

# Yu-Chieh Jesse Kuo

MOVE FORWARD TO BECOME AN OUTSTANDING RESEARCHER

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## Summary

I am an undergraduate student majoring in Information Management at National Taiwan University. My research interests span economic analysis of social networks, quantitative and theoretic marketing, and computational social science. Currently, I am fortunate to work with Professor Chih-Sheng Hsieh on the network analysis of the MeToo movement and corporate finance, and Professor Chih-Ping Wei on the sentiment analysis of economics. Previously, I worked with Professor Lin-Shan Lee on project management.

## Education

### National Taiwan University (NTU)

Taipei, Taiwan

B.B.A. IN INFORMATION AND MANAGEMENT

2018 - Exp. 2023

- **Overview GPA: 4.06/4.3**

- **Selected courses:**

**Programming:** Programming Design, Data Structure and Advanced Programming, Database Management, System Analysis and Design, Introduction to Text Mining(Graduate level), Machine Learning(Graduate level).

**Mathematics:** Calculus, Statistics, Engineering Mathematics, Linear Algebra, Operations Research, Convex Optimization(Graduate level).

**Economics and Management:** Introduction to Information Management, Business Management, Information Economics(Graduate level), Microeconomic Theory I(Graduate level), Platform Strategy(Graduate level), Computational Methods for Econometrics(Graduate level), Economic Analysis of Social Networks(Graduate level), Topics in Economics and Econometrics(Graduate level), Marketing Models: Game-Theoretic Approach(Graduate level).

## Research/Teaching Experience

### Research Assistant

Dept. of Economics, NTU

WORKED WITH PROF. CHIH-SHENG HSIEH AND PROF. 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 panel 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.
- Surveyed tens of papers applying social network analysis on corporate finance and summarized the content of papers.

### Research Assistant

Dept. of Information Management, NTU

WORKED WITH PROF. CHIH-PING WEI

July 2022 - Present

- Surveyed tens of economics, management, and financial paper applying sentiment analysis.
- Organized papers in topics, data type, data sources, and other fields.

### Teaching Assistant

Operations Research, NTU

WORKED WITH PROF. LING-CHIEH KUNG

Mar. 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.

## Course Research Projects

### Online Learning Behavior, Peer Effect, and Education

Economic Analysis of Social Networks

AUTHOR

Spring 2022

- Proposed a novel and interdisciplinary research combining economics, computer science, and learning science.
- Surveyed 40 literatures over three different fields to establish the research objectives, impacts, and methodologies.
- 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 bicycles 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 Online 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,  $\text{\LaTeX}$