XINYU SHI

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RESEARCH INTEREST

My current research focuses on **Human-Computer Interaction**, particularly, **Human-AI Co-Creation** and **AI-Powered Creativity Support Tool**. The goal of my research is to design, develop, and evaluate interactive AI systems that effectively incorporate human intent into the computation process in order to boost the productivity of creative activities. My research seeks to gain a deeper understanding of the flow of creativity and to enhance human intelligence and creativity.

EDUCATION

Ph.D. in Computer Science | ***advisor: Prof. Jian Zhao*** — Sept. 2021 – Present
University of Waterloo — Waterloo, ON, Canada

B.Eng. in Software Engineering — Sept. 2016 – Jun. 2020
Xiamen University — Xiamen, China

PUBLICATIONS

C.1 **De-Stijl: Facilitating Graphics Design with Interactive 2D Color Palette Recommendation**
X. Shi, Z. Zhou, J. Zhang, A. Neshati, A. K. Tyagi, R. Rossi, S. Guo, F. Du, and J. Zhao.
Conditionally accepted by **ACM CHI 2023**.

C.2 **Real-World Blind Super-Resolution via Feature Matching with Implicit High-Resolution Priors**
C. Chen*, **X. Shi***, Y. Qin, X. Li, X. Han, T. Yang, and S. Guo. (* equal contribution)
In Proceedings of the 30th ACM International Conference on Multimedia **(MM2022).** ***Oral (Top 5%)***

C.3 **Teaching American Sign Language in Mixed Reality**
Q. Shao, A. Sniffen, J. Blanchet, M. E. Hillis, **X. Shi**, T. K. Haris, J. Liu, J. Lamberton, M. Malzkuhn, L. C. Quandt, J. Mahoney, D. Kraemer, X. Zhou, and D. Balkcom.
In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies **(IMWUT, Ubicomp2021).**

C.4 **Accurate and Fast Classification of Foot Gestures for Virtual Locomotion**
X. Shi*, J. Pan*, Z. Hu, J. Lin, S. Guo, M. Liao, Y. Pan, and L. Liu. (* equal contribution)
In Proceedings of the 2019 IEEE International Symposium on Mixed and Augmented Reality **(ISMAR2019).**

RESEARCH EXPERIENCE

University of Waterloo — Waterloo, ON, Canada
Graduate Research Assistant in HCI | Advised by Prof. Jian Zhao — Sept. 2021 – Present
Design interactive *Human-AI Co-Creation* system to augment human creativity and productivity.

The Chinese University of Hong Kong, Shenzhen — Shenzhen, China
Research Assistant in CV | Advised by Prof. Xiaoguang Han — Dec. 2020 – Aug. 2021
Proposed an approach based on *Vector-Quantized GAN* for *Image Super-Resolution*.

Dartmouth College — Hanover, NH, USA
Research Assistant in HCI | Advised by Prof. Xia Zhou and Prof. Xing-Dong Yang — Sept. 2019 – Apr. 2020
Leveraged *wearable sensing technique* and *Mixed-Reality* to facilitate *American-Sign-Language teaching*.

Xiamen University — Xiamen, China
Research Assistant in HCI | Advised by Prof. Shihui Guo — Sept. 2017 – Aug. 2021
Exploited *wearable devices*, i.e., smart insoles, for *VR locomotion* with learned *gesture recognition models*.

HONORS AND AWARDS

Vector Scholarship in AI, Vector Institute | $17,500 for one year — 2021
International Doctoral Student Award, University of Waterloo | $15,000 per year — 2021
Award for Excellence in Academic Performance, Xiamen University | ¥5,000 per year — 2017 - 2020

SKILLS

Programming: Python, C, C++, Java, SQL, Shell
Framework: PyTorch, D3.js, Numpy, Sklearn