Yi ZOU

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Research Interest

My current research interests include Augmented Reality, Human-Computer Interaction and Context Awareness. I have worked on developing context-aware systems that adaptively support daily human activities by sensing context factors from the user and their environment.

Education

Hong Kong University of Science and Technology (Guangzhou) 2024 Sept – Present
Master of Philosophy, Computational Media and Arts Guangzhou, China
Supervisors: Prof. Pan HUI and Prof. Hai-Ning LIANG

- ROAS 5300 Multiple View Geometry for Mobile Robot Navigation - A-
- ROAS 6000 Learning for 3D vision - A-

South China University of Technology 2020 Sept – 2024 July
Bachelor of Engineering, Electrical Engineering Guangzhou, China

In-Submission Full Paper

[1] **Yi ZOU**, Ao YU, Ziming LI, Hai-Ning LIANG, Pan HUI. Context-Aware Adaptive User Interface in Augmented Reality in Dual-task Scenarios. ***(In submission to IEEE VR 2025)***

Research Experience

Context-Aware Adaptive User Interface in Augmented Reality 2025 Mar - Present

- Developed an adaptive interface in AR based on Hololens 2, aiming at improving user's safety and supporting user's continuous interaction in AR while walking as dual-task scenario
- Integrated vision grounding model to detect obstacle in surroundings, then used responsive planning to move AR window for avoiding visual occlusion

Develop Interactive Games for Robot Training Data Collection 2024 Oct - Present

- Gamified the data collection process for humanoid robot training
- Tele-operated humanoid robot via mixed reality headsets for embodied task conduction
- Designed game in virtual reality to mimic daily task and promote action data collection

Real-time Fall Detection of Elderly People 2023 July - 2024 Mar

- Used machine learning models to predict hazardous fall from sensor data during daily life
- Developed efficient algorithm based on Ghost-Net and LSTM with few parameters, reducing detection latency without compromising accuracy
- Applied a 2-steps mechanism and weighted preprocessing of sensor data from smartphone to enhance real-time performance and compatibility on tiny mobile devices

Patent

[1] **Yi ZOU**, Ao YU, Pan HUI. Distributed Fixed Mechanism and Camera Equipment. *Utility Model, Chinese Patent.* (Under Review)

Services

Teaching Assistant CMAA 5018 - Metaverse Cross-Disciplinary Design Thinking 2024 Fall

Specialized Skills

Programming Languages Python & PyTorch (Intermediate)
Software Unity, Figma

Additional Information

Languages Native Mandarin and Cantonese speaker, competent in written and oral English
IELTS 7, 2023 Dec