Bingrui Bian

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Education

Purdue University   West Lafayette, IN, USA
Ph.D. in Supply Chain & Operations Management.   Aug. 2023 - May 2028 (Expected)

Shanghai Jiao Tong University   Shanghai, China
B.BA of Business Data Science (GPA:3.71/4.0)   Sep. 2019 – Jun. 2023
B.S in Finance

Research Interests

- Robust Optimization   - Dynamic Programming
- Revenue Management   - Risk-aware Decision Making
- Reinforcement Learning   Service Systems

Research Experience

Distributionally Preference Ambiguity-Averse Robust Optimization - With Application to Social Welfare
Working paper. Supervised by: Prof.William B. Haskell   2024 - Present

- Axiomatization for distributionally preference robust optimization

- Optimization under belief/taste ambiguity

- Tractable conic reformulation of DPRO problem

A Distributionally Preference Robust Optimization Fine-tuinng Method in LLM
Working paper   2023

- A new modeling methods for LLM Fine-tuning to avoid model collapse.

- A conic optimization reformulation for objective in FT stage.

- A dual projection policy gradient method.

An optimal assortment optimization method based on Hidden Markov Chain
Undergraduate thesis *Supervised by: Prof.Guohua Wan*   2023

- Hidden Markov Chain description of Discrete choice model

- Predicting algorithm for customer behavior

- Optimal assortment result generating

Projects

Assortment optimization algorithm design   SH, CN
Research Assistant   2021 - 2022

Scheduling algorithm design for large scale systems   SH, CN
Research Assistant *Supervised by: Prof.Guohua Wan*   2021 - 2023

Skills

Technical: Modelling, Analysis, Stochastic Optinization, etc.
Language: English, Chinese
Programming: C++, Python, Matlab, etc.

Awards

Shanghai Jiao Tong university scholarship.[2019-2022]
Outstanding group of SJTU Mathematics Modeling Competition. [2022]
Outstanding Graduates of Shanghai Jiao Tong University. [2023]
Krannert School of Management Award for Doctoral Study in Supply Chain & Operations Management.[2023]
Presidential Doctoral Excellence Award.[2024]