Tommy (Xiuqi) Zhu

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Department of Art + Design, College of Arts, Media and Design | Northeastern University

Research Summary

I design and study AI-powered XR systems (e.g, smart glasses) that support *complex and collaborative* activities, enhancing human–human collaboration while preserving natural social interaction.

Research Interests: Extended Reality (XR); Wearable Computing; Human-Computer Interaction (HCI); Computer-Supported Cooperative Work (CSCW); AI in Simulation Learning

Education

Ph.D. in Interdisciplinary Design and Media 2023–2028
Northeastern University, Boston, MA *Advisor: Prof. Eileen McGivney*

B.A. in Digital Media Arts 2019–2023
Communication University of China, Beijing *Advisor: Prof. Min Fan*

Professional Experience

Graduate Research Assistant 2024–2025
Northeastern University *With Prof. Eileen McGivney*

Graduate Research Assistant 2023–2024
Northeastern University *With Prof. Dakuo Wang*

Research Intern (Outstanding Top 5%) 2021–2023
The Future Lab, Tsinghua University, Beijing *Mentors: Prof. Yang Jiao & Prof. Yingqing Xu*

User Research Intern 2022–2023
Lark Design, ByteDance, Beijing *Designed and evaluated People System using mixed-method insights*

Publications

* *denotes equal contribution*

Peer-reviewed Full Conference and Journal Publications

J.1 Understanding the Practice, Perception, and Challenge of Blind or Low Vision Students Learning through Accessible Technologies in Non-Inclusive 'Blind College'

Xiuqi Tommy Zhu, Ziyue Qiu, Ye Wei, Jianhao Wang, Yang Jiao

International Journal of Human-Computer Interaction (IJHCI), 2025

C.2 Reshaping Inclusive Interpersonal Dynamics through Smart Glasses in Mixed-Vision Social Activities

Yumo Zhang*, Jieqiong Ding*, **Xiuqi Tommy Zhu**, Kaige Yang, Yuqing Wei, Shiyi Wang, Yishan Liu, Yang Jiao

ACM Designing Interactive Systems (DIS 2026)

C.1 Can You Move It?: The Design and Evaluation of Moving Shots in VR Sports Broadcast

Xiuqi Zhu, Cenyi Wang, Zichun Guo, Yifan Zhao, Yang Jiao

IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2023)

Posters and Extended Abstracts

P.4 Conversational Successes and Breakdowns in Everyday Smart Glasses Use

Xiuqi Tommy Zhu, Xiaoan Liu, Casper Harteveld, Smit Desai, Eileen McGivney.

ACM CHI Conference on Human Factors in Computing Systems – Poster (CHI EA 2026)

P.3 Designing VR Simulation System for Clinical Communication Training with LLMs-Based Embodied Conversational Agents

Xiuqi Tommy Zhu, Heidi Cheerman, Mingxin Cheng, Sheri Kiami, Leanne Chukoskie, Eileen McGivney.

ACM CHI Conference on Human Factors in Computing Systems – Extended Abstracts (CHI EA 2025)

P.2 Co-Space: A Tangible System Supporting Social Attention and Social Behavioral Development through Embodied Play for Children with ASD

Xiuqi Zhu, Min Fan, Zhuohao Wu, Jiayi Lu, Yukai Liu

ACM Interaction Design and Children Conference – Work-in-Progress (IDC WIP 2023)

P.1 An Initial Attempt to Build a Natural Sounds Library based on Heuristic Evaluation

Xiuqi Zhu, Jingyu Zhang, Tongyang Liu, Gang He

International Conference on Human-Computer Interaction (HCII 2022) – Poster

Under-Review Submission

U.3 It doesn't look real, but it did feel real: Designing an LLM-Powered VR Simulation for Health Education

Xiuqi Tommy Zhu, Heidi Cheerman, Mingxin Cheng, Sheri Kiami, Leanne Chukoskie, Eileen McGivney

Artificial Intelligence in Education (AIED 2026) – Under Review

U.2 Reimagining the Future of Smart Glasses

Xiuqi Tommy Zhu, Xiaoan Liu, Casper Harteveld, Smit Desai, Eileen McGivney

Preparing for submission

U.1 HaptiFab: A Wearable Toolkit Supports the Integration of Haptic Actuator and Fabric

Yixuan Li*, Shuai Wang*, **Xiuqi Tommy Zhu**, Rui Zhang, Yang Jiao

Preparing for submission

Selected Awards

Global Runner-up ($4,200) – HONOR Talents Global Design Competition (2022)

First Prize – Beijing University Student Animation Design Competition (2021–2022)

Service

Reviewer (35 reviews in past 3 years): ACM CHI, IDC, SUI, DIS, CSCW, CUI, Chinese CHI; IEEE CoG

Outstanding Reviewer Recognition – ACM CHI 2025, IDC 2026

Student Volunteer: ACM CHI 2024

Lab Instructor / Graduate Teaching Assistant, Northeastern University Jan 2026–Present

ARTG 2263 – Lab for Prototyping with Code

Led two lab sections (29 students) for an undergraduate creative coding course. Designed and facilitated weekly hands-on workshops in p5.js/JavaScript covering programming fundamentals, interactive graphics, animation,

data structures, user interaction, HTML/CSS/JavaScript integration, and project development; mentored students through assignments, presentations, debugging, and final project feedback.

Graduate Teaching Assistant, Northeastern University Sep 2025–Dec 2025

ARTG 2263 – Lab for Prototyping with Code

Solo led two lab sections (27 students). Designed and delivered weekly lab sessions using Processing (Python mode); topics included variables, control flow, functions, drawing APIs, animation loops, interaction, and iterative project feedback.

Student Mentorship

2025–Present: **Yumo Zhang**, B.A., The Hong Kong Polytechnic University *[C.2]*

2025–Present: **Daniel Wan**, B.S., Northeastern University

2025.1-2025.6: **Catherine Azelby** B.A., Northeastern University

2023–2025: **Yixuan Li**, B.A., Beijing Forestry University; now M.S., Tsinghua University *[U.2]*

2022–2023: **Jiayi Lu**, B.A. and M.A., Communication University of China *[P.2]*

Skills

Programming: Python; JavaScript (Vue.js, React.js); HTML/CSS; C#LaTeX.

Data Analysis: NumPy, Pandas, SPSS, JASP, Matplotlib.

Machine Learning: Scikit-learn, PyTorch, TensorFlow, Hugging Face , Prompt Engineering.

Design: User Experience Design (Figma); Graphic Design (Adobe Creative Suite); XR Prototyping & Visualization tools (Unity, Unreal, Blender).

HCI Methods: Think-Aloud Protocol; Affinity Diagramming; Thematic Analysis; Workshop; Focus Group; Heuristic Evaluation; Behavioral Experiments; Rapid Prototyping; Autoethnography

Languages

English (Bilingual); Mandarin (Native)