

Ziqi Liu

+86 13990177975 | liuziqi21@mails.tsinghua.edu.cn | [Personal Website](#)

EDUCATION

Tsinghua University

2021 — Expected 2025

- B.Eng. in Automation
- GPA: 3.74/4.0
- I was enrolled in a 4-year interdisciplinary undergraduate program of Creative Design and Intelligent Engineering, where we took courses from Electrical Engineering and Computer Science (main part), Mechanical Engineering, Interaction and Industrial Design.

RESEARCH EXPERIENCES

Future Lab, Tsinghua University

03/2024 — Present

AroMR: Designing Olfactory Experiences for Spatial Computing Scenarios in Mixed Reality

Co-led the project of AroMR, which focused on designing the 'field-centric' olfactory rendering strategy for mixed reality, with a proof-of-concept system and exploration of potential olfactory scenarios and design spaces.

- Literature Review and Project Conception
- System Design and Prototyping
- Paper Writing

Pervasive HCI Group, Tsinghua University

06/2024 — Present

Enhancing Smartphone Eye Tracking with Cursor-Based Interactive Implicit Calibration

We introduce COMETIC (Cursor Operation Mediated Eye-Tracking Implicit Calibration), which uses cursor-eye movement correlation to enhance tracking accuracy. By filtering cursor coordinates as gaze proxies and fine-tuning with related images, COMETIC reduces tracking error to 208.04 px (1.2 cm), improving accuracy by 49.64%. Optimal results occur with cursor points 250-300 px (1.44-1.73 cm) from the gaze.

- Data Collection System Development
- User Experiments and Data processing

AI-Assisted Art Training: AI for Enhancing Artistic Skill Development in Calligraphy and Painting

Designed and developed a data collection platform to gather information such as pressure and pen posture during the calligraphy process. Collected datasets through user experiments and built a model to master artistic skills using representation learning.

- Literature Review and Project Conception
- Data Collection Application Development
- User Experiments and Interviews
- Data Processing and Model Training

PUBLICATIONS

- Chang Liu, Xiangyang Wang, Chun Yu, Yingtian Shi, Chongyang Wang, **Ziqi Liu**, Chen Liang, Yuanchun Shi. 2024. Enhancing Smartphone Eye Tracking with Cursor-Based Interactive Implicit Calibration. Submitted to *CHI 2025* (under review)

OTHER EXPERIENCES

Huawei & Future Lab, Tsinghua

10/2023 — 03/2024

Team Member | Project: Design Research of Future Terminal

- Desk research on innovations in technology, form, and interaction modes of smart terminals
- Concept design of the interaction and application of HMD devices, with low-fidelity demos.

Mercedes Benz, Beijing & Future Lab, Tsinghua

06/2024 — Present

Research Intern | Project: Towards Sustainable Car Interior Design with Smart Interactive Material

- Desk research on interactive materials in HCI
- Design and fabricate the high-fidelity demo for interior design with interactive materials, primarily responsible for lighting effects design and circuit implementation.

Skills

CS: basic AI methods, Python, C/C++, HTML

EE: circuit design, Verilog, Arduino

Design: AutoCAD, Solidworks, Figma, Adobe suit, Unity, Blender

English: CET-4: 648; TOEFL: 99