f.html.
- Course website is https://github.com/MJAlexander/applied-stats-2021.

1.2 R documents

- https://www.rdocumentation.org/
- Linear Models with R, Julian J. Faraway.
- Extending the Linear Model with R, J. Faraway.
- R for Data Science_ Import, Tidy, Transform, Visualize, and Model Data, Hadley Wickham, Garrett Grolemund.

1.3 Monographs

- Statistical Models, A. C. Davison.
- Principles of Applied Statistics, D. R. Cox, Christl A. Donnelly.
- An Introduction to Generalized Linear Models, Annette J. Dobson_ Adrian G Barnett.
- Bayesian Data Analysis, Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin.
- Data Analysis Using Regression and Multilevel-Hierarchical Models, Andrew Gelman_ Jennifer Hill.
- The Elements of Statistical Learning: Data Mining, Inference, and Prediction, Trevor Hastie, Robert Tibshirani, Jerome Friedman.

2 Probability

- Probability: Theory and Examples, Durrett.
- Probability and Measure, Partrick Billingsley.

3 Mathematical Statistics

- Mathematical Statistics, Peter J. Bickel, Kjell A. Doksum.
- Theory of Point Estimation, E.L. Lehmann, George Casella.
- All of Statistics - A Concise Course in Statistical Inference, Larry Wasserman.
- All of Nonparametric Statistics.

- Asymptotic Statistics.
- High dimensional statistics - a non-asymptotic viewpoint, Martin J. Wainwright.