Linquan Ma

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EDUCATION

Department of Statistics, University of Wisconsin-Madison Aug. 2017 - May 2019
M.S. in Data Science, GPA: 4.0/4.0, rank 1/42

Special Class of the Gifted Young, University of Science and Technology of China(USTC) Aug. 2014 – Jun. 2018
B.S. in Statistics, GPA: 3.68/4.3, rank 6/51

SKILLS SUMMARY

Programming: Expertise in R, Matlab and LaTeX. Familiar with Python, Linux, Mathematica and C.
Core Courses: Statistical Inference I&II (A), Linear Models (A), Design and Analysis of Experiments (A), Intro to Time Series (A), Intro to Non-parametric Statistics (A), Intro to Classification and Regression Trees (A), Regression Analysis (91/100), Applied Statistical Softwares (92/100), Probability Theory (90/100), Mathematical Statistics (91/100), Stochastic Processes (87/100), Real Analysis (85/100), Complex Analysis (91/100), Functional Analysis (85/100), Differential Equations (87/100).

PUBLICATION

- **L.Ma,** Y.Yin, L.Liu, Z.Geng. On the Individual Surrogate Paradox(2017), Submitted to Biostatistics, Under Revision. Arxiv: http://arxiv.org/abs/1712.08732

RESERCH EXPERIENCES

Department of Statistics, University of Minnesota Jun. 2017 - present

- Advisor: Lan Liu, Assistant Professor.
- Research Item: Individual Surrogate Paradox.
  - Adopted a new method to examine surrogate paradox.
  - Evaluated the sharp bounds of causal effect by simplex algorithm.
  - Performed real data analysis on clinical trial data.
- Research Item: Envelope Models with Missing Data (ongoing).
  - Applied EM algorithm as well as 1-D algorithm to explore the envelope structure when there is missing value.
  - Performed multiple imputation to impute missing data.

Department of Statistics, **UW-Madison**, Under supervision of Prof. Zhengjun Zhang Dec. 2017

- Research Item: Analyze Gene expressions using Generalized Measures of Correlation method.
  - Optimized the objective function through Monte Carlo method.

Department of Statistics, **UW-Madison**, Under supervision of Prof. Wei-Yin Loh Aug. 2017 – Dec. 2017

- Research Item: Machine learning with large scale dataset contains missing value.
  - Handled large scale national birth rate data (several GB) through the server.
  - Predicted whether the weight of a new born infant is too low through 200 covariates variables.
  - Imputed missing values using MICE and GUIDE.
  - Assessed various machine learning algorithms: regression trees, random forest, SVM, LDA, GUIDE, XgBoost and ensemble learning.
  - Compared various models by cross-validation to find the best one with the smallest prediction MSE.

AWARDS

- Student Academic Excellence Award, UW-Madison Dec. 2017
- Outstanding Student Scholarship of USTC Sep.2016
- Outstanding Student Scholarship of USTC Sep. 2015
- Outstanding Student Scholarship of USTC Nov. 2014