

Qianjie Wei

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RESEARCH INTEREST

Human-Computer Interaction, AR/VR Interaction, Educational Technologies, Accessibility, etc.

EDUCATION

- **University of Rochester** Sep 2025 - Present
PhD in Computer Science
◦ Advisor: [Prof. Zhen Bai](#) Rochester, USA
- **The Hong Kong University of Science and Technology (Guangzhou)** Sep 2023 - Jul 2025
MPhil in Computational Media and Arts
◦ Advisor: [Prof. Mingming Fan](#) (Primary), [Prof. Yi Cai](#) (Co) Guangzhou, China
- **Tongji University** Sep 2018 - Jul 2023
Bachelor of Engineering in Industrial Design, College of Design and Innovation
◦ Advisor: [Prof. Xiaohua Sun](#) (Graduation Thesis) Shanghai, China

PUBLICATIONS AND MANUSCRIPTS

- [P.1] Qianjie Wei, Xiaoying Wei, Yiqi Liang, Fan Lin, Nuonan Si, Mingming Fan. 2025. **RemoteChess: Enhancing Older Adults' Social Connectedness via Designing a Virtual Reality Chinese Chess (Xiangqi) Community**. Accepted by ACM CHI Conference on Human Factors in Computing Systems (CHI '25).
- [P.1] Qianjie Wei, Jingling Zhang, Pengqi Wang, Xiaofu Jin, Mingming Fan. 2024. **Augmented Library: Toward Enriching Physical Library Experience Using HMD-Based Augmented Reality**. In the *The 17th International Symposium on Visual Information Communication and Interaction (VINCI 2024)*.
- [P.2] Jingling Zhang#, Qianjie Wei#, Xiaoying Wei, Mingming Fan. **Exploring the Design of Virtual Reality Museums to Support Remote Visitation With Older Adults**. 2024. *ArXiv*. Preprint.

SELECTED PROJECTS

- **Craftsman Journey: Worker-centered Digital Management Platform** May 2022 - Jul 2022
University-industry Cooperation Program between Tongji University and BOSCH [■]
 - Developed an App that integrates site management and personal development, facilitating site work and enhancing workers' awareness of career development.
 - Tools: used Figma for UX/UI design, and used React + TypeScript for development.
 - Applied think-aloud usability test, A/B testing, and heat-map analysis to assess the user experience of the App.
- **SmartHand: Hand Rehabilitation System for Hemiplegic Patients** Apr 2022 - Jun 2022
Won the first prize in Shanghai Industrial Design Competition (Top 5%)
 - Conceptualized and developed a hemiplegic rehabilitation system facilitated by data loop of electromyographic signals and electrical stimulation. The system consists of two wearable devices and a mobile App, enabling hemiplegic patients to perform precise grip training exercises at home.
 - Implemented gesture image recognition in Python using Mediapipe and OpenCV for accurate motion tracking.
 - Monitored the user's muscle activity by establish interaction between Arduino and EMG sensors.
 - Engineered the structural components of the wearable devices, leveraged Figma to develop the App prototype.
- **ARFinding: A Home Item Management System for Older Adults** Mar 2022 - May 2022
Advised by Prof. Xiaohua Sun at the Center for Digital Innovation of Tongji University [■]
 - Developed a system using RFID tags, voice input, and AR navigation to help older adults manage household items.
 - Hardware: constructed RFID indoor positioning system through RFID tags, NFC, terminal machine, and antenna box.
 - Software: implemented the AR navigation App through Unity 3D.
 - Conducted surveys with target users to discern features that would optimize the experience and improve usability.

- **Running Food: A Serious Game for Popularizing the Food Carbon Footprint**

Nov 2021 - Dec 2021

University-industry Cooperation Program between Tongji University and Tencent



- Designed and developed a serious game that explores the carbon footprint of three scenarios (food production, purchase, and consumption), calling for less food waste and sustainable living concept.
- Created shaders and visual effects for characters, text, cutscenes, and dynamic dialogue system in Roblox engine, implemented the game's interaction logic through Lua programming language.
- Ensured a seamless and intuitive user experience by refining gameplay mechanics and interface and conducting playtesting and iteration to optimize player engagement and satisfaction.

PROFESSIONAL EXPERIENCES

- **Accessible & Pervasive User EXperience (APEX) Lab, HKUST(GZ)**

Sep 2023 - Present

Guangzhou, China

Research Student

Advisor: [Prof. Mingming Fan](#).

Conduct quantitative and qualitative research at the intersection of HCI, AR/VR/MR, and AI, with a particular focus on aging, accessibility, and learning.

- **Center for Digital Innovation, Tongji University**

Mar 2023 - Jun 2023

Shanghai, China

Research Intern

Advisor: [Prof. Xiaohua Sun](#).

Research on an augmented assistive communication system based on large language models.

- **Fablab, Tongji University**

Sep 2022 - Dec 2022

Shanghai, China

Research Intern

Advisor: [Prof. Saverio Silli](#).

Research on computational design and sustainable manufacturing.

HONORS AND AWARDS

- **National Encouragement Scholarship at Tongji University**, Top 5%

Oct, 2022

- **Shanghai Industrial Design Competition**, First Prize

Oct 2022

- **The 7th Think Youth-Shanghai International Digital Creation, Innovation & Entrepreneurship Competition**, First Prize

Aug 2022

- **The Best User Experience Design Project**, Held by BOSCH

Mar 2022

- **Outstanding Student Scholarship at Tongji University**, Top 10%

Oct, 2021

SKILLS

- **Languages:** Mandarin (Native), English (Fluent, IELTS 7.0), German (Basic)
- **AR/VR Development:** Proficient in developing AR/VR applications and interactions using unity (e.g., Multiplayer VR development, write C# scripts to implement AR/VR interaction)
- **UX/UI and Interaction Design:** Skilled in Figma, Adobe kits (PS, AI, PR...)
- **Open-source Hardware and Programming:** Arduino IDE, PCB Engineering
- **Industrial Design and Engineering:** Familiar with Blender, Rhino
- **Research:** Literature Review, User Study, Quantitative and Qualitative Data Analysis