Zhaoqi Li

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RESEARCH INTEREST

Bandits, adaptive experimentation, policy learning, online learning, causal inference

EDUCATION

UNIVERSITY OF WASHINGTON, SEATTLE, WA *2018 – Present*
Doctor of Philosophy in Statistics

MACALESTER COLLEGE, SAINT PAUL, MN *2014 – 2018*
Bachelor of Arts, Mathematics and Computer Science
Summa Cum Laude, GPA 3.98/4.00
Department Honor prize: Konhauser Achievement Prize, Wagon Competition Prize

PUBLICATIONS

- **Z. Li**, A. Luedtke. Estimation of subsidiary performance metrics under an optimal policy. In Progress.
- **Z. Li**, K. Jamieson, L. Jain. Optimal Exploration is no harder than Thompson Sampling. Submitted to NeurIPS 2023.
- L. Jain, **Z. Li**, E. Loghmani, B. Mason, H. Yoganarasimhan. Effective Adaptive Exploration of Prices and Promotions in Choice-Based Demand Models. Submitted to *Marketing Science*.
- **Z. Li**, L. Ratliff, H. Nassif, K. Jamieson, L. Jain (2022). Instance-optimal PAC algorithms for contextual bandits. *Advances in Neural Information Processing Systems,* 35, 37590-37603.
- J. A. Rathe, E. A. Hemann, J. Eggenberger, **Z. Li,** M. L. Knoll, C. Stokes, T. Y. Hsiang, J. Netland, K. K. Takehara, M. Pepper, M. Gale Jr (2021). SARS-CoV-2 Serologic Assays in Control and Unknown Populations Demonstrate the Necessity of Virus Neutralization Testing. *The Journal of infectious diseases*, 223(7), 1120–1131.
- B. Anzis, S. Chen, Y. Gao, J. Kim, **Z. Li,** R. Patrias (2018). Jacobi-Trudi determinants over finite fields. *Annals of Combinatorics*, 22(3), 447-489.
- **Z. Li**, Y. Ma, C. Vajiac, Y. Zhang, "Exploration of Numerical Precision in Deep Neural Networks", (2018), arXiv:1805.01078 [stat.ML].
- Y. Gao, **Z. Li**, T. Vuong, L. Yang (2018). Toric Mutations in the dP2 Quiver and Subgraphs of the dP2 Brane Tiling. *The Electronic Journal of Combinatorics,* 26(2), P2-19.

TEACHING EXPERIENCE

TEACHING ASSISTANT **Seattle, WA**
Department of Statistics, University of Washington *September 2018 - Present*

- STAT 535: Statistical Learning: Modeling, Prediction, and Computing — Fall 2019, Fall 2020, Fall 2021
- STAT 529: Sampling Survey Techniques — Spring 2019
- STAT 221: Statistical Concepts and Methods for the Social Sciences — Winter 2019
- STAT 340: Introduction to Probability and Mathematical Statistics I — Fall 2018
- STAT 341: Introduction to Probability and Mathematical Statistics II — Winter 2021
- STAT 391: Quantitative Introductory Statistics for Data Science — Spring 2021

LEAD TUTOR **Seattle, WA**
Department of Statistics, University of Washington *September 2020 - September 2021*

TUTOR **Seattle, WA**
Department of Statistics, University of Washington *September 2019 - June 2020*

STUDENT MENTOR **Seattle, WA**
Department of Statistics, University of Washington *January 2020 - December 2020*
- Mentor undergraduate students in the Directed Reading Program
- Prepare reading materials and host meetings each week
- Help the student prepare their final presentation and write-up

TEACHING ASSISTANT **Saint Paul, MN**
Department of Mathematics, Statistics and Computer Science, Macalester College *September 2015 - Spring 2018*
- MATH 378: Complex Analysis
- MATH 494-01: Cryptography/Number Theory
- MATH 494: Projects in Data Science
- MATH/COMP 365: Computational Linear Algebra
- COMP 110: Data/Computing Fundamentals

WORK EXPERIENCE

APPLIED SCIENTIST INTERN **Seattle, WA**
Amazon Inc. *June – September 2020, June – September 2021*

Project 1: Adaptive Experimental Design for Time Variation
- Conducted real data analysis to demonstrate the existence of time variation phenomenon in real life
- Implemented bandit algorithms robust to time variation to help with auto decision making

Project 2: Structured Multivariate Testing
- Implemented graph optimization algorithms that improves the current framework in multivariate testing use case
- Conducted simulation analysis to study performance of the algorithm in different cases

RESEARCH ASSISTANT **Seattle, WA**
Department of Statistics, University of Washington *September 2019 – June 2020*
- Did a project on Kernel Methods in Machine Learning with Professor Zaid Harchaoui and Professor Ali Shojaie
- Derive kernel methods to perform nonlinear regression and inference on structured data and network data
- Showed an error bound for the Kernel Projection Machine algorithm with the optimal choice of dimensionality

SKILLS

Programming Languages: Proficient in Python, Java, R, Matlab, Mathematica. Familiar with C++
Operating Systems: Proficient in Linux
Languages: English, Chinese (Mandarin)

LEADERSHIP EXPERIENCE AND SERVICE

MATHEMATICAL PROBLEM SOLVING CLUB, MACALESTER COLLEGE
Co-chair January 2017 – May 2018
- Organize a weekly meeting on mathematical problem solving
- Prepare interesting mathematics problems and presentations on famous mathematicians

OTHER SERVICE
- Reviewing applications for the department of statistics at the University of Washington

- Reviewer of Neurips 2022, Neurips 2023, AISTATS 2022