Ziying (Zoey) Huang

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EDUCATION

Southern University of Science and Technology, Shenzhen, China, B.S. in EEE — Sept. 2022 – Jun. 2026

- GPA: 3.87/4.00 (93/100) Rank: 2/187

Southern University of Science and Technology, Shenzhen, China, Minor in FIN — Sept. 2023 – Jun. 2026

- GPA: 3.92/4.00 (95.0/100.0)

Nanyang Technological University, Singapore, Summer Exchange — Jun. 2024 – Jul. 2024

- GPA: 5.0/5.0

Westlake University, Hangzhou, China, EIE Summer School — Jul. 2025 – Aug. 2025

RESEARCH EXPERIENCE

MRI–Text Vision-Language Modeling for Non-invasive Molecular Subtyping of Midline Glioma — Jul. 2025 - Present

Advised by Prof. Liangqiong Qu

- Building a VLM combining T1/T1c/T2/FLAIR MRI and text prompts to predict molecular subtypes of midline glioma non-invasively.
- Supports preoperative decision-making and reduces need for invasive biopsy.

UltraEdit: Training-, Subject-, and Memory-Free Lifelong Editing in Language Models — Jun. 2025 - Oct. 2025

Joint work with Xiaojie Gu

- Proposed a one-step LLM editing approach based on hidden-state gradients, requiring no retraining, external subjects, or memory.
- Achieved over 7x faster editing while using up to 4x less VRAM; reached state-of-the-art on 5 benchmarks across 6 models.
- Second Author, Under review at the International Conference on Learning Representations **(ICLR) 2026**.

Rethinking Evaluation and Conflict in Knowledge Editing — Jun. 2025 - Oct. 2025

Joint work with Xiaojie Gu

- Current evaluations often gauge output compliance rather than true parametric-memory change, leading to systematic overestimation.
- Re-editing previously edited facts accumulates representational conflict, reducing stability and reversibility; calls for evaluations and methods robust to repeated updates.
- Co-first author, Under review at the ACM Web Conference **(WWW) 2026**.

A Privacy-Preserving Federated Learning Framework Against Gradient Inversion Attacks — Dec. 2024 - Jun. 2025

Advised by Prof. Liangqiong Qu

- Investigated hypernetwork-based FL as a defense against gradient inversion attacks.
- Proposed a low-rank factorization strategy(RKD) that compressed the hypernetwork by a substantial margin, while preserving accuracy and accelerating convergence.
- Co-first author. Manuscript submitted to **IEEE Transactions on Information Forensics & Security (TIFS)**.

Hybrid Beamforming Design for Near-field Beam Patterns — Jan. 2024 - Jun. 2024

Advised by Prof. Changshen You

- Proposed a frequency-space expansion (FSE)-based method to characterize near-field beams under discrete phase shifters.
- Demonstrated that discrete phase shifters maintain effective beam focusing within the main lobe.

PROJECTS

GStar NTI Global Talent Program 2025 — New Turing Institute (Remote) Aug. 2025 – Present

- Selected as one of 48 participants (17.8% acceptance) worldwide; mentored by researchers from OpenAI, Stanford, and CMU.
- Intensive 12-week training on advanced LLMs, covering RLHF (GRPO/DPO), agentic reasoning, and efficient inference, with lectures by leading AI scholars.
- Conducted RL post-training on LLMs using GRPO/DR-GRPO and collaborated on optimizer benchmarking (Muon vs. AdamW) for RLHF and SFT.

The 2025 ASC Student Supercomputer Challenge - Team member Jan. 2025 – Feb. 2025

- Contributed to the design and optimization of a GPU-CPU heterogeneous cluster for scientific workloads such as HPL, AlphaFold3, and RNA m5C analysis.
- Tuned HPC systems, developed parallel workloads, and benchmarked performance across real-world scientific tasks.
- Won the **International Second Prize** as part of **Team ASC900**.

Undergraduate Training Program for Innovation & Entrepreneurship (National-level) - Team member May. 2024 – Nov. 2024

- Designed physical layer security techniques for mixed-field scenarios.
- Utilized interference caused by signal spectrum differences in mixed-field environments.
- Performed power reallocation under the model and optimized it to enhance physical layer security.

PUBLICATION

[1] Gu, X., **Huang, Z.**, Gu, J.-C., & Zhang, K. (2025). *UltraEdit: Training-, Subject-, and Memory-Free Lifelong Editing in Language Models*. *arXiv preprint* arXiv:2505.14679. `https://arxiv.org/pdf/2505.14679v2`

AWARDS

Outstanding Student Scholarship, SUSTech – **First Prize (¥5,000; top 5%)** 2024 & 2025
Distinguished Student Leadership Award, SUSTech 2024
Volunteer Excellence Award, SUSTech 2024
ASC Student Supercomputer Challenge – **International Second Prize** 2025
China Undergraduate Mathematical Contest in Modeling – **Provincial Second Prize** 2023

ACTIVITIES

Academic Peer Advisor, Office of Student Affairs 2023 - Present
Secretary-Treasurer, Student Union Executive 2022 - 2024
Member & Athlete, SUSTech Rowing Club – Mixed 8+ Crew 2023 - 2025
Member, SUSTech Climbing Club 2025 - Present

TECHNICAL SKILLS

Languages: Python, MATLAB, SQL, Java, C++

Software & Tools: Linux, PyTorch, LaTeX, VS Code, LabVIEW, ADS, Android Studio, ITK-SNAP