

Qualifications Summary

Dedicated and detail-oriented professional with demonstrated expertise in designing theoretical models to tackle critical business challenges and utilizing advanced techniques to optimize and scale models within modern corporate data infrastructures.

Statistical Analysis & Econometrics

- ◆ Capable of leveraging statistical methods and econometric techniques to analyze economic data and interpretation.

Research & Development

- ◆ Instrumental in spearheading research projects, leading R&D initiatives, and enhancing product offerings.

Data Science & Machine Learning

- ◆ Adept at applying data science and ML tools to evaluate large datasets, derive insights, and create predictive models.

Key Strengths

- ◆ Excel at transforming complex data into actionable insights, driving decision-making, and enhancing organizational performance.

Professional Experience

Economist II, Amazon, Seattle, WA

2024 – Present

Ph.D. in Economics, University of California, Los Angeles, CA

2019 – 2024

Earned Ph.D. in Economics under guidance of esteemed advisors Denis Chetverikov (Chair), Rosa Matzkin, Alper Atamturk, and Andres Santos. Developed a job market paper titled "Time Varying Unobserved Group-Period Fixed Effect Estimator," while contributing to advanced methodologies in econometrics. Specialize in key fields of Econometrics and Asset Pricing to demonstrate robust understanding of complex economic theories and applications.

Key Accomplishments:

- Improved fixed effects estimation with the Time Varying Unobserved Group-Period Fixed Effect Estimator, while enabling dynamic group membership over time.
- Developed Scalable Global Optimization Algorithm for Unobserved Grouped Heterogeneity.

Economist Intern, Amazon, Seattle, WA

2023 – 2024

Developed a theoretical model in the Selling Partner Dev Science team to analyze effects of branding on demand, while providing sellers with optimal roadmap for maximizing product profit. Implemented cutting-edge experimental design framework within SCOT Inventory Planning and Control team, while leveraging insights from past experiments to enhance participant selection efficiency for current experiments. Created models to address business challenges, utilized extensive data sets for model estimation, and collaborated with engineers and business leaders to ensure successful implementation. Conducted data analysis and interpretation via utilization of statistical software to support research projects. Provided assistance in collection and organization of economic data, while compiling information from various sources. Facilitated development of economic models and forecasts by contributing to research initiatives.

Key Accomplishments:

- Achieved simulated precision enhancement of 40% by engineering innovative experimental design framework that integrated machine learning and advanced statistical methodologies.
- Enhanced marketing teams' capacity to allocate resources effectively toward high-growth brands, resulting in the identification of \$45 billion in projected future revenue through the formulation and initial assessments of a comprehensive Branding Model.

Master of Arts in Economics, University of California, Los Angeles, CA

2019 – 2021

Research Assistant, Federal Reserve Bank of San Francisco, San Francisco, CA

2017 – 2019

Authored published Economics letter on "How Persistent are the Effects of Sentiment Shocks" alongside Jess Benhabib and Mark Spiegel to enhance discourse in the field of economics. Collected, analyzed, and interpreted data using various research methodologies and tools to support academic or scientific studies. Assisted in preparing research reports, literature reviews, and presentations by synthesizing data and reviewing relevant materials along with contributing to dissemination of research outcomes.

Key Accomplishments:

- Accomplished 1,200+ citations and contributed to advancement of economic research by delivering exceptional assistance in collaboration of 10 economists, gathering data, coding, and writing, and presenting 12 academic papers, with seven published.
- Amassed 3K+ hours of programming experience in Stata, Python, R, and MATLAB, while demonstrating proficiency in data analysis and statistical modeling to support rigorous economic research.

Key Accomplishments:

- Authored thesis titled "The Belgium Political Crisis: A Study of Coalition Negotiation" under guidance of advisor Chandrani Chatterjee, showcasing how debt crisis acts as external pressure that drives negotiations, which may become stuck in cycle, toward equilibrium.
- Revealed that political institutions could enhance societal welfare by implementing internal, time-varying costs to negotiations, offering less detrimental alternatives to the unintended external costs triggered by political crises.

Championed success in the Electronic Warfare division as Leading Petty Officer aboard USS Rodney M. Davis (FFG-60) by orchestrating operations and maintenance of advanced missile defense systems. Specialized as Cryptologic Technician Technical (CTT) in detection, analysis, and identification of electronic signals and systems, while playing a crucial role in collection and interpretation of critical intelligence. Operated advanced electronic equipment to track radar emissions, communication signals, and electronic threats by providing real-time data to support decision-making processes in tactical/strategic operations. Maintained and troubleshot complex systems, while ensuring optimal performance in high-pressure environments and contributing to safeguarding communications, identifying potential threats, and supporting mission success. Collaborated with cross-functional teams to design and integrate cryptographic solutions into software/hardware platforms.

Key Accomplishments:

- Spearheaded 32 intelligence-gathering missions, leading to seizure of 2.2 metric tons of cocaine and processing of 26 drug traffickers.
- Earned leadership opportunities typically reserved for those with ten years of service, reflecting strong commitment to excellence and proficiency in operations.
- Preserved ship's structural integrity and significantly extending its lifespan by identifying critical structural issue with ship and earning opportunity to lead 12-person team in addressing problem.

Teaching Experience

- Instructed approximately 720 students in statistics, econometrics, data science, and forecasting over the past 4 years, while achieving near-perfect teaching reviews and fostering strong understanding of complex quantitative concepts.
- Delivered various lectures on multiple subjects, encompassing:
 - *Statistics for Economists (Fall/Winter 2024, Fall 2020)*
 - *Introduction to Econometrics (Winter 2021, Fall 2022)*
 - *Data Science for Economists (Spring/Summer 2021, Winter 2023)*
 - *Financial Econometrics (Spring 2022)*
 - *Pricing and Strategy (Fall 2023)*

- Advanced Econometrics & Economic Forecasting (Winter 2022)

Education

- Ph.D. in Economics** | University of California, Los Angeles, CA (2019 – 2025)
- *Advisors: Denis Chetverikov (Chair), Rosa Matzkin, Andres Santos*
 - *Job Market Paper: Time Varying Unobserved Group-Period Fixed Effect Estimator*
 - *Fields: Econometrics, Asset Pricing*

Master of Arts in Economics | University of California, Los Angeles, CA (2019 – 2021)

Bachelor of Arts in Economics | Pennsylvania State University, University Park, PA (2012 – 2016)

Bachelor of Science in Mathematics | Pennsylvania State University, University Park, PA (2012 – 2016)

- Bachelor of Arts in Political Science** | Pennsylvania State University, University Park, PA (2012 – 2016)
- *Schreyers Honors College | Cumulative GPA: 3.86 (Cum Laude)*
 - *Thesis: The Belgium Political Crisis: A Study of Coalition Negotiation | Advisors: Chandrani Chatterjee*

Publications

Time-Varying Unobserved Group Period Fixed Effect Estimator
Linear Decision Boundary Search Algorithm For Unobserved Grouped Heterogeneity

Technical Proficiencies

Proficient in utilization of R, Python, Stata, MATLAB, SQL, TensorFlow, and Gurobi.