Jing Zeng

Contact

Department of Statistics, Florida State University
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Education

Florida State University, Department of Statistics
Ph.D. in Statistics (GPA: 4.0/4.0) Aug 2017 - May 2022
Advisor: Xin Zhang

University of Science and Technology of China, School of Mathematical Sciences
B.S. in Probability and Statistics (GPA: 3.72/4.3) Sep 2013 - June 2017

Skills

Languages: R (5+ years), Python, MATLAB, C, LaTeX, SQL

Utilities: Git, Linux, HPC, R package writing, Jupyter Notebook, Python scientific packages.

Publications

1. Zeng, J., Wang, W. and Zhang, X. (2020+). TRES: An R Package for Tensor Regression and Envelope Algorithms. *Journal of Statistical Software*, accepted.
2. Li, L., Zeng, J. and Zhang, X. (2020). Generalized Liquid Association Analysis for Multimodal Data Integration. *arXiv preprint arXiv:2008.03733,* 2020.
3. Zeng, J., Mai, Q. and Zhang, X. (2020). Subspace Estimation with Automatic Dimension and Variable Selection in Sufficient Dimension Reduction. Submitted.

Projects

1. A New Minimax-optimal Approach to Sliced Inverse Regression in High Dimensions
   Joint work with Keqian Min, Prof. Qing Mai and Prof. Xin Zhang Sep 2020 - Present
   - Conducted numerical studies and participate in discussion.
2. Low-rank Sparse Linear Discriminant Analysis (LDA) in High Dimensions
   Joint work with Prof. Xin Zhang and Prof. Qing Mai July 2020 - Present
   - Established a model-based interpretation of the reduced-rank LDA, and developed a convex formulation for parameter estimation in high-dimensional setting.
   - Conducted exhaustive numerical studies and took charge of the theoretical proofs.
   - Preparing the paper as the first author.
3. Generalized Liquid Association Analysis for Multimodal Data Integration
   Joint work with Prof. Lexin Li and Prof. Xin Zhang Feb 2020 - July 2020
   - Proposed a non-trivial sparse and low-rank tensor decomposition algorithm.
   - Conducted exhaustive simulation study, analysed a neural imaging data set using our proposal, and took charge of the theoretical proofs.
   - Wrote and submitted the paper as a contribution-equivalent author.
4. R package writing: **TRES** (available at `https://CRAN.R-project.org/package=TRES`)
   Joint work with Dr. Wenjing Wang and Prof. Xin Zhang June 2019 - Dec 2020

- Wrote a set of S3 methods with easy-to-use interfaces.
- Systematically improved the package by rewriting the functions in a more user-friendly manner and providing more detailed and informative help documentations.
- Published a relevant paper as the first author.

5. Subspace Estimation with Automatic Dimension and Variable Selection (SEAS)
   Joint work with Prof. Qing Mai and Prof. Xin Zhang Jan 2018 - Feb 2020
   - Proposed an efficient ADMM algorithm, conducted the exhaustive numerical studies, and is responsible for most part of the theoretical proofs.
   - Wrote and submitted the paper as the first author.

Professional Experience

- Referee: *WIREs Computational Statistics*, *Biometrics*.
- Presenter, invited talk at International Conference on Econometrics and Statistics (EcoSta)
  Seoul, South Korea July 2021 (upcoming)
- Presenter, contributed talk at Joint Statistical Meetings (JSM)
  Denver, CO July 2019
- Seminar organizer, Florida State University
  Tallahassee, FL Aug 2019 - Dec 2019
  - Organized the seminar with the topic: *High-dimensional data and dimension reduction.*
  - Gave several presentations about personal research and some self-studied skills.
- Research assistant, Florida State University
  Tallahassee, FL June 2019 - Present
  - Conducted four projects with Prof. Xin Zhang and helped organize the seminar successfully.
  - Published the R package **TRES** on CRAN.
  - Published a paper on *Journal of Statistical Software* and submitted three papers to top peer-reviewed journals.
- Solo instructor & Teaching assistant, Florida State University
  Tallahassee, FL Aug 2017 - May 2019
  - Independently taught two sections with four classes a week, 50 mins per class.
  - Organized the group activity in class and successfully activated the students.
  - Received around 5/5 median evaluation score.
- Summer intern, Industrial and Commercial Bank of China
  Hefei, P. R. China Jul 2016 - Aug 2016
  - Studied the application of system maintenance in bank system.
  - Used SQL (with softwares MySQL and Oracle) to manipulate database.

Achievements

- Outstanding Teaching Assistant Award (OTAA) nomination, Florida State University, Jan 2020
- Best First Year Student in Applied Statistics Award (top 10), Florida State University, Oct 2018
  - The award is presented in recognition of outstanding achievement as a graduate student.
- Scholarship for Outstanding Students, First Prize (top 5%), University of Science and Technology of China, Sep 2016
- Scholarship for Outstanding Students, Third Prize (top 20%), University of Science and Technology of China, Sep 2015
- Scholarship for Outstanding Students, Second Prize (top 10%), University of Science and Technology of China, Sep 2014

Relevant Courses

- **Online**: Advanced Machine Learning, Neural Networks and Deep Learning, Intro to SQL for Data Science.
- **Classroom**: Computational Methods in Statistics, Advanced Probability and Inference, Application in Statistics (Linear Regression and Generalized Linear Model), Time Series Analysis, Stochastic Process, Non-parametric Statistics, Real Analysis, Complex Analysis, Functional Analysis, Differential Equation, Computer Programming (C and C++), Data Structure and Database.