

Zhiwen Calvin Qiu

ML/HCI Researcher | UX Designer

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RESEARCH STATEMENT

My research interests sit at the intersection of machine learning, HCI, and robotics. I design and evaluate cognitively inspired embodied systems that perceive, interact, and learn from physical world to enhance human-AI interactions, with applications in mixed reality, robotics, and multi-agent systems.

EDUCATION

- Cornell University**, Ithaca, NY 08/2024 – 2028 (*expc.*)
Ph.D. in Information Science. *Advisor*: Saleh Kalantari
- Cornell University**, Ithaca, NY 08/2022 – 05/2024
M.A. in Human Centered Design (Research), Minor in Computer Science
Advisors: Saleh Kalantari, Abe Davis
- University of California, Los Angeles**, Los Angeles, CA 09/2016 – 06/2019
Master of Architecture and Building Technology
- Georgia Institute of Technology**, Atlanta, GA 08/2011 – 05/2016
B.S. in Architecture, Minor in Mathematics

EXPERIENCE

- UX Researcher/Product Designer**, Ads & Commercial Team 02/2020 – 04/2022
Kuaishou Technology, Beijing, China
- Designed Kwai Ads Manager that enables advertisers to create marketing campaigns on Kwai Video app, including user research (interview, contextual inquiry, and usability testing), interaction design, and working with engineers to build prototypes based on user feedback and tech constraints.
 - Performed quantitative analysis of behavior on how ads interface design influences the CTR/CVR performances of different types of splash ads (static, full-screen, interactive).
- Design Intern**, Global Production Service (GPS) 06/2018 – 12/2018
Amazon.com, Inc., Beijing, China
- Designed promotional customer-centric graphics and landing pages by integrating marketing objectives, target audiences, and design strategies for multiple Amazon marketplaces.
- AR Product Design Intern**, Department of Artificial Intelligence 06/2017 – 09/2017
NetEase Inc., Hangzhou, China
- Designed human-AR interfaces for marketing campaigns and AR embodied agent 3D modeling, combining human multi-sensory modalities with physical and contextual parameters.

PUBLICATIONS

Articles

- a.1. **Zhiwen Qiu**, Mojtaba Ashour, Xiaohe Zhou, Saleh Kalantari. 2024. NavMarkAR: A landmark-based augmented reality (AR) navigation system for enhancing older adults' spatial learning. *Advanced Engineering Informatics*, 62, 102635. [doi](#)
- a.2. Armin Mostafavi*, **Zhiwen Qiu***, Tony Bill Xu, Saleh Kalantari. 2025. Impact of translation and viewpoint transition methods in VR on spatial learning and cybersickness. Targeting submission for 2025. [pdf](#)
*equal contribution
- a.3. **Zhiwen Qiu**, Armin Mostafavi, Saleh Kalantari. 2024. Use of augmented reality in human wayfinding: A systematic review. **Under Review** for *Virtual Reality*. [arXiv](#)
- a.4. Yuexing Hao*, **Zhiwen Qiu***, Jason Holmes, Corinna E. Löckenhoff, Wei Liu, Marzyeh Ghassemi, Saleh Kalantari. 2024. Large language model integrations in cancer decision-making: A systematic review and meta-analysis. **Under Review** for *npj Digital Medicine*.
*equal contribution
- a.5. Mojtaba Ashour, Qi Yang, **Zhiwen Qiu**, Saleh Kalantari. 2025. Strategies to optimize wayfinding in complex built environment: Insights from the healthcare architecture industry. **Under Review** for *Journal of Cleaner Production*.
- a.6. **Zhiwen Qiu**. 2021. Kwai Star Platform: Design and implementation of an influencer marketplace system. *Industrial Design Research*, 1, 114-120. [doi](#), [pdf](#)

Working Papers

- w.1. **Zhiwen Qiu**, Ziang Liu, Tapomayukh Bhattacharjee, Saleh Kalantari et al. 2025. Diffusion-based trajectory planning for cognitive-aware human navigation behavior. Targeting submission for 2025.
- w.2. **Zhiwen Qiu**, Saleh Kalantari, Kuan Fang et al. 2025. Towards a cognitive memory framework for long-horizon vision-and-language navigation. Targeting submission for 2025.

Extended Abstracts

- e.1. Serena Guo, **Zhiwen Qiu**, Keith Green. 2024. DentAR: Innovating dental visits with sensory experiences in AR for people with autism spectrum disorder. In *Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (CHI EA '24)*. [doi](#).
- e.2. **Zhiwen Qiu**, Hsin-Ming Chao, Mengye Zhu, Chaoyu Wang, Saleh Kalantari. 2024. EncoreLife: A gamified platform to enhance older adults' social connections and daily life structure during transition to retirement. In *Extended Abstracts of the 2024 Annual Symposium on Computer-Human Interaction in Play (CHI PLAY '24)*. [doi](#).
- e.3. **Zhiwen Qiu**, Debbie Jung, Sydney Polando, Chloe Chen, Saleh Kalantari. 2023. Effects of manipulated daytime experience on mood, stress, and productivity in a work environment. In *Extended Abstracts of 54th Annual Conference of Environmental Design Research Association (EDRA 54)*. [pdf](#). [doi](#).
- e.4. **Zhiwen Qiu***, Karan Baijal*, Jennifer Sun. 2025. AdaTAMP: Adaptive task and motion planning with LLM-based embodied agents. Targeting submission for *Workshops in 2025 IEEE International Conference on Robotics and Automation (ICRA)*.
*equal contribution

ACADEMIC SERVICE

Reviewer

ACM Conference on Human Factors in Computing Systems (CHI) 2024, 2025

Presentation

Presenting Author, EDRA 54 06/2023

Topic: Work Environment/Ambient Lighting

Invited Participant, Cornell XR Collaboratory 10/2022

Teaching

INFO1300 Introductory Design and Programming for the Web, Cornell University *Fall 2024*

DEA6520 The Ambient Environment, Cornell University *Fall 2022*

SELECTED PATENTS

- p.1. **Zhiwen Qiu**. 2022. *A Method for Multimedia Push Notifications, Electronic Device, and Storage Medium*. Chinese Patent No. CN202111551384.2, authorized on May 3, 2022. [link](#).
- p.2. **Zhiwen Qiu**. 2022. *A Method for Data Display, Electronic Device, Storage Medium, and Process*. Chinese Patent No. CN2021111356818.3, authorized on Mar. 18, 2022. [link](#).

SELECTED AWARDS & HONORS

- a.1. **“NavMarkAR Wayfinding”**—Featured in CIHF (Cornell Institute for Healthy Futures) 2024
- a.2. **Design Excellence Award**, Kuaishou Technology 2022
- a.3. **Finalist**, User Experience Design Award (UXDA), China 2021
- a.4. **Best Intern Award**, Amazon.com, Inc. 2018
- a.5. **Dean’s List**, University of California, Los Angeles 2017 - 2019

SKILLS

Research: Interview, Survey, Participatory Design, Ethnographic Study, Contextual Inquiry, Experimental Design, Thematic Analysis

Computing: Machine Learning (PyTorch, TensorFlow), Statistical Analysis (R, Numpy, Pandas), Unity3D (AR/VR Development), Front-End Development (HTML/CSS, JavaScript, Vue.js)

Human-Centered Design: Use Experience Design (Figma, Adobe Creative Suite), 3D Modeling (Rhino3D, Blender, C4D), Generative Design (Processing, Grasshopper), Graphic Design

Prototyping: 3D Printer, Laser Cutting, Fabrication and Hardware Assembly, Basic Circuit Design