

You Li 李由

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EDUCATION

Fudan University

Ph.D. in Electronic Information Engineering, AI Track

- Advisor: Siming Chen, Associate Professor.
- Research: LLM-based Multi-Agent Systems, Social Simulation, Visual Analytics.

Shanghai, China

2026.09 – 2030.06 (Expected)

Fudan University

M.Eng. in Computer Technology

Shanghai, China

2022.09 – 2025.06

Beijing Jiaotong University

B.Eng. in Computer Science and Technology

Beijing, China

2018.09 – 2022.06

SELECTED RESEARCH PROJECTS

ChoiceVerse: Visual Analytics of Competitive College Choice Behavior via Multi-Agent What-If Simulation

2025.09 – Present

- Built a multi-agent what-if visual analytics system for exploring how public signals reshape collective competition in centralized college admissions (Gaokao).
- Conducted empirical analysis of survey data from 300+ recent college entrants to characterize heterogeneous college-choice behavior and decision factors.
- Designed a two-tier agent framework combining rule-based agents with LLM-driven agents to simulate heterogeneous decision-making under finite-capacity constraints.
- Developed three coordinated visual analytics views spanning competitive positioning, group-level reallocation, and stage-aligned individual reasoning comparison.

Large-Scale Social Simulation with LLM Agents

2025.09 – Present

- Conducted research on large-scale social media simulation with approximately 5,000 LLM agents mapped one-to-one to real users, modeling information diffusion and collective behavior over social interaction networks.
- Designed simulation mechanisms for event-driven agent activation and network-based information propagation, supporting asynchronous responses to evolving real-world information.
- Contributed to role-conditioned cognitive modeling and event-aware memory mechanisms for heterogeneous and temporally coherent agent behavior, with ongoing extension to additional social media platforms.
- Led the design of experimental protocols for systematic evaluation under controlled simulation scenarios.

PUBLICATIONS & RESEARCH OUTPUTS

[†] Equal contribution.

- [1] Y. Li, Y. Guo, Y. Qin, Y. Yang, P. Zhang, and S. Chen. ChoiceVerse: Visual Analytics of Competitive College Choice Behavior via Multi-Agent What-If Simulation. *IEEE Transactions on Visualization and Computer Graphics*, 2026. Under review.
- [2] Y. Qin[†], Y. Li[†], Y. Guo, and S. Chen. Visual Analytics of Educational Matching Market Behavior via LLM-Based Multi-Agent System Simulation: Evidence from Gaokao Admissions Decision Surveys. Non-archival oral presentation, *HERA 2026 Young Scholars and Doctoral Students Forum*, 2026.
- [3] J. Yu, J. Ren, Y. Chang, Q. Yu, X. Tong, B. Wang, Y. Song, Y. Li, X. Mai, and W. Zhang. Noise Fusion-based Distillation Learning for Anomaly Detection in Complex Industrial Environments. In *Proc. IEEE/RSJ IROS*, 2025.
- [4] Q. Wang, S. Gao, J. Hu, J. Yu, X. Tong, Y. Li, and W. Zhang. HSS-IAD: A Heterogeneous Same-Sort Industrial Anomaly Detection Dataset. In *Proc. IEEE ICME*, 2025.
- [5] A Two-Stage Active Learning Method for Fine-Grained Bronchial Airway Segmentation. *Patent*, 2025. Fifth author.
- [6] M. Ye, Y. Huangfu, Y. Li, and Z. Yu. SSP-RACL: Classification of Noisy Fundus Images with Self-Supervised Pretraining and Robust Adaptive Credal Loss. In *Proc. IEEE BioCAS*, 2024.

RESEARCH & PROFESSIONAL EXPERIENCE

Research Assistant

2025.09 – 2026.08

FDU-VIS Lab, Fudan University

- Led the ChoiceVerse project and conducted research on large-scale LLM-based social simulation in an industry collaboration project.
- Facilitated interdisciplinary collaboration between the School of Data Science and the Institute of Higher Education at Fudan University.

Algorithm Intern

2023.09 – 2024.05

Shanghai MicroPort MedBot (Group) Co., Ltd.

- Fine-tuned ZoeDepth for real-time monocular depth estimation in bronchoscopic surgical navigation.
- Built coronary artery segmentation with nnUNet for surgical map construction (Dice: 86%).

ACADEMIC SERVICE

- Reviewer, IEEE International Conference on Multimedia and Expo (ICME), 2025.
- Reviewer, International Conference on Computer-Aided Design and Computer Graphics (CAD/Graphics), 2026.
- Organizing Team Member, UbiComp/ISWC 2026 Workshop: *Visual Storytelling in Everyday Ubiquity: Human-AI Co-Creation, Wearable Media, and Plural Futures*, 2026.

ACADEMIC & INTERDISCIPLINARY ENGAGEMENT

- Moderator, Data Science Distinguished Doctoral Student Forum, Fudan University 121st Anniversary, 2026.05.29.
- Moderator, Lecture: Humanities and Social Sciences Meet Artificial Intelligence: An Introduction to Computational Social Science, Fudan General Education Center / Fudan Liberal Arts Society, 2025.04.15.
- Moderator, Lecture: ChatGPT Technology and Development, Fudan General Education Center / Fudan Liberal Arts Society, 2023.03.02.

TECHNICAL SKILLS

Languages: English (CET-6: 584, Reading: 243/249).

LLM Technologies: Transformers, LangChain, LLM deployment and optimization.

Programming: Python, C++.

Tools: Git, Shell, Linux, $\LaTeX$, Figma.