Wenhan Lyu

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Research Profile

My research investigates how to design, build, and evaluate Generative AI systems as effective collaborators to enhance human learning and problem-solving. I specialize in Human-Computer Interaction, employing a mixed-methods approach that integrates user-centered design with full-stack prototyping (React, Python) to explore AI's role in K-12 education and undergraduate-level programming. Seeking a 12-24 week research internship for 2026 to apply my skills to real-world challenges in collaborative AI.

Publications

- **Lyu, W.**, et al. *"Designing AI Peers for Collaborative Mathematical Problem Solving with Middle School Students: A Participatory Design Study"* ACM CHI, 2026. (Acceptance rate: 25.3%)
- **Lyu, W.**, et al. *"Will Your Next Pair Programming Partner Be Human? An Empirical Evaluation of GenAI as a Collaborative Teammate..."* ACM Learning at Scale (L@S), 2025. (Acceptance rate: 21.4%)
- **Lyu, W.**, et al. *"Understanding the practices, perceptions, and (dis) trust of generative AI among instructors... in the US higher education."* Computers and Education: Artificial Intelligence, 2025.
- **Lyu, W.**, et al. *"Evaluating the effectiveness of LLMs in introductory computer science education..."* ACM L@S, 2024. (Acceptance rate: 24.4%)
- Huang, Y., ..., **Lyu, W.** et al. *"TrustLLM: Trustworthiness in Large Language Models."* ICML, 2024. (Acceptance rate: 27.5%)

Ongoing Research

Enabling Computer Architecture Simulation as a Service (CASaaS) Jan 2024 - Present

Architected and implemented a full-stack web platform (React, Node.js) to provide CASaaS. This platform enables configurable cloud-based experiments of GPU simulations through a real-time dashboard with integrated visualization tools. My work directly supports novel research by reducing experiment setup time and improving the interpretability of simulation results.

Education

William & Mary, Virginia, United States Jan 2024 - Present

Ph.D. Candidate in Computer Science Advisor: Yixuan (Janice) Zhang

Lead TA, Web Programming (CSCI 432). Co-designed curriculum and 8 autograded assignments for 70+ students.

New York University, New York, United States Jan 2021 - May 2023

M.S. in Computer Science

TA for graduate-level Operating Systems (CSCI-GA.2250).

Nankai University, Tianjin, China Sep 2016 - Jun 2020

B.Eng. in Computer Science and Technology

Industry Experience

ByteDance, *Frontend Engineering Intern* Feb 2021 – Jun 2021

Developed and shipped production features for a customer-service chatbot (React, Redux, TypeScript), collaborating with UX teams to iterate on designs based on user engagement metrics and feedback; built reusable frontend components to improve development consistency and reduce implementation time; engineered a streamlined system-configuration flow that increased automated problem resolution from 54% to 60%.

Skills

- **Programming:** JavaScript / TypeScript, Python, C/C++
- **Web Development:** React, Svelte, Node.js, TailwindCSS
- **HCI/UX Methods:** User Interviews, Thematic Analysis, Usability Testing, Participatory Design, Prototyping
- **Developer Tools:** Git, Docker, Figma, Google Cloud, Qualtrics