Shuze Chen

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EDUCATION

Columbia University, Graduate School of Business   Sep. 2025 - present
Ph.D. in Decision, Risk and Operations

  ○ *Advisor: Tianyi Peng*

Shanghai Jiao Tong University   Sep. 2021 - June 2025
Undergraduate in Computer Science

  ○ *Member of **John Hopcroft Honors Class**, an elite CS program at SJTU for top 5% of students*
  ○ *Graduate with Best Thesis Award*

RESEARCH EXPERIENCE

Efficient Experimentation for Long-term Causal Effects   Jan. 2024 - Aug. 2025
Advisor: Prof. David Simchi-Levi, MIT Data Science Lab

  ○ Systematically modeled and analyzed the experimentation problem for long-term causal effects in dynamic service systems by incorporating the Markov Decision Process (MDP) framework.

Scalable Evaluation in Multi-agent Reinforcement Learning   Feb. 2024 - May 2025
Advisor: Prof. Tianyi Peng, DRO, Columbia Business School

  ○ Invented a novel theoretical framework called Markov Entanglement to study local value decomposition. This framework is inspired by Quantum Entanglement in quantum physics.

Solving Extensive-form Games with Linear Function Approximations   July 2023 - Nov. 2023
Advisor: Prof. Shuai Li, John Hopcroft Center, Shanghai Jiao Tong University

  ○ Designed algorithms for imperfect-information extensive-form games (IIEFGs) with linear function approximations, and presented provably efficient convergence to Nash Equilibrium.

PREPRINTS

1. **Multi-agent Markov Entanglement**
   with Tianyi Peng.
   *NeurIPS 2025 **Spotlight** ($\sim 2\%$)*

   * Second place, *INFORMS George Nicholson Student Paper Competition 2025*

   * Winner, *INFORMS Junior Faculty Interest Group (JFIG) Best Paper Prize 2025*

2. **Improving the Estimation of Lifetime Effects in A/B Testing via Treatment Locality**
   with David Simchi-Levi and Chonghuan Wang.
   https://arxiv.org/abs/2407.19618

3. **Towards provably efficient learning of extensive-form games with imperfect information and linear function approximation**
   with Canzhe Zhao, Weiming Liu , Haobo Fu, Qiang Fu, Shuai Li.
   UAI 2025

PROFESSIONAL EXPERIENCE

ByteDance   May 2025 - Aug. 2025
Data Scientist Intern

  ○ Study simulations in A/B testing via Large Language Model (LLM) and design recommendation algorithms based on customer digital twins.

Honors and Awards

- Second place, INFORMS George Nicholson Student Paper   2025
- Winner, INFORMS JFIG Best Paper Prize   2025
- Outstanding Graduate of Shanghai   2025
- Best Bachelor Thesis, *Multi-agent Markov Entanglement,*   2025
- Zhiyuan Distinguished Scholarship   2025
- National Scholarship of China   2022
- Fan Hsu-Chi Scholarship   2023, 2024
- Han-Ying-Ju-Hua Scholarship   2023
- Zhiyuan Honorary Scholarship   2022, 2023, 2024
- A-class Academic Excellence Scholarship   2022

Skills Summary

- **Programming Languages**: C/C++, Python
- **Frameworks**: Pytorch, Jax