

Xiaomeng Wang

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EDUCATION

Tongji University

Bachelor of Engineering in Software Engineering

Shanghai, China

Expected Jun. 2027

- GPA: 4.76/5.0 (92.64/100)
- Research Interests: XR/AR • Human-AI Interaction • Motion Tracking • Body-Based Interaction

RESEARCH EXPERIENCE

Mitacs Globalink Research Intern — University of British Columbia Okanagan

Kelowna, BC, Canada

Department of Computer Science | Supervisor: Prof. Mohammad Khalad Hasan

Jun. 2026 – Sep. 2026

ElbowUp — Upper-Limb Posture Interaction for Mobile Augmented Reality

- Built an end-to-end Meta Quest 3/Unity experimental system using real-time **hand and upper-body tracking** to detect upper-limb postures and support four interaction techniques; applied a One Euro Filter for real-time tracking stabilization and implemented interaction logic, experimental workflow, and data logging.
- Independently conducted a 20-participant user study, including deployment, session execution, and data collection, to compare interaction performance and characteristics across different upper-limb interaction techniques.

Proximate — Inter-Agent Communication between Personal Proactive XR Assistants

- Investigated context-aware communication and coordination between personal proactive AI agents during face-to-face interaction, with particular attention to information sharing, transparency, and user control over proactive agent behavior.
- Contributed to a design workshop, scenario analysis, interaction prototyping, user-study activities, and manuscript preparation, identifying recurring patterns for user-controllable AI-mediated communication.

MANUSCRIPTS

Marium-E-Jannat, **Xiaomeng Wang**, Raja Ubaidullah, Keiko Katsuragawa, William Delamare, and Khalad Hasan. “ElbowUp: Leveraging Elbow Posture for On-Demand Interface Access in Mobile Augmented Reality.” *Under review at ACM CHI 2027*.

Bakdauren Narbayev, **Xiaomeng Wang**, Ziming Li, Hai-Ning Liang, Pourang Irani, and Khalad Hasan. “Proximate: Inter-Agent Communication between Personal Proactive XR Assistants During Face-To-Face Interaction.” *Under review at ACM CHI 2027*.

INDUSTRY & TECHNICAL EXPERIENCE

Kunshan Yuanlefu Technology Co., Ltd. — R&D Engineer Intern

Shanghai, China

R&D Engineer Intern

Jun.–Aug. 2025; Feb.–Apr. 2026

Gesture Warfare: Cyber Dojo — Game Development with MediaPipe Hand Tracking

- Integrated **MediaPipe-based markerless hand tracking** into Unity to capture real-time hand landmarks and drive gesture-based interactions, enabling hands-free gameplay without touchscreens or keyboards.
- Improved tracking stability and responsiveness using Kalman filtering, optimized gesture-recognition logic, and an event-driven architecture; extended functional interfaces to improve system extensibility.

Deep Learning-Based Metal Curtain Wall Defect Detection System

Shanghai, China

Algorithm Developer

Sep. 2025 – Apr. 2026

- Developed a YOLOv11-based computer-vision pipeline for corrosion defect detection, including dataset construction, image preprocessing, model training, optimization, and robustness evaluation.

AI-Driven Immersive Cultural Heritage Showcase System

Barcelona, Spain

Backend Developer

Jul. 2025 – Aug. 2025

- Developed an interactive web-based system integrating 3D-scanned architectural models with an AI conversational interface, enabling users to explore cultural heritage through natural-language interaction.
- Built the interaction pipeline linking AI responses with 3D model controls, enabling the AI to trigger scene navigation and object manipulation during dialogue and provide users with coordinated textual and visual feedback.

HONORS & SKILLS

Honors: China National Scholarship (**0.2%**) (2026); National Encouragement Scholarship (2025); First-Class Undergraduate Scholarship (2024); Excellent Student Award (2024); Excellent Volunteer Award (2024).

Programming & Tools: Python, C#, C/C++, Unity, Meta XR SDK, Hand/Body Tracking, MediaPipe, Experimental Design, User Studies, SPSS

Languages: English (**IELTS 8.0**), Mandarin.