

# 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:** Microeconomics, Econometrics (Python, R), Computational Methods for Econometrics (Python, R, Stata), Economic Analysis of Social Networks (Python, R), Topics in Econometrics.
- **Ph.D. Business Courses:** Game-Theoretic Approach Marketing, Information Economics, Platform Strategy.
- **Computer Science Courses:** 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.
- **Mathematics Courses:** Calculus, Statistics (Python), Advanced Statistics (Ph.D. level), ODE/PDE, Linear Algebra, Operations Research (Python), Convex Optimization (Ph.D. level; Python).

## RESEARCH EXPERIENCE

### Behavior and Data Science Research Center, National Taiwan University

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

*June 2022 – Present*

- Organized over 500 suspicious celebrities related to the MeToo movement and assorted suspects' characteristics.
- Collected, extracted and cleaned search records from Google Trends to build complete two-year panel data.
- Used a statistical estimation model to calibrate the normalized raw data from Google Trends to enable further analysis.
- Developed and implemented programs to analyzed the effect of big events and spillover in the MeToo movement.
- Conducted and visualized 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, business, marketing, and finance 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 project combining economics, computer science, education and learning science and aiming at uncovering the relationship between the offline peer effects and online learning behavior.
- Surveyed 40 pieces of literatures from 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 student learning behavior data.

### Political Sentiment Analysis: A Survey of U.S. Media's Attitude toward China Before and After the Presidential Election

*Term Project for Text Mining*

*Fall 2021*

- Proposed the main research topic for discussing the media's attitude before and after the election after surveying five pieces of literature regarding sentimental analysis of economics and found different accessible data resources.
- 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 and checked the scrapped data quality.
- 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 five pieces of literature related to the topics of competition between retailers and online-offline relationships, 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, pytrends, cvxpy, gurobi, NetworkX.

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