Xinyi Lu

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Research Interest

My research centers on designing and developing Human-AI collaborative systems that supports the creation of high-quality educational content. This line of work includes systems that provides instructors with on-demand controllable AI assistance for designing quiz questions and worked examples, and a pipeline of using LLM-simulated students to evaluate and refine question items. Building on my experience of designing AI-based systems for education, I explore the desirable amount and form of AI assistant for educational content and facilitate active learning.

Education

University of Michigan Sep 2023 – Present
Ph.D. student in Computer Science Engineering, adviser by Dr. Xu Wang *Ann Arbor, MI*

University of Michigan Sep 2021 – May 2023
BS in Computer Science Engineering *Ann Arbor, MI*

Shanghai Jiao Tong University Sep 2019 – Aug 2021
BS in Electrical and Computer Engineering *Shanghai, China*

Publication

- **Xinyi Lu**, Simin Fan, Jessica Houghton, Lu Wang, Xu Wang. "ReadingQuizMaker: A Human-NLP Collaborative System that Supports Instructors to Design High-Quality Reading Quiz Questions", In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (**CHI 2023**). **Best Paper Honorable Mention** .
- **Xinyi Lu**, Xu Wang. "Generative Students: Using LLM-Simulated Student Profiles to Support Question Item Evaluation", In Proceedings of the eleventh ACM Conference on Learning@Scale (**L@S 2024**).
- **Xinyi Lu**, Mitchell Dudley, Raelin Musuraca, Lu Wang, Xu Wang. "Exemplify: Understanding How Instructors Use AI to Create Interactive Worked Examples as Scaffolding Exercises", Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (**CHI 2025**) [In Submission].
- Xiaoyu Liu, **Xinyi Lu**, Soobin Jeon, Yunyan Li, Joshua Littenberg-Tobias, Shawn Y Stevens, Ying Xu, Xu Wang. "To Chat or to Quiz?: Examining the Pedagogical Benefits and Risks of AI Tutors in Facilitating High School Science Learning from Videos", Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (**CHI 2025**) [In Submission].
- Xinyue Chen, Nathan Yap, **Xinyi Lu**, Aylin Gunal, Xu Wang. MeetMap: Generating Dialogue Maps as Real-Time Cognitive Scaffolds for Online Meetings. In Proceedings of the ACM on Human-Computer Interaction (**CSCW 2025**) [In Submission]

Teaching Experience

Introduction to Machine Learning, Instructional Aide Sep 2022 – Dec 2022
University of Michigan. Instructor: Sindhu Kutty *Ann Arbor, MI*

Discrete Mathematics, Teaching Assistant May 2022 – Aug 2022
Shanghai Jiao Tong University. Instructor: Runze Cai *Shanghai, China*

Community Service

- **Workshop Organizer:** Learnersourcing: Student-Generated Content @ Scale (L@S 2024)
- **Reviewer:** CSCW 2023 Posters, CHI 2024, L@S 2024, CHI 2025
- **Co-leader:** Explore Computer Science Research program (Explore CSR 2024-2025) at University of Michigan

Honors and Scholarships

- Rackham Traveling Grant ($900), University of Michigan, 2024
- CSE Fellowship ($36000), University of Michigan, 2023
- Gary Marsden Travel Awards ($2500), SIGCHI, 20234
- Honorable Mention Award (5%), ACM CHI 2023
- Graduate with Honors, Shanghai Jiao Tong University, 2023
- Finalist, Interdisciplinary Contest In Modeling (ICM), 2021
- Student Development Scholarship, Shanghai Jiao Tong University, 2020, 2021
- Undergraduate Outstanding Scholarship, Shanghai Jiao Tong University, 2020, 2021

Relevant Certificates and Skills

- **Programming language:** C/C++, Python, Java, JavaScript, HTML, CSS, SQL, LaTeX, R, MATLAB
- **Framework:** Pytorch, Numpy, TensorFlow, Django, Jinja2, MySQL, SQLite, MongoDB, Flask, React
- **Application and Tools:** AWS, GCP, Git, Digital Ocean, Mathematica, Origin, SolidWorks