Jiguang Li

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Education

- **The University of Chicago Booth School of Business** **Chicago, IL** *Sep 2022 – Present*
  - Ph.D. student in Econometrics & Statistics; M.B.A. (concurrent). Advisor: *Veronika Ročková*.
  - Research interests: Bayesian Statistics, Reinforcement Learning, Psychometrics.
- **Yale University** **New Haven, CT** *Aug 2019 – May 2020*
  - Master of Arts in Statistics.
- **Middlebury College** **Middlebury, VT** *Sep 2015 – May 2019*
  - B.A. in Mathematics; B.A. in Computer Science.
  - *Summa Cum Laude*; Highest Honors in Mathematics; Davis UWC Scholar.

Publications

- **Jiguang Li** and Hengrui Luo. "Robust Bayesian Optimization via Tempered Posteriors." 2026. *Submitted*. [paper] [code]
- **Jiguang Li**, Robert Gibbons, and Veronika Ročková. "Sparse Bayesian Multidimensional Item Response Theory." *Journal of the American Statistical Association*, 2025. [paper] [code]
- **Jiguang Li**, Robert Gibbons, and Veronika Ročková. "Deep Computerized Adaptive Testing." 2025. *Revision submitted to Psychometrika*. [paper] [code]

Technical Skills & Languages

- **Programming**: Python (PyTorch), R, Java, LaTeX, basic JavaScript/HTML.
- **Languages**: Chinese (native), English (fluent), Spanish (intermediate), Italian (IB ab initio).

Experience

- **Applied Scientist Intern** **Amazon.com, Inc.** *Jun 2025 – Aug 2025*
  Grocery Economics & Optimization Science
  - Designed a constrained optimization framework for media-channel budget allocation atop Bayesian Maketing Mixing Model (Whole Foods, Amazon Fresh), with projected **8%** ROAS lift and UQ for sales and spend.
  - Built interactive visualization tools to make the optimization workflow interpretable for stakeholders.
- **Research Professional, Center for Applied AI** **The University of Chicago** *Aug 2020 – Jul 2022*
  Supervised by Sendhil Mullainathan
  - Developed PyTorch pipelines for medical imaging (CNNs, MAML, multi-GPU) and StyleGAN2.
  - Built Bayesian inference workflows in PyMC3/HMC for educational testing; analyzed large-scale item-response, DICOM X-ray, and conviction datasets.
- **Research on Online Volunteer–Nonprofit Matching** **Yale University** *May 2020 – Aug 2020*
  - Optimized marketplace policies to raise volunteer–nonprofit match rates; analyzed 100,000+ interaction devices with Google Analystics Python API.
- **Earlier Research (Astrostatistics)** **California Institute of Technology** *2017 – 2019*

- Implemented spectral continuum normalization methods and built a demo site (Python), Yale (2019).
- Built quasar variability analysis pipeline; two-sample tests; *Caltech VURP Award*, Caltech (2017).

Professional Service

- **Journal Reviewer:** *Bayesian Analysis*, *Operations Research*, *Statistics and Computing*.
- **Teaching Assistant:** Business Statistics; Calculus III, Economic History.

Presentations

- Contributed Talk, J-ISBA Conference (*Jun 2024*, Venice, Italy).
- Contributed Poster, ISBA Conference (*Jul 2024*, Venice, Italy).
- Invited Talk, Chicago Booth Healthcare Initiative (*Nov 2024*, Chicago, IL).
- Invited Talk, Department of Public Health Sciences at UChicago (*Oct 2025*, Chicago, IL).
- Invited Talk, ICSA Conference (*Jun 2026*, Arlington, VA).

Selected Ph.D.-Level Coursework

- **Economics:** Bayesian Econometrics; Causal Machine Learning; Empirical Analysis; Price Theory II & III; Theory of Income I.
- **Mathematics:** Advanced Probability; Measure Theory; Optimization Techniques; Spectral Graph Theory.
- **Statistics/ML:** Bayesian Deep Learning; Fundamentals of Deep Learning; High-Dimensional Hypothesis Testing; Linear Models; Mathematical Statistics II.