Yu-Chieh (Jesse) Kuo

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Education

National Taiwan University Taipei, Taiwan

Bachelor's degree in Information Management; ***GPA: 3.93*** *Sep. 2018 - Jun. 2023*

- **Ph.D.-level Economics Courses:** Microeconomics, Econometrics (Python, Stata), Bayesian and Network Econometrics, Computational Methods for Econometrics (Python, R, Stata), Economic Analysis of Social Networks (Python, R).
- **Ph.D.-level 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 (C++, Python), Database (SQL).
- **Mathematics Courses:** Calculus, Statistics (Python), Advanced Statistics (Ph.D.-level), ODE/PDE, Linear Algebra, Operations Research (Python), Convex Optimization (Ph.D.-level; Python), Machine Learning Theory (Ph.D.-level).

Research Experience

Behavior and Data Science Research Center, National Taiwan University

Research Assistant to Professor ***Chih-Sheng Hsieh*** *and* ***C.Y. Cyrus Chu*** *Jun. 2022 - Present*

- Implemented regressions to analyze the effect of big events and spillover in the MeToo movement after using a statistical estimation model to calibrate the normalized Google Trends data and build a complete two-year panel dataset.
- Employed the network analyze approach to examine suburbanization and rural labor performance in China by using SQL to utilize a large-scale telecom's dataset for the communication networks of mobile phones.
- Worked on estimating the impact of users' friendship network sizes, behaviors, and patterns on users' selection of tariff plans, call durations, and cellphone models and extending to the marketing research.

Department of Economics, National Taiwan University

Research Assistant to Professor ***Ming-Jen Lin****,* ***Yu-Chang Chen****, and* ***Hsin-Tien (Tiffany) Tsai*** *in* ***CCL Lab*** *Aug. 2023 - Present*

- Conducted literature reviews in science fundings and research evaluations, recommendation systems, e-commerce, and platform advertising auctions.
- Explored users' behaviors and patterns and their purchasing results by using data of an e-commerce platform in Taiwan.

Department of Information Management, National Taiwan University

Research Assistant to Professor ***Chih-Ping Wei*** *Jun. 2022 - Feb. 2023*

- Conducted literature reviews in economics, management, marketing, and finance applying sentiment analysis.
- Worked on modeling the confidence level of information from online reviews toward varying sentiment and arousal.

Independent Research

Online Learning Behavior, Peer Effects, and Education

Term Project for Economics Analysis of Social Networks *Spring 2022*

- Proposed an interdiscinpling 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*

- Investigated the media's attitude before and after the precidential election in the U.S. using sentiment analysis after surveying five pieces of literature and found accessible data sources and APIs.
- Polished pre-collected 6000+ Twitter data and examined the text's cosine similarity with TF-IDF and word embedding.
- Experimented with the performance of different natural language analysis and sentiment analysis packages and methods, then verified the sentiment change of medias and found the semantic differences between pre-/post-election articles.

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, Stata, R, Julia, shell scripts, SQL, C++, Git/Github, Markdown, LaTeX.

Python Package: NumPy, pandas, Polars, Matplotlib, TensorFlow, PyTorch, NLTK, scikit-learn, SciPy, statsmodels, BERT, pytrends, Requests, beautifulsoup4, CVXPY, RegEx, Gurobi, NetworkX.

Languages: Mandarin (Native), Taiwanese (Native), English (Fluent).