

# LAUREN LINGYUN QU

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## SKILLS & INTERESTS

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- **Research Interests:** Family Economics, Macroeconomics, Labor Economics, Household Finance
- **Skills:** Structural Model Construction and Estimation (GMM, MLE); Empirical Design (DID, RD, Causal Inference); Computational Methods (ML, DSGE); Data Collection, Visualization & Statistical Analysis
- **Languages:** Chinese, English, Japanese, Korean (Fluent)
- **Technical:** Python, R, MATLAB, STATA, SAS, C++, Julia; Databases MySQL; LaTeX; Git

## EDUCATION

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### University of Chicago | Chicago, IL

MA, Social Sciences – Economics, September 2024 – Expected June 2025

### Georgia Institute of Technology | Atlanta, GA

MS, Computer Science (Online), September 2024 – Present

### Waseda University | Tokyo, Japan

BA, Economics, Summa Cum Laude, GPA: 3.9/4.0, Rank: 2/144, June 2023

### Korea University | Seoul, South Korea

BA, Statistics, GPA: 92/100, June 2022

## SELECT COURSEWORK

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- **Graduate:** Microeconomics (PhD-Level), Macroeconomics (PhD-Level), Econometrics (PhD-Level), Statistics Inference (PhD-Level); Measure Theory, Stochastic Calculus; Machine Learning, Deep Learning, Reinforcement Learning, Algorithms Design and Analysis
- **Undergraduate:** Time Series Analysis (Grad-Level), Mathematical Statistics (Grad-level), Probability Theory, Bayesian Statistics, Data Visualization with R, Statistical Experimental Method

## RESEARCH EXPERIENCE

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### University of Chicago | Chicago, IL

*Research Assistant - Prof. Oscar Gálvez-Soriano, June 2024 – Present*

- Conducted regression analysis using `redgfe` and `xtevent` in STATA, comparing fixed effects and control variable choices to ensure accurate and reliable results.
- Tested parallel trends assumption via visualization and verified validity of DID approach.

### University of North Carolina | Chapel Hill, NC

*Research Assistant - Prof. Franklin Qian, January 2024 – Present*

- Collaborated with team members to build structural micro model of firm decision between capital allocation and hiring.
- Expanded simple discrete two-period model to continuous infinite-period model. Calculated Hessian and Jacobian matrices for two-period model to check for convergence.
- Implemented dynamic programming; Visualized value function iteration process using Python.

### University of Tokyo | Tokyo, Japan

*Predoctoral Research Assistant - Prof. Nakata Taisuke, August 2023 – December 2023*

- Collected mobility and traffic data from 42 websites of different prefectures with Python (BeautifulSoup, Scrapy).
- Conducted fixed effect regression to examine link between new Covid cases and variables (mobility, GDP loss) in STATA.

### Waseda (Sōdai) University | Tokyo, Japan

*Research Assistant - Prof. Kubota So, December 2022 – September 2023*

- Examined relationship between housework and unemployment; Prepared empirical results in STATA and conducted comprehensive model validations, including IV test, robustness check, and alternative mechanism test.
- Utilized machine learning techniques to test theoretical models and conducted extensive numerical simulations and LOOCV analyses to verify key assumptions in R.

### Emlyon Business School | Lyon, France

*Research Assistant - Prof. Nguyen Giang, March 2022 – December 2022*

- Conducted data cleansing for 3 million+ data in SAS; Used R for exploratory data analysis and visualizations.
- Applied clustering and KNN methods to explore relationship between social connectedness, private market capital allocation, and overall performance in R.

## RESEARCH PROJECTS

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### Housing Price and Divorce Rates Regression Discontinuity Analysis, joint work with Mingzhe Chou, October 2024

- Developed a regression discontinuity (RD) design to analyze the impact of housing price changes on divorce rates in China,

utilizing a policy-driven discontinuity based on real estate regulations.

#### **Python Gale-Shapley Algorithm Stability and Desirability Research, September 2022**

- Designed evaluation metrics and demonstrated Gale-Shapley Algorithm outperformed random matching and nearest neighbor searching techniques in terms of stability and average matching rank in Python.

### **TEACHING EXPERIENCE**

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#### **University of Chicago | Chicago, IL**

*Teaching Assistant - ECMA 31350 Machine Learning (Prof. Ponomarev), March 2025 – May 2025*

- TBD
- TBD

*Teaching Assistant - ECMA 33603 Macroeconomics and Financial Frictions (Prof. Silva), January 2025 – March 2025*

- Independently prepared detailed homework solutions in LaTeX, addressing key areas of student concern.
- Conducted weekly office hours, providing in-depth explanations and derivations to enhance student understanding.
- Collected and organized course feedback, facilitated communication between students and the professor.

#### **University of Chicago | Chicago, IL**

*Teaching Assistant - ECON 11020 Introduction to Econometrics (Prof. Gálvez-Soriano), September 2024 – December 2024*

- Prepared and delivered pre-recorded lecture videos, facilitated discussion sessions to reinforce key concepts, and held weekly office hours to provide individual support.
- Collaborated on problem set solutions and grading criteria; evaluated and graded all submitted problem sets without any complaint or regrading request from students.

### **PROFESSIONAL EXPERIENCE**

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#### **Changchun National Development and Reform Commission | Changchun, China**

*Consultant, September 2023 – December 2023*

- Managed and facilitated approval, validation, and review processes for investment projects entering Changchun City in accordance with regulatory authority defined by State Council.
- Monitored and assessed risks and potential hazards, including evaluating risks associated with crowd dynamics, adverse weather conditions such as blizzards, and fluctuations in commodity prices for investments.
- Provided insightful analysis and formulated relevant work recommendations to mitigate identified risks, ensuring proactive management and strategic decision-making.

#### **China International Capital Corporation Limited | Beijing, China**

*Limited Fixed Income Intern, July 2023 – September 2023*

- Conducted in-depth research on 25 ABS projects, including financing leases, accounts receivable, project final payments, and consolidated REITs; Analyzed creditworthiness of projects and completed credit evaluation reports.
- Analyzed macroeconomic trends and bond market movements; Assisted researchers in writing fixed income reports.
- Conducted financial analysis on target companies using absolute valuation methods; Automated the calculation process of EBIT, WACC, equity cost, and other data with Python.

#### **Meituan | Beijing, China**

*Strategic Investment Intern, April 2023 – July 2023*

- Authored desk research report on Japanese food delivery market; Conducted in-depth research on macro policy, historical and current development of the industry, and competition situation.
- Conducted financial research on both listed and unlisted companies in target industry using relative valuation methods.
- Analyzed operating performance of companies in the enterprise software industry; Deconstructed financials into 16 indicators, such as operational metrics, SaaS metrics, startup company indicators, and customer indicators.
- Supported work process of the strategic investment team through expert interviews and desk research.

*Business Analyst Intern, February 2022 – September 2022*

- Used SQL and Python for efficient data mining and analytics, integrating internal and external data sources, developed over 20 statistical models and reports with visualizations and interactive dashboards.
- Conducted extensive market research, producing over 15 weekly reports, and created a comprehensive metrics system using Excel VBA that covered customer base, order volume, transaction volume, profit, etc.
- Devised novel system design for evaluating complexity rating of takeaway restaurants, decomposing complexity into 16 variables and constructed automated data collection procedure and rating evaluation system for 15M+ restaurants.

#### **Nomura Research Institute | Beijing, China**

*Business Analyst Intern, April 2021 – July 2021*

- Benchmarked the hydrogen vehicle market and developed a competitive landscape analysis of 5 leading firms
- Consolidated key data and indicators of client companies, identified major factors affecting strategic growth with internal database statistics and developed targeted proposals, produced 10+ weekly reports

#### **Industrial Securities | Shanghai, China**

Equity Research Analyst Intern, September 2021 – December 2021

- Analyzed social service & retail industries, particularly duty-free sector; Utilized Python to collect and visualized diverse data.
- Produced in-depth industry research report, featuring market forecasts and investment recommendations.
- Applied advanced Python coding to gather and analyze more than 200,000 rows of data on 88 variables, covering asset quality and return for over 20 A-share companies; Developed financial models and produced five independent reports.
- Conducted extensive fundamental research, encompassing operations and financial summaries, near-term catalysts, and valuations based on DCM and EV/EBITDA methodologies.

**OTHER EXPERIENCE**

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**University of Chicago | Chicago, IL**

Organizer of Brown-Bag Seminar for the Department of Economics, September 2024 – Present

- Coordinate seminar logistics, including securing venues and promoting events to students from various programs.

**AWARDS**

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**University of Chicago | Chicago, IL**

M.A. Director's Scholarship (merit-based)

Social Science Promise Scholarship

Gargoyle Research Scholarship

**Korea University | Seoul, South Korea**

CAMPUS Asia Scholarship

**Waseda University | Tokyo, Japan**

Japan Student Services Organization Scholarship (JASSO)