

Minjae Seo

Chicago, IL, 60637 | (773) 966-8925 | minjaeseo@uchicago.edu | linkedin.com/in/minjae-seo-6915b31b5/ | minjaeseo6603.github.io

Education

University of Chicago

Master of Art in Public Policy with Certificate in Research Methods

May 2027

GPA: N/A

Autumn 2025: Game Theory(PhD), Advanced Microeconomics for Policy Analysis(PhD), Applied Econometrics(PhD)

University of California, Berkeley

Bachelor of Arts in Statistics

Dec 2024

GPA: 3.85/4.0

Relevant Coursework: Optimization Models in Engineering, Modern Statistical Prediction & Machine Learning, Principles & Techniques of Data Science, Data, Inference, & Decisions, Econometrics, Causal Inference

Skills

Languages / Tools: Python, R, C, SQL, Stata, SAS, Tableau, PowerBI, Pytorch, Tensorflow, AWS, Git, Qualtrics, MS Excel

Databases / Web Technologies: MySQL, PostgreSQL, MongoDB, PHP, JavaScript, HTML, CSS, Matlab

Highlighted Experience and Projects

Graduate Teaching Assistant, Mathematical Foundations of Machine Learning, University of Chicago Sep 2025- Present

- Facilitated weekly technical recitations for 20+ students, utilizing interactive Python/NumPy demos to bridge theory and application across complex topics like SVD, Gram-Schmidt, and Least Squares.
- Mentored students through rigorous exam preparation by synthesizing matrix methods into accessible reviews, while resolving 100+ technical inquiries on Ed Discussion regarding subspace projections and algorithm implementation.

Data Labelling Analyst, Handshake AI, Remote May 2025- July 2025

- Developed math-specific prompts to my domain for Large Language Models by evaluating and revising responses
- Collaborated with 70+ members to minimize and decrease the responses error by utilizing Reinforcement Learning from Human Feedback(RLHF)

AI Intern, YCX, Remote

March 2025 - May 2025

- Engineered an AI-powered [Know Your Business \(KYB\)](#) system that dynamically integrates multi-agent orchestration, enabling automated report generation and dataset enrichment using LLM's Groq API and web scraping(Beautiful Soup in Python).
- Improved data complexity by designing a modular agent pipeline that increased data coverage across 300+ firms by 40%, integrating inputs from open web sources, company filings, and JSON-formatted LLM outputs.

Quantitative Research Intern, Global Key Advisors, Hybrid July 2024 - March 2025

- Analyzed insider trading profitability by merging and cleaning SEC Form 4, CRSP, and Refinitiv datasets, leveraging Python to develop alpha prediction models across Fama-French 48 sectors.
- Developed automated pipelines for data extraction, classification, and ROI tracking, facilitating downstream portfolio strategy testing by the research team.

Research Assistant: [Causal effects estimation: Evidence from Natural Experiments](#), UC Berkeley Jan 2024 - Feb 2025

- Performed sharp regression discontinuity analysis at the 33°N threshold to identify the causal relationship between the running/treatment variable and indoor air temperatures using matplotlib(Python) and rdrobust(R) packages.
- Cleaned and harmonized the Chinese Thermal Comfort Dataset, constructing a city-level panel of 32 northern (treatment) and southern (control) cities using Python.
- Identified a statistically significant 4.3°C increase in operative temperature in northern cities(treatment) via weighted least squares, controlling for city fixed effects and polynomial trends.

Research Assistant: [Investigation of Sustainability in Durable Good Markets](#), UC Berkeley Jan 2024 - Jan 2025

Jan 2024 - Jan 2025

- Analyzed household-level expenditure([Consumer expenditure from BLS](#)) through event study plot and regression analysis under a [Difference-in-Differences/Synthetic Control framework](#) to evaluate the causal effect of Massachusetts' Right to Repair Law on vehicle service and parts expenses.
- Identified a post-policy decline in repair costs attributed to increased third-party competition, supporting legislative impacts on market efficiency and consumer behavior.

Research Assistant: [Adaptive Cross-validation in Double Machine Learning](#), UC Berkeley July 2024 - Dec 2024

July 2024 - Dec 2024

- Developed and implemented an adaptive simulation framework for Double Machine Learning (DML) with continuous treatments, enabling dynamic model selection via cross-validation and information criteria.
- Collaborated with an Economics PhD candidate to reduce researcher-induced bias using Monte Carlo simulation pipeline particularly ensemble CV tuning indices through python scripts, achieving 90.8% accuracy.

Leadership and Extracurricular Activities

Undergraduate Economics Association, Head of Research, UC Berkeley Economics Department

Jan 2024 - Mar 2025

- Directed biweekly research workshops to train new members in core econometric methods and statistical programming (R/Stata), enhancing analytical capacity across project teams.

Attendee, [Econometrics Game](#), University of Chicago

March 30th, 2024 - April 1st, 2024

- Delivered a [high quality analysis](#) report to the judges, including a Nobel prize winner in economics with a team of 4 (two London School of Economics and one UC Berkeley student).