

EDUCATION

Stanford University

Ph.D. Candidate in Operations Research (Management Science & Engineering) Expected 2022

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

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

- *Awards: RMP Jeff McGill Student Paper Award Finalist (2021), 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: Phi Beta Kappa; Llewellyn Bixby Prize for excellence in mathematics

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

2015

PUBLICATIONS AND WORKING 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)*
 - Finalist, *RMP Jeff McGill Student Paper Award (2021)*
 - Presented in *MSOM Service SIG 2021*
 - Preliminary version presented in *ACM Conference on Economics and Computation (EC '20)*.
- “Interference, Bias, and Variance in Two-Sided Marketplace Experimentation: Guidance for Platforms.” (2021)
 - With Geng Zhao, Ramesh Johari, and Gabriel Weintraub.
 - Working paper, presented in *EC '20 Workshop on Design of Online Platforms*.
- “Decision Making using Platform Experiments: Errors Under Interference.”
 - Working paper.
- “Standardized Tests and Affirmative Action: The Role of Bias and Variance.” (2021)
 - With Nikhil Garg and Faidra Monachau
 - Working paper
 - Under review in *Management Science*.
 - Preliminary version accepted to *ACM Conference in Fairness, Accountability, and Transparency Conference (FAccT), 2021*

- “Exploration vs. Exploitation in Team Formation.” (2018)
 - With Ramesh Johari, Vijay Kamble, and Anilesh K. Krishnaswamy.
 - Abstract 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 – Aug ’14

Developing liquidity metrics to assess financial portfolio risk.

TEACHING EXPERIENCE

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

- Finalist in RMP Jeff McGill Student Paper Award (2021)
- 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 Seminar.

Service and Outreach

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

PRESENTATIONS

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

- INFORMS Annual Meeting 2021 (Upcoming)
- INFORMS MSOM SIG Conference 2021
- Marketplace Innovations Workshop 2021
- Vinted Data Science Team
- Stanford Data Science Labs
- 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
- 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”

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

TECHNICAL TOOLS

- Python
- C++
- Java
- 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