Yu Zheng

352-328-4299 | seanzhengyu1@gmail.com | Gainesville, FL, 32608

[LinkedIn](#) | [Github](#) | [Personal Website](#)

EDUCATION

University of Florida — Gainesville, FL

Ph.D. in Statistics (In process) — *Aug. 2021 - May. 2025*
- Advisor: Leo L. Duan
- GPA: 3.95 / 4

University of Science and Technology of China — Hefei, CN

Bachelor of Science, Mathematics and Applied Mathematics — *Aug. 2016 - May. 2020*
Minor in Business Administration
Admitted to School of the Gifted Young

SKILLS AND STANDARD TESTS

Programming Languages: R (Advanced), Python (Advanced), C/C++ (Moderate)
Skills and Tools: SQL, Stan, Git, LaTeX, TensorFlow, Pytorch, JAX
Languages: Mandarin Chinese (Native), Wu Chinese (Native), English (Advanced), Spanish (Moderate)
GRE: V157 + Q170 + W4.0; **GRE Subject Mathematics**: 970 (99th Percentile)

WORK EXPERIENCE

Quantitative Research Intern at Susquehanna International Group, LLP — Jun. 2024 - Apr. 2024
- Conducted in-depth quantitative analysis to develop high-performing features and build profitable trading strategies based on Python, achieving a top-three ranking in single runs during the blast competition of interns.
- Gained experience with financial instruments, market structures, equity options trading, machine learning models, and the application of quantitative methods in financial markets.

PREPRINT PUBLICATIONS

Yu Zheng, and Leo L. Duan. (2023). *Blocked Gibbs Sampler with Anti-correlation Gaussian Data Augmentation, with Applications to L1-ball-type Models.* [arXiv](#).

Yu Zheng, Leo L. Duan, and Arkaprava Roy. (2024). *Consistency of Graphical Model-based Clustering: Robust Clustering using Bayesian Spanning Forest.*

CONTRIBUTED PRESENTATIONS

2023 Joint Statistical Meetings — *Toronto, Canada* — Aug. 2023
- Talk title: Blocked Gibbs Sampling for L1-ball Priors: an Efficient Computation for Structuredly Sparse Models.

2024 Theory and Foundations of Statistics in the Era of Big Data — *Tallahassee, Florida* — Apr. 2024
- Gibbs Sampling using Anti-correlation Gaussian Data Augmentation, with Applications to L1-ball-type Models.

ACADEMIC PROJECTS

Clustering Consistency with Forest Process as the Pseudo Posterior — Aug. 2023 - Present
- Developed theories of Bayesian clustering consistency with the forest process model as the pseudo posterior.
- Extended traditional research by proving posterior consistency not only for the number of clusters but also for partitions, broadening the applicability of the forest process model.

Anti-correlation Gaussian Data Augmentation — Jan. 2023 - Jul. 2023
- Proposed an innovative data augmentation algorithm in the L1-ball-type model, achieving an average of 30-fold increase in the effective sample size per computing time.
- Finished a challenging proof of the geometric ergodicity of the proposed Gibbs sampler, which was the first proof of such property for models with a spike-and-slab-type prior.

Neural Network for Alzheimer's Disease Diagnosis — May. 2022 - Dec. 2022
- Proposed a novel neural network model that incorporates Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Variational Autoencoders (VAEs), and Bayesian modeling, and implemented using Pytorch.

Teaching Experience

Instructor at the University of Florida   Jan. 2023 - Apr. 2023
- STA 3024: Introduction to Statistics II
- Held lectures that help 100+ students make progress in utilizing statistical tools (such as ANOVA, nonparametric methods, contingency tables, and linear and logistic regression) to analyze and quantify real-world problems.

Teaching Assistant at the University of Florida   Aug. 2021 - Dec. 2022
- STA 6275: Optimization; STA 6166: Statistical Methods in Research I; STA 3032: Engineer Statistics.

Teaching Assistant at the University of Science and Technology of China   Aug. 2018 - May. 2020
- Multivariate Calculus; Mathematical Statistics; Mathematical Analysis B1; Mathematical Analysis B2.

Awards

Mendenhall Award for the best first-year student   Gainesville, FL
University of Florida   *Jan. 2023*