# 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 340: Introduction to Probability and Mathematical Statistics I
STAT 221: Statistical Concepts and Methods for the Social Sciences

Winter 2019

Fall 2018

STAT 221: Statistical Concepts and Methods for the Social Science

Spring 2019

STAT 529: Sampling Survey Techniques
STAT 535: Statistical Learning: Modeling, Prediction, and Computing

Fall 2019, Fall 2020, Fall 2021

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

- Assist Director of the Statistics Tutor and Study Center and point of contact for tutoring requests
- Responsible for hiring new tutors and providing TA and tutor training
- Organize the quarterly schedule of tutors for the Statistics Tutor and Study Center

**TUTOR** Seattle, WA

Department of Statistics, University of Washington

September 2019 - June 2020

- Host drop-in tutoring sessions in the Statistics Tutor and Study Center
- Help other tutors answer questions from advanced undergraduate and graduate classes

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

# **SKILLS**

Programming Languages: Proficient in Python, Java, R, Matlab, Mathematica. Familiar with C++

Languages: English, Chinese (Mandarin)

#### LEADERSHIP EXPERIENCE AND SERVICE

#### **REVIEWS**

Co-chair

- Reviewing applications for the Department of Statistics at the University of Washington
- Reviewer of NeuRIPS 2022, NeuRIPS 2023, AISTATS 2022

## MATHEMATICAL PROBLEM SOLVING CLUB, MACALESTER COLLEGE

January 2017 - May 2018

- Organize a weekly meeting on mathematical problem solving
- Prepare interesting mathematics problems and presentations on famous mathematicians