LIANYAN LIU

New York, NY | 832-554-6188 | ll2226@cornell.edu | Portfolio

EDUCATION

Cornell Tech (Cornell University), New York, NY — May 2026
Dual Master of Science Degrees in Applied Information Science & Information Systems | GPA: 3.98
Relevant Coursework: Applied Machine Learning, HCI and Design, 3D Interaction Design, Ubiquitous Design
Honors/Awards: Merit Scholarship

Zhejiang University, Hangzhou, China — June 2024
Bachelor of Engineering in Industrial Design | GPA: 3.98
Relevant Coursework: Ergonomics, Data Visualization, Information Product Design, User Experience and Innovation Design
Honors/Awards: National Scholarship, Outstanding Graduates of Zhejiang Province

University of Oxford, Oxford, United Kingdom — January 2021
Certificate in Artificial Intelligence and Machine Learning

SKILLS

Programming Languages:	Python, C, C++, C#, SQL, HTML, CSS, JavaScript
Other Tools:	Figma, Unity, Blender, Rhinoceros 3D, Adobe Photoshop, Adobe Illustrator
Research Methods:	Contextual Inquiry, Exploratory Data Analysis, Usability Testing, User Interview, A/B testing

EXPERIENCE

AI and Design Innovation Lab of Zhejiang University, Research Assistant, Hangzhou — July 2023–September 2023

- Designed interactive features for ProtoDreamer, a mixed-prototype tool that integrates physical prototyping with generative AI to streamline the design process. Developed a matrix-based display for design exploration and a prompt style folder to enhance user's intuitive understanding of AI functionality.
- Conducted an evaluation study with 20 participants, employing interviews, quantitative analysis, and video coding to assess usability and creativity support.
- Expanded the tool's application scope across four areas: lowering design threshold, facilitating design deliberation, supporting on-site prototype iteration, and enhancing team communication and collaboration.

International Design Institute of Zhejiang University, Research Assistant, Hangzhou — October 2022–September 2023

- Designed and developed the 3D UI interface for DuoMR, an MR-based co-design system, using Unity and MRTK to enable gesture-based command execution and tool selection on HoloLens.
- Led a formative study with 16 participants and identified four key challenges in MR co-design through thematic analysis.
- Directed a system evaluation with 48 participants, utilizing mixed-methods research with four surveys and semi-structured interviews to assess usability, cognitive load, and communication efficiency. Statistical analysis validated DuoMR's effectiveness in enhancing expression clarity between designers and users.

Alibaba Group, Interaction Design Intern, Hangzhou — April 2022–May 2023

- Designed and implemented a 3D product detail page system for XR environments using Unity and deployed on Oculus Quest 2, enabling immersive, interactive 3D product displays with dynamic information visualization.
- Conceptualized five expression methods and four performance techniques to establish an information presentation framework for XR product detail pages.
- Conducted a user study with 24 participants, performing data-driven analysis to measure the system's impact on user involvement, telepresence, and diagnosticity.

PUBLICATIONS

[1] Pei Chen, Kexing Wang, **Lianyan Liu**, Xuanhui Liu, Hongbo Zhang, Zhuyu Teng, and Lingyun Sun. "Exploring the Role of Mixed Reality on Design Representations to Enhance User-Involved Co-Design Communication." Companion Publication of the 2025 Conference on Computer-Supported Cooperative Work and Social Computing (CSCW'25), In Press. 2025. DOI

[2] Hongbo Zhang, Pei Chen, Xuelong Xie, Chaoyi Lin, **Lianyan Liu**, Zhuoshu Li, Weitao You, and Lingyun Sun. "ProtoDreamer: A Mixed-prototype Tool Combining Physical Model and Generative AI to Support Conceptual Design." Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST'24), pp. 1-18. 2024. DOI