

YIREN LIU

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[Semantic Scholar] [Google Scholar] [LinkedIn] [GitHub]

EDUCATION

Ph.D. in Informatics, University of Illinois Urbana Champaign, 2026 (anticipated)

M.S. in Information Management, University of Illinois Urbana Champaign, 2021

B.E. in Electronic Engineering + Information Systems, University of Electronic Science and Technology of China, 2019

RESEARCH EXPERIENCE

University of Illinois Urbana Champaign

Aug 2021 - Present

Graduate Research Assistant, Social Computing Systems Lab (SALT) Lab [Website]

Adobe

May 2025 - Aug 2025

Research Scientist Internship, San Jose, CA [Website]

Conviva

June 2023 - Aug 2023

Research Internship, Foster City, CA [Website]

University of Illinois Urbana Champaign

May 2021 - Aug 2021

Graduate Research Assistant, The IBM-ILLINOIS Center for Cognitive Computing Systems Research (C3SR)

TECHNICAL STRENGTHS

Programming languages: Python, Typescript/Javascript, Golang, Java, C++, R, SQL

Full-Stack Development: React.js, Vue.js, Django, FastAPI, Next.js, Svelte(Kit)

DevOps: Docker (Swarm), Kubernetes, AWS, GCP, Azure

Machine Learning: Pytorch, Scikit-learn, Pandas, Keras, TensorFlow

Others: Natural Language Processing, Machine Learning, Data Analysis, User Research

PUBLICATIONS

Peer-Reviewed Articles:

- **Yiren Liu**, Pranav Sharma, Mehul Jitendra Oswal, Haijun Xia, and Yun Huang (2025), *Personaflow: Boosting research ideation with LLM-simulated expert personas*, In Proceedings of the 2025 ACM Designing Interactive Systems Conference (pp. 506-534). [ArXiv][ACM DL][GitHub]
- **Yiren Liu**, Viraj Shah, Sangho Suh, Pao Siangliulue, Tal August, Yun Huang (2025), *Perspectra: Choosing Your Experts Enhances Critical Thinking in Multi-Agent Research Ideation*, In Submission. [ArXiv]
- Yaman Yu, **Yiren Liu**, Jacky Zhang, Yun Huang, and Yang Wang (2025), *Youth-Centered GAI Risks (YAIR): A Taxonomy of Generative AI Risks from Empirical Data*, Twenty-First Symposium on Usable Privacy and Security (SOUPS 2025). [ArXiv][USENIX]
- Yaman Yu, **Yiren Liu**, Jacky Zhang, Yun Huang, and Yang Wang (2025), *YouthSafe: A Youth-Centric Safety Benchmark and Safeguard Model for Large Language Models*, to appear in CCS 2025. [Huggingface][ArXiv]
- Qingxiao Zheng, Minrui Chen, Pranav Sharma, Yiliu Tang, Mehul Oswal, **Yiren Liu**, and Yun Huang (2025), *EvAlignUX: Advancing UX Research through LLM-Supported Exploration of Evaluation Metrics*, In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (SIGCHI 2025). [ACM DL] [ArXiv]
- **Yiren Liu**, Yerong Li, Ryan Mayfield, and Yun Huang (2025), *Improving Emotional Support Delivery in Text-Based Community Safety Reporting Using Large Language Models*, In Proceedings of the ACM on Human-Computer Interaction (PACM HCI), CSCW 2025. [ACM DL][ArXiv]

- **Yiren Liu**, Si Chen, Haocong Cheng, Mengxia Yu, Xiao Ran, Andrew Mo, Yiliu Tang, Yun Huang (2024), *Co-Quest: Exploring Research Question Co-Creation with an LLM-based Agent*, Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (SIGCHI 2024). [ArXiv] [ACM DL][GitHub]
- Liri Fang, Lan Li, **Yiren Liu**, Vetle I Torvik, Bertram Ludäscher (2023), *T-KAER: Transparency-enhanced Knowledge-Augmented Entity Resolution Framework*, In International Journal of Digital Curation IDCC24. [IJDC][ArXiv]
- **Yiren Liu**, Ryan Mayfield, Yun Huang (2023), *Discovering the Hidden Facts of User-Dispatcher Interactions via Text-based Reporting Systems for Community Safety*, In Proceedings of the ACM on Human-Computer Interaction (PACM HCI), CSCW 2023. [ArXiv] [ACM DL]
- **Yiren Liu**, Mengxia Yu, Meng Jiang, Yun Huang (2023), *Creative Research Question Generation for Human-Computer Interaction Research*, in Proceedings of the 4th Workshop on Human-AI Co-Creation with Generative Models (HAI-GEN '23) at ACM IUI Workshops. [CEUR-WS]
- **Yiren Liu**, Halil Kilicoglu (2023), *Commonsense-Aware Prompting for Controllable Empathetic Dialogue Generation*, In AAAI 2023 Workshop on Knowledge Augmented Methods for Natural Language Processing. [ArXiv]
- Liri Fang, Lan Li, **Yiren Liu**, Vetle I Torvik, Bertram Ludäscher (2023), *KAER: A Knowledge Augmented Pre-Trained Language Model for Entity Resolution*, In AAAI 2023 Workshop on Knowledge Augmented Methods for Natural Language Processing. [ArXiv]
- Qingxiao Zheng, Yiliu Tang, **Yiren Liu**, Weizi Liu, Yun Huang (2022), *UX research on conversational human-AI interaction: A literature review of the ACM digital library*, In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. [ACM DL] [ArXiv]

Not Peer-Reviewed or Abstracts in Conference Proceedings:

- **Yiren Liu**, Kuan-Ying Lee (2020), *E-commerce query-based generation based on user review*, [ArXiv]
- Jionghao Lin, **Yiren Liu** (2018), *A neural network based explainable recommender system*, [ArXiv]

PROJECTS

Personaflow: Research ideation with LLM expert personas

- Designed and implemented an interactive visual interface to build **persona-driven multi-agent workflows** that increased perceived research ideation relevance/creativity.
- Productionized and used by **220+ users from 20+ research institutions** globally.
- Enabled persona customization that improved users' sense of agency and mitigated over-reliance on AI.

CoQuest: LLM Agent for Research Question Co-Creation

- Built CoQuest, an LLM-based agent to support researchers in developing research questions through human-AI co-creation, receiving **25+ stars on GitHub and 80+ citations** from academic publications.

Sphere: LLM-based Q&A Conversational Agent for Academic Conferences

- Developed a full-stack web application that leverages LLMs using self-hosted Dify to provide real-time, accurate answers to user queries about academic conferences.
- Implemented a hybrid pipeline combining user intent classification, web-based search, and RAG-based QA to improve response accuracy and relevance.
- Deployed in production environment in a conference with more than 5000 participants (SIGCHI 2025), answering queries from 300+ unique users with long-lasting engagement.

YouthSafe: A Risk Detection and Guard-railing Platform for Youth-GenAI Interaction

- Curated *YAIR*: 12,449 annotated snippets across 78 risk types tailored to teen-LLM interactions.

- Developed *YouthSafe*, a real-time risk detection model that outperforms prior moderation systems on youth-specific harms; integrated into a parental-control browser extension and analytics platform.
- Winner of 2025 UC Berkeley RDI LLM Agents MOOC Hackathon [Leaderboard].

DispatcherLLM: Enhancing Emotional Support in Public Service Dispatch

- Fine-tuned Llama-2 to generate supportive responses; human evaluation showed higher perceived effectiveness than human baselines.
- Worked with local law enforcement agencies to pilot the model in real-world settings through a deployment of a full-stack chatbot application with automatic report filing.

PATENTS

Patent / Technology Disclosure

- Yun Huang, Yiren Liu: “Efficient Content Extraction From Unstructured Dialog Text”, U.S. Patent No. 12,405,986, Sep. 2, 2025.

PRESENTATIONS

At Conferences:

- “Discovering the Hidden Facts of User-Dispatcher Interactions via Text-based Reporting Systems for Community Safety”, CSCW 2023, Oral Presentation
- “Creative Research Question Generation for Human-Computer Interaction Research”, HAI-GEN Workshop at ACM IUI Conference 2023, Oral Presentation
- “Commonsense-Aware Prompting for Controllable Empathetic Dialogue Generation”, Workshop on Knowledge Augmented Methods for Natural Language Processing at AAAI 2023, Poster
- “KAER: A Knowledge Augmented Pre-Trained Language Model for Entity Resolution”, Workshop on Knowledge Augmented Methods for Natural Language Processing at AAAI 2023, Poster

GRANTS/FELLOWSHIPS

Received:

- NAIRR 240177: National Artificial Intelligence Research Resource Pilot (\$10,000), “Advancing the Accessibility of STEM Online Learning by Using Generative AI”, 2024-2025
- OpenAI Researcher Access Program (\$10,000), “Large-scale Automated Swatting via AI Misuse”, 2024-2025
- NSF 22-087: CloudBank Computing Grant for CISE Grantees (\$10,000), “Collaborative Research: Advancing STEM Online Learning by Augmenting Accessibility with Explanatory Captions and AI”, 2023-2024
- Discover Award of Advanced Cyberinfrastructure Coordination Ecosystem: Services & Support (ACCESS), Co-PI, 2023-2024

TEACHING

Classes as TA:

- CS 492 Introduction to GenAI for Human-Computer Interaction, UIUC, Fall 2025
- CS 513 Theory and Practice of Data Cleaning, UIUC, Summer 2022

Invited Lecturer:

- Guest Talk on LLM Agents at ResearchTrend.AI, Winter 2025 [Recording]

- IS 567 Text Mining, UIUC, Spring 2024
- UNIST AI & Big Data Winter Camp 2022, UIUC, Winter 2022

ACADEMIC SERVICES

Conference Paper Review:

- Reviewer, The 7th Annual Symposium on HCI Education (EduCHI 2025) (1)
- Program Committee, ACM Creativity and Cognition 2025 conference (C&C 2025) (5)
- Program Committee, The 7th workshop on Human-AI Co-Creation with Generative Models at IUI (HAIGEN at IUI 2025) (1)
- Reviewer, The ACM CHI conference on Human Factors in Computing Systems (SIGCHI 2025) (3)
- Reviewer, The 27th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW 2025)
- Reviewer, The 27th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW 2024)
- Program Committee, The 5th workshop on Human-AI Co-Creation with Generative Models at IUI (HAIGEN at IUI 2023)
- Reviewer, The 60th Annual Meeting of the Association for Computational Linguistics (ACL 2023)
- Reviewer, The 26th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW 2023)

Journal Paper Review:

- PeerJ Computer Science (1)
- International Journal of Human-Computer Studies (1)
- PeerJ Computer Science (1)
- International Journal of Human-Computer Studies (1)
- International Journal of Human-Computer Studies (1)
- ACM Computing Surveys (1)
- International Journal of Human-Computer Interaction (3)
- Knowledge and Information Systems (1)