

Minjae Seo

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Education

University of Chicago Master of Art in Public Policy with Certificate in Research Methods Autumn 2025: Game Theory(PhD), Advanced Microeconomics for Policy Analysis(PhD), Applied Econometrics(PhD)	May 2027 GPA: N/A
University of California, Berkeley Bachelor of Arts in Statistics Relevant Coursework: Optimization Models in Engineering, Modern Statistical Prediction & Machine Learning, Principles & Techniques of Data Science, Data, Inference, & Decisions, Econometrics, Causal Inference	Dec 2024 GPA: 3.85/4.0

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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">Developed math-specific prompts to my domain for Large Language Models by evaluating and revising responsesCollaborated 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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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: <i>Investigation of Sustainability in Durable Good Markets</i> , UC Berkeley	Jan 2024 - Jan 2025
<ul style="list-style-type: none">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: <i>Adaptive Cross-validation in Double Machine Learning</i> , UC Berkeley	July 2024 - Dec 2024
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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).	