# Minjae Seo

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## EDUCATION

**University of Chicago (Incoming, Start: Sep, 2025)**                                **Expected May 2027**
Master of Science in Computer Science & Public Policy                                                GPA: N/A
**Autumn 2025:** Intermediate Python, Advanced Statistics for Data Analysis, Political Analytics

**University of California, Berkeley**                                                                **Dec 2024**
Bachelor of Arts in Statistics                                                                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, Power BI, Pytorch, Tensorflow, AWS, Git, Qualtrics, MS Excel
**Databases / Web Technologies:** MySQL, PostgreSQL, MongoDB, PHP, JavaScript, HTML, CSS, MATLAB

## EXPERIENCE & PROJECT

**Data Labelling Analyst,** Handshake AI, Remote                                        **July 2025**
- Developed math-specific prompts for my domain for Large Language Models by evaluating and revising responses
- Collaborated with 70+ members to minimize and decrease the response errors by utilizing Reinforcement Learning from Human Feedback (RLHF)

**AI Intern,** YCX, Remote                                                              **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                            **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       **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 Goods Markets,* UC Berkeley        **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           **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 a Monte Carlo simulation Pipeline, particularly ensemble CV tuning indices through Python scripts, achieving 90.8% accuracy

## LEADERSHIP & 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 in R and Stata, enhancing analytical capacity across project teams

**Undergraduate Student Instructor, Machine Learning,** UC Berkeley Statistics Department           **Aug - Dec 2024**
- Assisted professors in grading and revising 60+ students' homework and exams on a timely and scheduled basis.

**Attendee, Econometrics Game**, University of Chicago                         **March 30th, 2024 - April 1st, 2024**
- Delivered a high-quality analysis report to the judges, including a Nobel Laureate in economics, with a team of 4 (two from the London School of Economics and one from UC Berkeley)