

EDUCATION

Stanford University

Ph.D. Candidate in Operations Research (Management Science & Engineering)

June 2022

Research: I worked with Prof. Ramesh Johari and Prof. Gabriel Weintraub on the design and optimization of statistical methodology for online marketplaces. I developed methods for experimentation on these platforms, in the presence of interference. I combined techniques from operations research, causal inference, and economics to develop theoretical insights for practically motivated problems. I also worked on education applications and utilizing operations research techniques to design accessible education systems.

Relevant Courses: Data science, machine learning, linear and convex optimization, stochastic modeling, causal inference, econometrics, market design, game theory

Awards: *RMP Jeff McGill Student Paper Award 2021 (2nd Place)*, *Best Student Paper Award at ACM EAAMO '21*, *Dantzig-Lieberman Operations Research Fellowship*, *MS&E Department Service Award*

Pomona College

2016

Bachelor of Arts in Mathematics

Thesis: The Manickam-Miklos-Singhi Conjecture in Combinatorics (*Received Distinctions*)

Relevant Coursework: Combinatorics, graph theory, discrete math, abstract algebra, Galois theory

Awards: *Llewellyn Bixby Prize for Excellence in Mathematics*; *Phi Beta Kappa*

Budapest Semester in Mathematics- Budapest, Hungary (*Received High Honors*)

2015

PAPERS

- “Experimental Design in Two-Sided Platforms: An Analysis of Bias.” (2021)
 - With Ramesh Johari, Inessa Liskovich, and Gabriel Weintraub
 - Forthcoming at *Management Science (MS)*
 - *RMP Jeff McGill Student Paper Award (2021)*, 2nd Place
 - Presented in *MSOM Service SIG 2021*
 - Presented in *Conference on Web and Internet Economics (WINE): Spotlights Beyond Wine*
 - Preliminary version presented in *ACM Conference on Economics and Computation (EC '20)*.
- “Standardized Tests and Affirmative Action: The Role of Bias and Variance.” (2021)
 - With Nikhil Garg and Faidra Monachau
 - Working paper, under review at *Management Science*.
 - Preliminary version accepted to *ACM Conference in Fairness, Accountability, and Transparency Conference (FAccT)*, 2021
 - Best Paper with a Student Presenter Award at *ACM Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO) '21*.

- “Interference, Bias, and Variance in Two-Sided Marketplace Experimentation: Guidance for Platforms.” (2021)
 - With Geng Zhao, Ramesh Johari, and Gabriel Weintraub.
 - Accepted to *TheWebConf (WWW)* '22.
 - Presented in *EC '20 Workshop on Design of Online Platforms*.
- “Decision Making using Platform Experiments: Errors Under Interference.”
 - In preparation.
- “Exploration vs. Exploitation in Team Formation.” (2018)
 - With Ramesh Johari, Vijay Kamble, and Anilesh K. Krishnaswamy.
 - Accepted to *Conference on Web and Internet Economics (WINE)*.
- “Novel Characterization and Live Imaging of Schlemm’s Canal Expressing Prox-1.” (2014)
 - With Tan Truong, Young-Kwon Hong, and Lu Chen.
 - *PLoS One*.

INDUSTRY EXPERIENCE

Common App

Volunteer Consultant

Mar '21-Present

Using data science to promote equitable and accessible college education.

Airbnb

Data Science Intern

Jun '19 – Sep '19

Implementing causal inference methods to assess marketplace features.

Opendoor

Data Science Intern

Jun '18 – Sep '18

Implementing causal inference methods to optimize real estate pricing.

State Street Global Advisors / Worcester Polytechnic Institute

Math Finance Intern/Researcher

May '14– Aug '14

Developing liquidity metrics to assess financial portfolio risk.

TEACHING EXPERIENCE

Teaching Assistant for the following classes.

Stanford University (Graduate Classes)

- Foundations of Data Science, Fall '19, Fall '20, and Fall '21. (Stanford Management Science & Engineering)
- Data Science for Online Marketplaces, Spring '19. (Stanford Graduate School of Business)

Pomona College (Undergraduate Classes)

- Abstract Algebra
- Operations Research
- Calculus II Honors

AWARDS AND RECOGNITION

- INFORMS RMP Jeff McGill Student Paper Award (2021), 2nd place
- Dantzig-Lieberman Operations Research Fellowship (Stanford University)
- Management Science & Engineering Department Service Award (Stanford University)
- Llewellyn Bixby Prize for excellence in mathematics (Pomona College)
- Phi Beta Kappa
- National Merit Scholar

SERVICE AND OUTREACH

Journals, Conferences, and Seminars

- Reviewer for EC'21 Operations of People-Centric Systems Workshop
- Reviewer for *Management Science*
- Session Chair for INFORMS '20 and INFORMS '21
- Organizer for the Stanford Research on Algorithms, Incentives, and Networks (RAIN) Seminar

Service and Outreach

- Senior student mentor at *ACM Economics and Computation (EC '20 and EC '21)*
- Mentor, Stanford Data Science Inclusive Mentoring program
- Stanford MS&E department liaison and student mentor
- Pomona College Math Department liaison

PRESENTATIONS

“Platform Experimentation and Decision-Making Under Marketplace Interference”

- INFORMS Annual Meeting 2021 (Upcoming)
- Cornell Young Researchers Workshop 2021

“Interference, Bias, and Variance in Marketplace Experimentation”

- MIT Conference on Digital Experimentation (CODE) 2021. (Upcoming)

“Experimental Design in Two-Sided Platforms: An Analysis of Bias”

- WINE '21: Spotlights Beyond Wine
- Stanford Causal Science Center
- 2021 Conference on Digital Experimentation (CODE)
- INFORMS MSOM SIG Conference 2021
- Marketplace Innovations Workshop (MIW) 2021
- Vinted Data Science Team
- Stanford Data Science Lab
- INFORMS Annual Meeting 2020
- Lyft Data Science Team
- Kellogg-Wharton Operations Management Workshop
- ACM Conference on Economics and Computation (EC) 2020
- Revenue Management and Pricing Live Paper Series
- 2020 Conference on Digital Experimentation (CODE)

- Facebook Core Data Science Seminar
- Stanford Causal Inference Seminar (invited)

“Dropping Standardized Testing for Admissions: Differential Variance and Access”

- INFORMS MSOM Conference 2021

“Exploration vs. Exploitation in Team Formation”

- Informs Annual Meeting 2020.
- Conference on Web and Internet Economics 2018
- INFORMS Annual Meeting 2018
- Upwork Data Science Seminar
- Stanford Social Algorithms Seminar

TECHNICAL TOOLS

- Python
- R
- SQL

OTHER EXPERIENCE

Writer for College Student Blog

Student Voices, Pomona College

Jan ‘15 - May ‘15

Research Assistant

UC Berkeley Vision Sciences- Berkeley, CA

May - Aug ‘13

News Writer

The Student Life, Pomona College

Aug ‘12 - May ‘13