LINGYUN QU

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EDUCATION

MA Program in Social Science, Economics concentration, **University of Chicago** 09/2024 – 05/2026

BA in Economics, School of Political Science and Economics**, Waseda University** 09/2019 – 06/2023

- GPA: 3.9/4.0 (ranked 2nd/144)| Coursework: grad-level Microeconomics, DSGE, grad-level Econometrics
- Summa Cum Laude, 2019-2020 Japan Student Services Organization Scholarship, 2019-2023 Dean's Award Scholarship

BA in Statistics, College of Political Science and Economics, **Korea University** 03/2021 – 06/2022

- GPA: 92/100 | Coursework: Probability Theory, Mathematical Statistics, grad-level Time Series Analysis
- 2021 CAMPUS Asia Scholarship

RESEARCH EXPERIENCE

Research Assistant for Professor Frankin Qian at University of Northern California, **Remote** 01/2024 – present

- Independently write comprehensive literature reviews for a variety of diverse topics.
- Built applied micro models such as firm decisions hiring flexible and permeant labor, firm financial constraints and allocating funds. Interpreted models with historical and realistic events with future economic implications.

Predoc Research Assistant for Professor Nakata Taisuke at University of Tokyo**, Tokyo, Japan** 08/2023 – 02/2024

- Conducted empirical research on the relationship between covid situation and economic factors in Japan prefectures.
- Used python to fit linear regression for predicting GDP, ran fixed effect regression to examine the relationship between covid new cases and variables including mobility and GDP loss.

Research Assistant for Professor Kubota So at Waseda University**, Tokyo, Japan** 02/2023 – 09/2023

- Focused on examining the relationship between housework and unemployment. Prepared empirical results and conducted comprehensive model validations and comparisons to ensure the robustness and reliability of research findings.
- Utilized LASSO regression and other advanced statistical techniques to test theoretical models and conducted extensive numerical simulations and LOOCV analyses to verify key assumptions.

Research Assistant for Professor Nguyen Giang at Emlyon Business School, **Remote** 03/2022 – 12/2022

- Research Topic: Investment of Sovereign Wealth Funds in Venture Capital-backed Firms.
- Identified reliable and relevant resources to independently collect characteristic data and provided statistical data and analysis. Used R to produce advanced visualizations to support key findings and insights.
- Conducted rigorous quantitative analysis, including clustering and KNN to explore the relationship between social connectedness, private market capital allocation, and overall performance.

RESEARCH OUTCOME

Causal Inference in Networks with Noise 02/2023

- Conducted modeling of networks such as social networks and neural networks observed repeatedly over time.
- Utilized Bayesian models to compute the posterior probabilities of the existence of network edges.
- Performed simulation sampling based on the results of posterior distributions to calculate treatment effects.
- Applied the methodology to simulate social networks on FACEBOOK, comparing biases and variances between the results after modeling correction for noise and the initial results. Concluded that modeling noisy networks yields more accurate estimates of causal effects.

Paper under review: Does Digitalization Spillover Negatively Influence the Economy? Empirical Evidence from Japan, revised and resubmitted to Finance Research Letters 11/2022

- Joint work with Prof Qiuling Hua from Jilin University (Jilin, China)
- Constructed the digitalization index by Principal Component Analysis method, and the digitalization spillover effect index by Directed Arrow Graphs Based on Japan's prefecture data in 2011-2019
- Estimated effects of digitalization development spillover to the overall economic activities with OLS and FE estimates, explained population and industrial structure mechanisms with extensible policy implications
- Found that digitalization spillover reduces GDP per capita of the received prefecture by 0.4% (5% significant).

PROJECT EXPERIENCE

C++ OOPs Mini Project on Library Management System 07/2023

- Implemented a user-friendly interface for library staff and patrons, allowing them to search for books, check availability, and manage borrowing records. Incorporated various data structures including array and list, and sorting algorithms to optimize search and retrieval operations.

Python Gale-Shapley Algorithm Stability and Desirability Research 09/2022

- Developed a Python program to implement the algorithm and designed stability and average matching rank as evaluation metrics. Compared compare the performance of the Gale-Shapley Algorithm against random matching and nearest neighbor searching techniques.
- Demonstrated that the Gale-Shapley Algorithm outperformed random matching and nearest neighbor searching techniques in terms of stability and average matching rank, by means that Gale-Shapley algorithm consistently produced more stable matches and achieved higher average matching ranks.

Machine Learning Project: Predictive Analysis for Customer Churn in Telecommunication Industry 07/2023

- Leveraged various machine learning algorithms and techniques, including LASSO regression, Ridge regression, Supporting Vector Machine, Partial Least Square Regression to analyze customer data and make accurate churn predictions. Explored and compared different machine learning algorithms to identify the most effective model for churn prediction.
- Engineered relevant features from the dataset, including customer tenure, call duration, monthly charges, and customer complaints. Conducted feature selection and dimensionality reduction techniques to improve model performance.
- Split the dataset into training and testing sets. Trained the selected machine learning model using the training data and fine-tuned hyperparameters through cross-validation. Evaluated the model's performance using metrics such as accuracy, precision, recall, and F1-score.

PROFESSIONAL EXPERIENCE

Changchun National Development and Reform Commission, Consultant Changchun*, China 09/2023-12/2023*

- Managed and facilitated the approval, validation, and review processes for investment projects entering Changchun City in accordance with the regulatory authority defined by the State Council. Ensured compliance with all relevant guidelines and regulations, contributing to the successful execution of projects within the specified region.
- 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, Limited Fixed Income Intern *Beijing, China* 07/2023 – 09/2023

- Conducted in-depth research on 25 ABS projects, including financing leases, accounts receivable, project final payments, and consolidated REITs. Analyzed the 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, Strategic Investment Intern *Beijing, China* 04/2023– 07/2023

- Independently authored a desk research report on the 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 the target industry using relative valuation methods.
- Analyzed the operating performance of companies in the enterprise software industry. Deconstructed the financials into 16 indicators, such as operational metrics, SaaS metrics, startup company indicators, and customer indicators. Supported the work process of the strategic investment team through expert interviews and desk research.

Nomura Research Institute, Business Analyst Intern *Beijing, China* 04/2022– 07/2022

- 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

Meituan, Business Analyst Intern *Beijing, China* 02/2021 – 09/2021

- 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 a novel system design for evaluating the complexity rating of takeaway restaurants, decomposing complexity into 16 variables and constructed an automated data collection procedure and rating evaluation system for 15mil+ restaurants.

Industrial Securities, Equity Research Analyst Intern *Shanghai, China* 09/2021 – 12/2021

- Specialized in analyzing the social service and retail industry, particularly the 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.

ADDITIONAL INFORMATION

- **Languages:** Native in Mandarin Chinese, Fluent in English, Japanese (JLPT N1) and Korean (TOPIK Level 5)
- **Technical Skills:** C++, Python, R, Matlab, Stata, Databases MySQL, Latex, SAS
- **Leadership Experiences:** Vice President of LGBT Student Support Club "People-2-People", Vice President of Japanese Voluntary Activities Club