Andrew (Maozheng) **Zhao**

🔗: https://maozheng6.github.io/Maozheng/
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Research Interests

My research is in **Human-computer interaction**. I design, build, and evaluate **intelligent multimodal input technologies** on mobile devices. I integrated multiple input modalities, such as touch, voice, and eye gaze, with AI models for a more **efficient and natural interaction experience**. I'm experienced with Android, iOS, and Unity development, as well as LLM finetuning and computer vision.

Education

Ph.D., Stony Brook University, USA
Major: Computer Science. Advisor: Prof. Xiaojun Bi. GPA: 3.78
Graduated in Dec. 2023

M.S., Beijing University of Posts and Telecommunications, China
Major: Information and Communication Engineering. GPA: 3.80

B.S., Harbin Engineering University, China
Major: Electronic and Information Engineering. GPA: 3.82

Internship experience

Research Scientist Intern, Meta Reality Labs, Redmond, WA
May 2022 - Sept 2022
Built a multi-modal gesture input application in virtual reality using wristband and eye gaze as input. It reduced 30% movement burden for users. The project is published in IUI 2023.

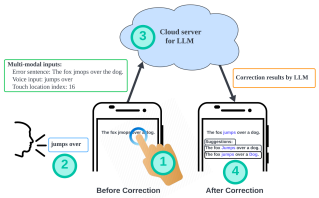
Research Intern, Google, Mountain View, CA
Oct 2022 - Dec 2022
Fine-tuned LLMs to enable Android settings search to understand natural language queries. The fine-tuned LLMs outperform traditional search methods such as TF-IDF, sentence encoding, and prompt engineering.

Student researcher, Google, Mountain View, CA
Dec 2022 - May 2023

Publications

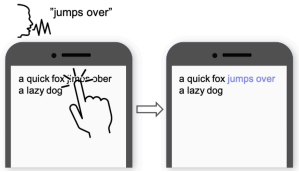
LLM-VT: LLM-based Noise-robust Case-sensitive Text Correction System on Smartphones with Voice and Touch Input

Maozheng Zhao, Nathan Huang, Rui Liu, Michael Xuelin Huang, Shumin Zhai, I. V. Ramakrishnan, and Xiaojun Bi.
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT**), 2024. (Under submission)
Webpage



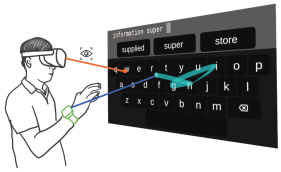
Voice and Touch Based Error-tolerant Multimodal Text Editing and Correction for Smartphones

Maozheng Zhao, Wenzhe Cui, I. V. Ramakrishnan, Shumin Zhai, and Xiaojun Bi.
The 34th Annual ACM Symposium on User Interface Software and Technology (**UIST),** 2021. [Acceptance Rate: 25.05%]
Webpage, **Paper**



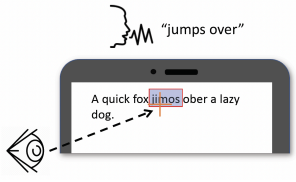
Gaze Speedup: Eye Gaze Assisted Gesture Typing in Virtual Reality

Maozheng Zhao, Alec M. Pierce, Ran Tan, Ting Zhang, Tianyi Wang, Tanya R. Jonker, Hrvoje Benko, and Aakar Gupta.
Proceedings of the 28th International Conference on Intelligent User Interfaces (**IUI**), 2023. [Acceptance Rate: 24.1%]
Webpage, **Paper**



EyeSayCorrect: Eye Gaze and Voice Based Hands-free Text Correction for Mobile Devices

Maozheng Zhao, Henry Huang, Zhi Li, Rui Liu, Wenzhe Cui, Kajal Toshniwal, Ananya Goel, et al.
27th International Conference on Intelligent User Interfaces (**IUI**), 2022. [Acceptance Rate: 24.5%]
Webpage, **Paper**



Select or Suggest? Reinforcement Learning-based Method for High-Accuracy Target Selection on Touchscreens

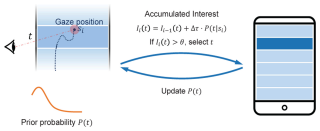
Li, Zhi, **Maozheng Zhao**, Dibyendu Das, Hang Zhao, Yan Ma, Wanyu Liu, Michel Beaudouin-Lafon, Fusheng Wang, Iv Ramakrishnan, and Xiaojun Bi.
Conference on Human Factors in Computing Systems (**CHI**), 2022.
[Acceptance Rate: 24.8%]

Paper

BayesGaze: A Bayesian Approach to Eye-Gaze Based Target Selection

Li, Zhi, **Maozheng Zhao**, Yifan Wang, Sina Rashidian, Furqan Baig, Rui Liu, Wanyu Liu et al.
Proceedings. Graphics Interface (**GI**), 2021.

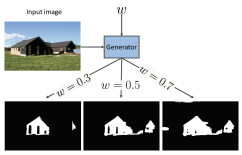
Paper



Shadow detection with conditional generative adversarial networks

Nguyen, Vu, Tomas F. Yago Vicente, **Maozheng Zhao**, Minh Hoai, and Dimitris Samaras.
Proceedings of the IEEE International Conference on Computer Vision (**ICCV**), 2017.

Paper



Skills

Programming: Java, Swift, C/C++, Python, C#

Tools: PyTorch, TensorFlow, Scikit-learn, Android SDK, IOS, Unity