

# Siyuan Fan

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## EDUCATION

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**Georgia Technology Of Institute**, Atlanta, GA Aug. 2024-June 2029(Expected)  
*Doctor of Philosophy in Operations Management*

**Duke University**, Durham, NC Aug. 2022-June 2024  
*Master of Arts in Economics*

- **Relevant Coursework:** Microeconomics, Econometrics, Mathematical Finance, Industry Organization

**University of Connecticut**, Storrs, CT September 2018-June 2022  
*Bachelor of Arts in Applied Mathematics; Bachelor of Arts in Economics; Minor in Geography*

- **Relevant Coursework (Math):** Partial Differential Equations, Probability, Multivariable Calculus, Applied Linear Algebra, Transition to Advanced Math, Differential Equations
- **Relevant Coursework (Economics):** Intermediate Macroeconomic Theory, Labor Economics, Intermediate Microeconomic Theory, Mathematical Economics, Econometrics, Money and Banking

## PUBLICATIONS

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**Siyuan Fan.** *Analysis of the Impact of Shopping Online on the Real Economy.* 2021 International Symposium on Innovative Management and Economics (ISIME 2021). June 2021, Moscow, Russia.

## RESEARCH EXPERIENCE

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**More or Less: How Information Richness Affects Our Decision Consistency** **Remote**  
*Advisor: Kejia Hu, Oxford University* Oct. 2023-Present

- Assisted with experimental design to explore decision congruence between stated and displayed preferences
- Improved the details of experimental design in Qualtrics and collected data using Prolific
- Recommend that user interface platforms implement progressive disclosure

**Mitigating Human Bias in Decision Making through Artificial Intelligence: Evidence from Knowledge Service Operations** **Remote**  
*Advisor: Kejia Hu, Oxford University* Aug. 2023- Nov. 2023

- Researched whether AI-powered text processing can reduce certain types of bias in human decision-making and enhance diverse perspectives when providing answers
- Conducted literature retrieval and edited literature review
- Concluded that AI can counteract some of the biases that exist in humans, such as preferring neutral opinions and expert authoritative opinions

**Statistical Research Methods** **Remote**  
*Advisor: Kejia Hu, Oxford University* July 2023-Nov. 2023

- Created PhD-level slides, including Data Analytics, Data Collection and Preprocessing, Data Visualization and Storytelling, Experimental Design and Analysis, Quasi-Experimental Design and Analysis, Structural Modeling and Predictive Analytics and Machine Learning
- Provided Python code examples

### **Optimizing Bundle Pricing**

**Durham, NC**

*Advisor: Chloe Glaeser, University of North Carolina, Chapel Hill*

July 2023-Oct. 2023

- Explored ideas to optimize bundle pricing to increase revenue and optimizing the weekly assortment of products offered based on product features
- Conducted literature review

### **Inventory Theory**

**Durham, NC**

*Advisor: Jeannette Song, Duke University*

June. 2023-Present

- Created PhD-level slides on inventory theory including Economic-Order-Quantity Model, Stochastic (r,q) policy, Base-Stock Policy and Optimal Policy for Time-varying Stochastic and Series Systems
- Learned theoretical aspects of the model of inventory theory

### **The Art of Matching**

**Durham, NC**

*Advisor: Jeannette Song, Duke University*

Feb. 2023-July. 2023

- Conducted translation work
- Explored the principles that appear in the book and how they are different and similar in China and the U.S.
- Examined principles of operations management in various sectors (food, clothing, shelter, and transportation)

### **Managerial Economics: Theory and Cases, CIS (Cathaypath Institute of Science)**

**Remote**

*Independent Researcher (Advisor: Frank R. Lichtenberg, Columbia University)*

Feb. 2021-Mar. 2021

- Researched the application of mathematical pricing models in social economics, including customer demand, costs and profitability, marginal analysis, targeted pricing by airlines, market segmentation, and investment and pricing decisions in health care (Merck Gardasil Case)
- Explored mathematical models and social economics concepts advanced in various books and articles
- Completed a paper entitled “Analysis of the Impact of Shopping Online on the Real Economy”

## **INDEPENDENT RESEARCH EXPERIENCE**

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### **Unraveling the Dynamics of Government Infrastructure Investment and Economic Growth in the United States**

**Durham, NC**

*Independent Study, Duke University*

Aug. 2023-Dec. 2023

### **The Correlation between Inflation and Gold**

**Durham, NC**

*Independent Study, Duke University*

Feb. 2023-April. 2023

### **How Does Social Status Impact Life Expectancy in the United States?**

**Durham, NC**

*Joint Study, Duke University*

Feb. 2023-April. 2023

## **PROFESSIONAL EXPERIENCE**

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### **Agricultural Bank of China**

**Henan, China**

*Debit and Credit Intern*

Nov. 2020-Jan. 2021

- Assisted with credit rating of customers, issuance of personal credit extension loans (up to 200,000 RMB), and follow-up management

- For small agricultural self-employed households, conducted a comprehensive determination of production and income, followed by on-site visits to self-employed stores to collect further information and assess the credit situation of each individual household
- For housing loans and business loans, checked the information provided by the customer, assisted the manager in conducting field investigations, evaluated the customer, and issued credit extension loans

### **VOLUNTEER EXPERIENCES**

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Aug. 2021: After heavy rainstorm in Zhengzhou, China, helped distribute supplies, sorted out relief funds sent by the district government, and allocated funds reasonably according to the loss and damage in different areas

Dec. 2019, Covenant Soup Kitchen, Storrs, CT: provided food and basic services to individuals and families

Nov. 2019, Our Companions Animal Rescue, Storrs, CT: promoted the ideas of protecting animals

Nov. 2019, Garden Club, Storrs, CT: helped clean up the historic garden at Willimantic

### **SKILLS**

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**Technical Skills:** Stata, Minitab, Python, Matlab, Latex, R