YUE YU

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EDUCATION

INDIANA UNIVERSITY (GPA: 3.9/4.0) **Bloomington, IN**

Ph.D. in Statistical Science, with Minor in Computer Science and Mathematics *Aug. 2021 – Present*

- **Core Courses:** Applied Statistical Computing, Advanced Statistical Theory I & II, etc.
- **Teaching Assistant Appointments:** STAT S520-Introduction to Statistics (Fall 2021, Spring 2022, Summer 2023, Summer 2024); STAT S350-Introduction to Statistics (Fall 2022, Spring 2023, Summer 2023, Summer 2024); STAT S670-Exploratory Data Analysis (Fall 2023, Spring 2024, Spring 2025); STAT S625-Nonparametric Statistics (Spring 2024); STAT S610 Introduction to Statistical Computing (Fall 2024); STAT S621-Fundamentals of Statistical Methods and Theory I (Fall 2024)
- **Activities:** Statistics Club Graduate Vice President & Graduate Student Research Seminar Co-host (2024-2025)
- **Award:** Department of Statistics Fellowship (Summer 2022, Fall 2023)

UNIVERSITY OF MICHIGAN (GPA: 3.7/4.0) **Ann Arbor, MI**

Master of Science in Applied Statistics *Sept. 2018 – May 2020*

- **Core Courses:** Statistical Learning I: Regression, Statistical Learning II: Multivariate Analysis, Statistical Inference, Bayesian modeling and computation, Nonparametric Statistics, etc.
- **Awards:** Rackham Graduate School Conference Travel Grant (2020); Rackham Graduate School International Student Fellowship (2019)

Master of Science in Sport Management *Sept. 2018 – May 2020*

- **Core Courses:** Financial Management for the Sport Industry, Strategic Management in Sport, Marketing Management for the Sport Industry, Philosophy of Science and Research in Kinesiology, etc.
- **Appointment & Activities:** Teaching Assistant for SM313-Sports Analytics (Winter 2020); Michigan Men's Basketball Data Analytics Student Consultant in 2019-2020, provided game analysis and suggestions

SUN YAT-SEN UNIVERSITY (GPA: 3.4/4.0) **Guangzhou, China**

Bachelor of Engineering in Theoretical and Applied Mechanics *Aug. 2014 – Jun. 2018*

- **Core Courses:** Advanced Mathematics 1(Highest Level) I & II, Linear Algebra, Computer Algorithmic Language, Ordinary Differential Equations, Methods of Mathematical Physics, Computational Fluid Mechanics, Theoretical Mechanics I & II, The Finite-Element Method & Programming, etc.
- **Awards:** Sun Yat-sen University Outstanding Student Scholarship (2016); Sun Yat-sen University Exchange Student Fellowship (2017)

Minor in Statistics *Aug. 2015 – Jun. 2018*

- **Core Courses:** Probability Theory & Mathematical Statistics, Mathematical Modeling Practice, Computational Methods, Operations Research, etc.

COLUMBIA UNIVERSITY (GPA: 3.7/4.0) **New York, NY**

Exchange Student Program with Concentration in Statistics *Jan. 2017 – May 2017*

- **Courses**: Introduction to Probability & Statistics, Time Series Analysis, etc.

SELECTED PROFESSIONAL EXPERIENCES

BAIM INSTITUTE FOR CLINICAL RESEARCH **Boston, MA**

SAS Programmer I *Nov. 2020 – Jun. 2021*

- Supported the continued success and quality of biostatistics clinical research projects
- Performed SAS programming using such techniques as macro language, advanced data manipulation techniques, and statistical procedures (e.g., PROC GLM, PROC FREQ, PROC REPORT)
- Reviewed and provided feedback regarding data management plans and research manuscripts for publication

BANK OF MONTREAL **Guangzhou, China**

Global Information and Technology Risk Management Assistant *Jan. 2018 - May 2018*

- Completed 12 main technology risk governance and supplier risk assessments and data protection projects
- Aligned objectives and bridged communications with Oracle teams to perform internet data analysis using SQL

ADIDAS **Beijing, China**

Business Analytics Assistant *Jul. 2017 – Dec. 2017*

- Tasked with collating, stratifying, and visualizing 20% of North Region sales data in Q3 & Q4 2017
- Optimized and enhanced sales prediction models by leveraging historical data and market research

SELECTED RESEARCH PROJECTS

Computationally Efficient Continuous Time Reinforcement Learning *Jul. 2024 – Jan. 2025*
Project Leader (Advised by Prof. Dongruo Zhou)

- Developed a model-based continuous-time reinforcement learning (CTRL) algorithm with general function approximation, ensuring both sample and computational efficiency
- Conducted experiments on continuous control tasks and diffusion model fine-tuning, achieving comparable performance with significantly fewer policy updates and rollouts
- Benchmarked performance against baseline fine-tuning techniques (Guidance, Online PPO, Non-adaptive, Greedy, Ensemble ODE Methods), currently under review of *UAI (Uncertainty in Artificial Intelligence) 2025*

Nonparametric Variogram Estimation *Jul. 2024 – Present*
Project Leader (Advised by Prof. Chunfeng Huang)

- Deriving inverse formulae and constructing rigorous proofs for the variogram and spectral function within intrinsic stationary random fields, applying to widely used variogram models
- Simulating data to approximate theoretical values, utilizing method of moments estimations for validation

NBA Player Clustering Analysis *Mar. 2021 – Aug. 2022*
Project Leader (Advised by Prof. Guanyu Hu)

- Used Bayesian Mixtures of Copulas to optimize traditional clustering methods like K-Means
- Classified players into distinct categories with clusters derived from various statistical metrics

Michigan Pharmacy Fraud Analysis *May 2020 – Dec. 2020*
Lab Project Member (Advised by Prof. Ji Zhu and Dr. Xianshi Yu)

- Performed feature engineering and data pre-processing tasks like dimension reduction and non-ignorable missing data imputation
- Improved the performance of traditional ML methods by developing positive and unlabeled learning models, such as one-class SVM and isolated forest, achieving the best model with 0.88 AUC
- Delivered an engaging and comprehensive presentation on final models and visualized data for the Office of the Inspector General of the Michigan State Government

OSA Disease Spatial Analysis *Aug. 2019 - May 2020*
Project Co-Leader (Advised by Prof. Galit Dunietz)

- Outlined the correlation between Obstructive Sleep Apnea Syndrome (OSA) treatment rate and ethnic group distribution within the state or Hospital Referral Region by utilizing GLM and geospatial data analysis
- Presented findings at the *SLEEP 2020* Conference (abstract accepted) and co-authored a published paper

PUBLICATION

Dunietz, G. L., **Yu, Y.**, Levine, R. S., Conceicao, A. S., Burke, J. F., Chervin, R. D., & Braley, T. J. (2020). Obstructive sleep apnea in older adults: geographic disparities in PAP treatment and adherence. Journal of clinical sleep medicine: JCSM: official publication of the American Academy of Sleep Medicine, 10.5664/jcsm.8914. Advance online publication. https://doi.org/10.5664/jcsm.8914.

CONFERENCE PRESENTATION

Yue Yu, Rivkah S. Levine, Tiffany J. Braley, James F. Burke, Ronald D. Chervin, Galit L. Dunietz. Obstructive Sleep Apnea in Older Adults: Geographic Variation in CPAP Treatment. SLEEP 2020, Oral and Poster Presentation.

ONLINE COURSES & CERTIFICATES

Stochastic Processes, National Research University Higher School of Economics on Coursera *Nov. 2020*
Data Science Professional Certificate, Harvard University on edX *Jun. 2019*
Deep Learning Specialization Certificate, deeplearning.ai on Coursera *Aug. 2019*
Machine Learning, Stanford University on Coursera *May 2019*

SKILLS

Programming Languages: R (dplyr/ggplot2), Python (PyTorch/Keras/Pandas/NumPy/Matplotlib), SQL, SAS, Spark, MATLAB, C++, Fortran
Data Visualization Tools: ArcGIS, Tableau, Flourish
Software & Tools: MS Office Suite, LaTeX