Que Liu

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Education

University of Shanghai for Science and Technology **Sept 2021 – Jun 2025 (Expected)**
Bachelor's Degree in Intelligence Science and Technology *Shanghai, China*

Publications

1. Xing, Yunhao, **Que Liu**, Jingwu Wang, and Diego Gomez-Zara. **"SMoRe: Enhancing Object Manipulation and Organization in Mixed Reality Spaces with LLMs and Generative AI."** *arXiv [Cs.HC]*, 2024. Available at: http://arxiv.org/abs/2411.11752.

2. Muhammad Salman Abid, Mrigank Pawagi, Sugam Adhikari, Xuyan Cheng, Ryed Badr, Md Wahiduzzaman, Vedant Rathi, Ronghui Qi, Choiyin Li, Lu Liu, Rohit Sai Naidu, Licheng Lin, **Que Liu**, Asif Zubayer Palak, Mehzabin Haque, Xinyu Chen, Darko Marinov, and Saikat Dutta. **"GlueTest: Testing Code Translation via Language Interoperability."** In *Proceedings of the 40th International Conference on Software Maintenance and Evolution (ICSME'24) - NIER Track*, 2024.

Relevant Coursework

- Machine Vision (92)
- Autonomous Mobile Robots (98)
- Machine Learning (93)
- Robot Vision System and Measurement (92)

Research Experience

Human-Computer Interaction Research Group **Jul 2024 – Present**
Undergraduate Researcher supervised by Prof. Diego Gómez-Zará *University of Notre Dame*

- Integrated depth camera with visual SLAM (Simultaneous Localization and Mapping) on ROS (Robot Operating System) to achieve scene understanding and environmental mapping in mixed reality setups.
- Developed a VR meeting room prototype using Unity and Photon Networking to create multi-user, immersive environments, improving virtual collaboration in distributed teams.
- Applied Unity's XR interaction toolkit to create intuitive user controls and interactions, ensuring seamless communication between the VR hardware and software.
- Collaborated with teams on mixed reality projects that leveraged AI-driven environmental recognition to enhance object detection and manipulation in mixed reality spaces.

Summer Undergraduate Research **Aug 2023 – Jan 2024**
Remote Undergraduate Researcher supervised by Prof. Darko Marinov *University of Illinois Urbana-Champaign*

- Assisted in identifying and establishing a pipeline of clients for library translation services, while testing compatibility and stability of client integrations.
- Leveraged Linux environments for efficient development, utilizing Docker containers for consistent development setups and scaling applications. Utilized GitHub for team collaboration and code review.
- Modified and optimized XML configuration files for better modularity and compatibility across multiple Maven-based Java projects.
- Resolved complex Python packaging and dependency conflicts within Java runtime environments, enhancing cross-language integration.

School Of Computing Summer Workshop **Jul 2023**
Visiting Student *National University of Singapore*

- Developed a 2D game from scratch within a 3-week timeframe, collaborating with group members.
- Acquired proficiency in Unity and C# for 2D game development.

Skills

Programming: Python, C#, C, C++, Java, Matlab, SQL
Tools and Frameworks: ROS, Unity, Docker, Git, PyTorch
Engineering: RealSense, Altium, Keil
Languages: English (TOEFL: 106), French (intermediate), Chinese (native)