Yu-Chieh Jesse **Kuo**

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Education

National Taiwan University (NTU)   *Taipei, Taiwan*

B.B.A. in Information Management   *September 2018 - June 2023*

- **Ph.D. Economics Courses:** Microeconomic Theory, Computational Methods for Econometrics, Economic Analysis of Social Networks, Topics in Economics and Econometrics,
- **Ph.D. Management Courses:** Information Economics, Platform Strategy, Marketing Models: Game-Theoretic Approach.
- **Computer Science Courses:** Introduction to Text Mining(Ph.D. level), Machine Learning(Ph.D. level), Data Structure and Advanced Programming, The Design and Analysis of Algorithms, Database Management, System Analysis and Design.
- **Mathematics Courses:** Calculus, Statistics, Engineering Mathematics, Linear Algebra, Operations Research, Convex Optimization(Ph.D. level).

Research/Teaching Experience

Research Assistant   *Department of Economics, NTU*

Worked with Professor Chih-Sheng Hsieh and Professor C.Y. Cyrus Chu   *June 2022 - Present*

- Organized over 500 suspicious celebrities related to the MeToo movement and collected searching records from Google Trends to build a complete 2-year panal data.
- Calibrated the normalized raw data from Google Trends using a statistical estimation method to enable further analysis.
- Designed and implemented the regressions to analyze the effect of certain significant events and spillover effects in the MeToo movement.
- Organized a large-scale Taiwanese companies' dataset with millions of entries.
- Conducted literature reviews of corporate finace applying social network analysis.

Research Assistant   *Deparment of Information Management, NTU*

Worked with Professor Chih-Ping Wei   *July 2022 - Present*

- Conducted literature reviews in economics, management, and financial applying sentiment analysis.
- Organized literature in topics, data type, data sources, and other fields.

Teaching Assistant   *Operations Research, NTU*

Worked with Professor Ling-Chieh Kung   *March 2022 - June 2022*

- Verified 3 assignments, 2 case studies, and the final exam and wrote 6 corresponding solutions with the rigorous mathematical statement and one additional assignment writing guidance to help and encourage students.
- Built a course-oriented LaTeX class file and corresponding document to modularize and accelerate the file writing process.
- Graded over 300 assignments and 100 exam papers in a few days and managed grades for 100 enrolled students.
- Summarized precautions and details for the TA's work of this course in a handover document to help the TA in the future.

Independent Research

Online Learning Behavior, Peer Effect, and Education   *Economic Analysis of Social Networks*

Author   *Spring 2022*

- Proposed a noval and interdiscinpling research combining economics, computer science, and learning science.
- Surveyed 40 literatures over three different fields to establish the research objectives, impacts, and methedologies.
- Sought the collaboration positively with NTU COOL, an online platform providing professors and students at National Taiwan University to hold courses and learn online, to obtain large-scale online behavior data.

Modeling the Optimal Vehicle Scheduling for YouBike2.0 for NTU Campus   *Operations Research*

Author, Team Leader & Presenter   *Spring 2020*

- Modeled the optimal vehicle schedule route for in-campus shared bycicles by linear and integer programming and graph theory.
- Designed the algorithm to implement the optimization problem and visualized the optimal routes.
- Served as the project leader and assigned works and due time properly.

Online-Offline Retailing Cooperation with BOPS Scheme under Price Competition   *Information Economics*

Co-Author & Presenter   *Spring 2021*

- Surveyed 5 papers related to the topics of coopetition between retailers, and online-offline relationship, especially the adoption of the BOPS (Buy Oline and Pick up in-Store) strategy.
- Formulated a game-theoretic model to analyze the cooperation relationship between online and offline retailers.
- Discussed the firm's efficiency and incentive compatibility to derive the conditions for successful cooperation.

Political sentiment analysis based on social media: A survey of U.S. media's attitude toward China before and after the presidential election

Introduction to Text Mining

CO-AUTHOR

Fall, 2021

- Proposed 3 research questions and directions after surveying 5 research papers.
- Studied the performance of sentence embeddings from different natural language analysis and sentiment analysis packages to determine the package to use.
- Explored and compared the text's cosine similarity with TF-IDF and word embeddings from pre-collected 6000 tweets.

Extracurricular Activity

Director of Academic Department

NTUIM Student Association

AT NTU AZALEA FESTIVAL

2021, 2022

- Led a team of 5 members to survey 20 courses in the department and write a detailed introductory document over 5000 words to promote the department in the largest university expo in Taiwan.
- Established the key direction of introduction and adopted the agile development method to set targets and due time to secure the work progress.
- Provided a 5 minutes live presentation online based on the document.

Project Manager

Speech Lab, NTU

WORKED WITH PROF. LIN-SHAN LEE

Feb. 2019 - Dec. 2021

- Organized various data over thousands items for Professor Lin-Shan Lee's archive website and developed new contents.
- Communicated with 10 members and the professor and organized different tasks varying from website development to UI/UX design.
- Established and optimized the workflow by adopting productive tools such as Notion, CI/CD, Jira, etc.

Academic Mentor

Taipei, Taiwan

COLLABORATED WITH OVER 20 STUDENTS AND PARENTS

Aug. 2018 - Present

- Guided over 20 students for 10 subjects to improve their grades from the average to the top 10 in class.
- Employed the communication skills with empathy to defuse the family crisis.

Skills

Programming	Python, C++, R, shell scripts
Language	Chinese(Mandarin), English
Soft Skills	Interpersonal coordination, Leadership, Curiosity, Passion, Task Management
Other	Git, LaTeX