Xinyi Zhao

201-423-3308 xzhao@stern.nyu.edu linkedin.com/in/x46n x46n.github.io

Education

New York University, Leonard N. Stern School of Business **Aug. 2017 – May 2022**
Ph.D. Candidate in Operations Management *New York, USA*

- GPA: 3.9/4.0, Department of Technology, Operations and Statistics.
- Core Coursework: Foundations of Machine Learning, Machine Learning to Decision-making, Convex Optimization, Stochastic Processes, Data Science Research, Industrial Organization, Stochastic Inventory Theory, Dynamic Programming, Advanced Empirical Methods, Supply Chain Finance.

Tsinghua University, School of Economics and Management **Sep. 2013 – Jun. 2017**
Bachelor in Information Systems and Management *Beijing, China*

- GPA: 94/100 (Top 1), Department of Management Science and Engineering.
- Core Coursework: Algorithms and Data Structures, Database Management, Computer Architecture, Data Mining, Econometrics, Microeconomics, Mathematical Analysis, Probability and Statistics, Game Theory.

Professional Experience

Instructor: Operations Management(Undergraduate Core) **May 2021 – Aug. 2021**
New York University *New York, NY*

- Brought both classical quantitative operation models and cutting-edge practitioner cases to the audience, by making them intuitive and accessible, with all 5-star teaching evaluation rating from students in my class.

Intern: IBM **May 2020 – Aug. 2020**
Blockchain Research Intern *Yorktown Heights, NY*

- Developed several models to study how blockchain visibility improves the coordination between online fulfillment and inventory management in a perishable supply chain, with 20% profit improvement in simulation.
- Implemented the predictive control system and used Python Cplex to numerically solve the mixed integer program.

Teaching Assistant: Operations Management(MBA Core) **Dec. 2019 – Feb. 2020**
New York University *New York, NY*

Publications and Projects

"Fulfilled by Amazon": A Strategic Perspective of Competition at the E-commerce Platform
Forthcoming at Manufacturing and Service Operations Management

- Developed a game-theoretical model to study the economic effects of FBA offered by Amazon to its third-party sellers and OEM suppliers, considering the competition on both the price and the service level.
- Proved the strategical equilibrium of the whole supply chain and conducted several numerical studies in Mathematica.

Estimating Large-Scale Tree Logit Models via Variable Change to Difference of Strictly Convex Functions
Major Revision at Operations Research

- Developed an efficient and robust estimation method for large-scale non-convex tree logit models, and implemented this novel method and several variants of gradient descent algorithms as benchmarks in MatLab.
- Conducted several numerical studies on both simulated and real world data on HPC, enhanced the performance by 10%.

Matching Enhancement and Information Revelation Effects of AI on Gig-Economy Platforms
Major Revision at Management Science

- Built a game-theoretical model considering workers' strategic participation behavior with the use of AI on gig platforms.
- Proved the counter-intuitive effects of the matching enhancement and information revelation of AI on platform's profit.

Strategic Financing and Information Revelation Amid Market Competition
Reject and Resubmit at Management Science

- Built an analytical model using signaling to study the interaction between operations and finance under competition.
- Proved and derived the close-form solutions of the unique Nash Equilibrium to this non-standard supply chain model.

Exploring Key Hackers and Cybersecurity Threats in Chinese Hacker Communities
Published at 2016 IEEE Conference on Intelligence and Security Informatics (ISI)

- Developed a framework to identify key users, cybersecurity threats and trends of topics in Chinese hacker communities.
- Implemented text mining (LDA model) using Python to collect and analyze the data from 19 forums and 10k authors.

Technical Skills

Languages: Python, MatLab, R, SQL, Mathematica, STATA **Technologies**: Machine Learning, Optimization, LaTeX