

# YU-CHIEH JESSE KUO

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## EDUCATION

### National Taiwan University

Taipei, Taiwan

*B.B.A. in Information Management; GPA: 3.98/4.30*

*September 2018 – June 2023*

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

## RESEARCH EXPERIENCE

### Department of Economics, National Taiwan University

*Research Assistant to Professor Chih-Sheng Hsieh and Professor C.Y. Cyrus Chu*

*Jun 2022 – Present*

- Organized over 500 suspicious celebrities related to the MeToo movement and collected suspects' characteristics and searching records from Google Trends to build a complete 2-year panel data.
- Using a statistical estimation model to calibrate the normalized raw data from Google Trends to enable further analysis.
- Analyzed the effect of certain big events and spillover effects in the MeToo movement by implementing the regressions.
- Conducted and visualized a large-scale networks from 14GB Taiwanese companies' dataset with millions of entries.
- Conducted several literature reviews of corporate finance applying social network analysis to improve further research.

### Department of Information Management, National Taiwan University

*Research Assistant to Professor Chih-Ping Wei*

*June 2022 – Present*

- Conducted literature reviews in economics, management, and financial applying sentiment analysis.
- Organized literature in topics, data sources, and other fields to better leverage sentimental analysis approaches.

## INDEPENDENT RESEARCH

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

*Term Project for Economics Analysis of Social Networks*

*Spring, 2022*

- Proposed an interdisciplinary research combining economics, computer science, education, 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.

### Political sentiment analysis: A survey of U.S. media's attitude toward China during the presidential election

*Term Project for Introduction to Text Mining*

*Fall, 2021*

- Proposed 3 research questions and directions after surveying 5 literature regarding sentimental analysis on economics.
- Studied and compared the performance of sentence embeddings from different natural language analysis and sentiment analysis packages and methods 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.

### Online-Offline Retailing Cooperation with BOPS Scheme under Price Competition

*Term Project for Information Economics*

*Spring, 2021*

- Surveyed 5 papers related to the topics of cooperation 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.

## SKILLS

**Programming:** Python, R, Stata, shell scripts, SQL, C++, Git/Github, Markdown  $\LaTeX$ .

**Python Package:** Numpy, Pandas, Matplotlib, Tensorflow, Torch, nltk, Sklearn, Scipy, Statsmodel, BERT, pytrend, cvxpy, gurobi, NetworkX.

**Languages:** Chinese(Mandarin), Taiwanese, English