Tommy (Xiuqi) Zhu

HCI Researcher & XR+AI Developer

zhu.xiu@northeastern.edu
xiuqizzzz.github.io
linkedin.com/in/xiuqi-zhu

A HCI researcher with a strong background in designing and understanding conversational contextually-aware XR+AI solutions. Vision: Designing multimodal AI agents to support dynamic everyday human collaboration without disrupting social interactions.

Education

Ph.D. in Interdisciplinary Design and Media Expected May 2028
Northeastern University, Boston, MA
Advisor: Dr. Eileen McGivney | Thesis: Balancing Students and AI Agency in Multimodal AR Collaborative Learning

B.A. in Digital Media Arts May 2023
Communication University of China, Beijing | GPA: 3.6/4.0
Advisor: Dr. Min Fan | Thesis: Designing Collaborative Tangible Interface for Children with Autism

Professional Experience

Graduate Teaching Assistant Sept 2024–Present
Northeastern University – College of Arts, Media and Design, Boston, MA

- *ARTG 2263 –Lab for Prototyping with Code*
  Solo led two lab sections (27 students). Designed and delivered weekly lab sessions to teach design-background students Python fundamentals; topics included variables, control flow, functions, drawing APIs, animation loops, interaction, and iterative project feedback.

Graduate Research Assistant Sept 2024–Present
Northeastern University – XR ED Lab, Boston, MA

- Led a mixed-method study with 50+ health-profession students to evaluate usability, agency, and learning outcomes of the VAPS system via surveys, interviews, and biometric measures. [P1]
- Led an autoethnography + participatory speculative design project to examine conversational breakdowns and success factors in everyday multimodal AI use with Meta Ray-Ban glasses. [P2]

User Research Intern Sept 2022–Jan 2023
ByteDance, Lark Design – People Systems, Beijing, China

- Ran 30+ interviews to revamp HR system for 7K+ internal employees, significantly increasing user experiences
- Field-researched 8 organizations to integrate Lark into existing workflows, yielding 5+ official case studies
- Interviewed with 10+ North American real-estate professionals, synthesized insights into 2 design opportunities to explore Lark's potential overseas expansion

HCI Research Intern (Top 5%) Sep 2021–May 2023
The Future Lab, Tsinghua University, Beijing, China

- Led a mixed-method research project with 20 blind and low-vision (BLV) students and conducted a workshop with 9 BLV to investigate how non-inclusive environments impact their learning and usage of assistive technologies [P3]
- Led the interaction design for a national-level Winter Olympics VR project, developing dynamic camera techniques that optimized user experience and viewing comfort [P4]

Selected Research Projects

Reimagining Smart Glasses for Everyday Human–AI Collaboration [P2] 2024–Present
Research Lead – Meta Ray-Ban AI glasses, qualitative study, thematic analysis

- Designed and conducted a two-phase study (autoethnography + participatory speculative design) to examine conversational successes and breakdowns in non-display smart glasses.
- Built a scenario set and analysis pipeline from in-the-wild episodes to identify interactional limits (e.g., repair, progressive sensemaking) and translate them into design implications.

VAPS: VR AI Patient Simulator for Clinical Communication Training [P1] 2024–Present
System Builder + Study Lead – Unity, LLM (Claude), embodied conversational agents, mixed-method evaluation

- Developed a VR simulation with LLM-powered embodied conversational agents to train difficult clinical communication skills (e.g., de-escalation, empathy, shared decision-making).
- Implemented dialog orchestration and scenario authoring workflow; integrated surveys, interviews, and biometric measures to evaluate usability, agency, and learning outcomes.

- Leading a mixed-method study with 50+ health-profession students;

Assistive Tech for BLV Education in "Blind Colleges"[P3] 2023–2025
The Future Lab, Tsinghua University – Accessibility & Qualitative HCI

- Investigated the practices, perceptions, and challenges of BLV students learning with accessible technologies in Chinese "Blind Colleges," and articulated barriers to broader inclusion.
- Conducted a two-part qualitative study (in-class observation study, $N = 9$; semi-structured interview study, $N = 20$) grounded in field understanding and a formative study.

VR Sports Broadcast: Dynamic Camera Movement Design [P4] 2021–2023
Research + Prototyping – VR video, camera control design, user evaluation

- Design a digital twin VR environment to investigate moving-shot camera designs for VR sports broadcast and evaluate their impact on viewing experience and comfort.
- Prototyped camera movement techniques and conducted controlled user studies; synthesized design guidelines for VR broadcast cinematography.

Selected Academic Publications (All first-author; Full list at google scholar)

Understanding the Practice, Perception, and Challenge of Blind or Low Vision Students Learning through Accessible Technologies in Non-Inclusive "Blind College" [Paper]
Xiuqi Tommy Zhu, Ziyue Qiu, Ye Wei, Jianhao Wang, and Yang Jiao
International Journal of Human-Computer Interaction (IJHCI), 2025

Can You Move It?: The Design and Evaluation of Moving Shots in VR Sports Broadcast [Paper]
Xiuqi Tommy Zhu, Cenyi Wang, Zichun Guo, Yifan Zhao, and Yang Jiao
IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2023)

Designing VR Simulation System for Clinical Communication Training with LLMs-Based Embodied Conversational Agents [Paper]
Xiuqi Tommy Zhu, Heidi Cheerman, Mingxin Cheng, Sheri Kiami, Leanne Chukoskie, and Eileen McGivney
ACM CHI Conference on Human Factors in Computing Systems – Extended Abstracts (CHI EA 2025)

Co-Space: A Tangible System Supporting Social Attention and Social Behavioral Development through Embodied Play for Children with ASD [Paper]
Xiuqi Tommy Zhu, Min Fan, Zhuohao Wu, Jiayi Lu, and Yukai Liu
ACM Interaction Design and Children Conference – Work-in-Progress (IDC WIP 2023)

Technical Skills

Generative AI & ML Frameworks: PyTorch, TensorFlow, JAX, Hugging Face Transformers, Machine learning integration (GPT, Claude, etc.), Python, C#

HCI System Building & Prototyping: JavaScript, Swift (SwiftUI, UIKit), HTML/CSS, Node.js (Implied by web stack need), XCode, Unity, ARKit, AFrame, Flask, Firebase

Design & Research Tools: Figma, Adobe Suite (PS, XD, Illustrator), Miro, Blender, Interviews, Controlled experiments, Usability testing, Qualitative & Quantitative analysis with SPSS & Nvivo

Honors & Service

Outstanding Reviewer Recognition – ACM CHI 2025
Global Runner-up ($4,200) – HONOR Talents Global Design Competition 2022
First Prize – Beijing University Student Animation Design Competition 2021–2022
Reviewer (23 papers): CHI, CSCW, DIS, IDC, SUI, CoG, Chinese CHI 2023–Present
Student Volunteer: ACM CHI 2024