

Shiyi Liu

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SUMMARY

Ph.D. student with a strong foundation in Human-AI collaboration and visual analytics. Skilled in full-stack development (JavaScript, React, Vue, Python), interactive system design, and data analysis. Experienced in conducting user studies and publishing in top venues (TVCG, CSCW, CG&A). Actively seeking research or engineering internships in visualization, HCI, or human-centered AI.

EDUCATION

Arizona State University

Ph.D. Student, Computer Science

GPA: 4.0/4.0

Tempe, AZ, USA

2024 – expected 2028

ShanghaiTech University

Master of Science, Computer Science

GPA: 3.78/4.0

Shanghai, China

2021 – 2024

Shanghai Jiao Tong University

University of Michigan - Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)

Bachelor of Engineering, Mechanical Engineering

Shanghai, China

2017 – 2021

EXPERIENCE

Research Associate, VADER Lab, Arizona State University

Supervised by Dr. Ross Maciejewski

2024 – now

Tempe, AZ, USA

- Synthesizing and theorizing visualization design principles of data glyphs
- Conducting research on trust in human-AI collaborative decision-making
- Developing AI-assisted interactive systems for document analysis

Visiting Student, VIS Lab, Hong Kong University of Science and Technology

Supervised by Dr. Huamin Qu

Spring 2023

Hong Kong, China

- Exploring multimodal reasoning enhancement for large language models
- Designing visual analytics systems for large-scale jailbreak prompt analysis

Research Assistant, ViSeer Lab, ShanghaiTech University

Supervised by Dr. Quan Li

2022 – 2024

Shanghai, China

- Building AI-powered visual analytics systems to support data analysis for different application
- Developing a supervised influence maximization approach for temporal social networks

PUBLICATIONS

Journal

2025 J2 Zhihua Jin, **Shiyi Liu**, Haotian Li, Xun Zhao, Huamin Qu. 2025. Jailbreakhunter: a visual analytics approach for jailbreak prompts discovery from large-scale human-llm conversational datasets. *IEEE Transactions on Visualization and Computer Graphics*, vol. 31, no. 10, pp. 7923-7937, Oct. 2025, DOI: [10.1109/TVCG.2025.3557568](https://doi.org/10.1109/TVCG.2025.3557568).

- J1 Yuheng Shao*, **Shiyi Liu***, Gongyan Chen, Ruofei Ma, Xingbo Wang, Quan Li. 2025. FashionCook: A Visual Analytics System for Human-AI Collaboration in Fashion E-Commerce Design. 2025. *IEEE Computer Graphics and Applications*, DOI: [10.1109/MCG.2025.3597849](https://doi.org/10.1109/MCG.2025.3597849).

Conference

- 2025 C3 Jianben He, Xingbo Wang, **Shiyi Liu**, Guande Wu, Claudio Silva, Huamin Qu. POEM: Interactive Prompt Optimization for Enhancing Multimodal Reasoning of Large Language Models. 2025. *IEEE 18th Pacific Visualization Conference (PacificVis)*, pp. 36-46, DOI: [10.1109/PacificVis64226.2025.00010](https://doi.org/10.1109/PacificVis64226.2025.00010).
- C2 Laixin Xie, Ying Zhang, Xiyuan Wang, **Shiyi Liu**, Shenghan Gao, Xingxing Xing, Wei Wan, Haipeng Zhang, Quan Li. 2025. Influence Maximization in Temporal Social Networks with a Cold-Start Problem: A Supervised Approach. *Proceedings of the International AAAI Conference on Web and Social Media*, 19(1), 2062-2075. DOI: [10.1609/icwsm.v19i1.35919](https://doi.org/10.1609/icwsm.v19i1.35919)
- 2024 C1 **Shiyi Liu**, Ruofei Ma, Chuyi Zhao, Zhenbang Li, Jianpeng Xiao, and Quan Li. 2024. BPCoach: Exploring Hero Drafting in Professional MOBA Tournaments via Visual Analytics. *Proc. ACM Hum.-Comput. Interact.* 8, CSCW1, Article 26 (April 2024), 31 pages. DOI: [10.1145/3637303](https://doi.org/10.1145/3637303)

Manuscripts

- 2025 M3 **Shiyi Liu**, Jiayi Hong, Ross Maciejewski. 2025. Exploring the Use and Evaluation of Glyphs in Visual Analytics Systems and Applications. *IEEE Transactions on Visualization and Computer Graphics*. Under Review.
- M2 Rui Sheng, Chuhan Shi, Sobhan Lotfi, **Shiyi Liu**, Adam Perer, Huamin Qu, Furui Cheng. 2025. Design Patterns of Human-AI Interfaces in Healthcare. arXiv: [2507.12721](https://arxiv.org/abs/2507.12721).
- 2023 M1 Zhihua Jin, Gaoping Huang, Zixin Chen, **Shiyi Liu**, Yang Chao, Zhenchuan Yang, Quan Li, Huamin Qu. 2025. Actorlens: Visual analytics for high-level actor identification in moba games. arXiv: [2307.09699](https://arxiv.org/abs/2307.09699).

SKILLS

Programming: TypeScript, JavaScript, CSS, HTML, Python

Web Development: Vue, React, D3, MongoDB

AI Applications: PyTorch, TensorFlow

Tools: Git, Figma, LATEX, Adobe Suites(XD, AI, PR)

Language: Mandarin (native), English (professional)

AWARDS

Excellent Master's Graduate of Shanghai

2024, Shanghai

Outstanding Student

2022-2023, ShanghaiTech University

Outstanding Student

2021-2022, ShanghaiTech University

TEACHING EXPERIENCE

Spring 2023

Teaching Assistant, CS160: Human-Computer Interaction

Fall 2022, 2023, Spring 2022.

Teaching Assistant, CS240: Algorithm Design and Analysis