HE LI

Personal Website ◇ Github Profile ◇ Google Scholar
Phone: (+86) 133-7036-2727 ◇ Email: lihe22@mails.tsinghua.edu.cn & lihe50hz@gmail.com

EDUCATION

Tsinghua University (THU) *July 2026 (expected)*
B.E. in Computer Science (Yao Class)
GPA: 3.95/4.0
Rank: 5

RESEARCH INTERESTS

I am interested in Generative Model and Computer Vision.

PUBLICATIONS

[1] T. Li, Y. Tian, **He Li**, M. Deng, and K. He, *Autoregressive image generation without vector quantization*, 2024. arXiv: 2406.11838 [cs.CV]. [Online]. Available: https://arxiv.org/abs/2406.11838.

[2] K. Wang, J. Chen, **He Li**, Z. Mi, and J. Zhu, *Sparsedm: Toward sparse efficient diffusion models*, 2024. arXiv: 2404.10445 [cs.LG]. [Online]. Available: https://arxiv.org/abs/2404.10445.

RESEARCH EXPERIENCE

Auto-regressive Model for Vision Jan 2024 - Sep 2024
Supervisors: Dr. Li Tianhong and Prof. He Kaiming MIT

- This project resulted in the paper [1], which was accepted by NeurIPS 2024 **(spotlight)**
- Run experiments for exploring the property of MAGE model.
- Explored the usage of GMM-style encoding on MAGE and the use of GIVT.
- Found the randomness from location can be replaced by token, enabling flexible generating order.

Sparsity for Diffusion Models Oct 2023 - May 2024
Supervisors: Dr. Wang Kafeng, Prof. Chen Jianfei, and Prof. Zhu Jun THU

- This project resulted in the paper [2], which is in the process of ICML 2025 submission
- Completed the baseline model experiments of existing model on previous sparse-pruning methods.
- Proposed the theoretical analysis of the paper from the perspective of thermodynamics.
- Finished the hardware acceleration rate testing.

SERVICES

Unofficial TA for OOP Course Feb 2023 - July 2023
Instructor: Prof. Liu Zhiyuan THU

- I had programming experience before I took this course and was hired as an unofficial TA.
- Helped students with their programming assignments and projects.

Member of Student Association of Science and Technology (SAST) Sep 2023 - Sep 2024
Department: AI Agent Department THU-CST

- Participated in the regular acticities of the SAST.
- Took part in the design process of game *Generals*, which can be used as a competition between AI Agents. Developing a competitive *Generals* agent was accepted as a bonus project for many courses.

AWARDS

Academic Excellence Scholarship	*2024*
Tsinghua Alumni - Nanjing Turing Institute of Artificial Intelligence Scholarship	*2024*
Tsinghua Freshman scholarship	*2022,2023,2024*
First prize in provincial CMO (Tianjin)	*2020,2021*
First prize in provincial CPhO (Tianjin)	*2020,2021*
First prize in CSP-S (Tianjin)	*2019*

SELECTED OPEN-SOURCE PROJECTS

GPU Graphics Renderer Sep 2024 - Jan 2025

Repository: ACG-Project

- GPU-based graphics renderer implemented in GLSL with original wave effect simulation feature.
- Won 2^{nd} place in the most popular project poll in the ACG course.

AI Computing Acceleration on Chips July 2024 - Sep 2024

Repository: gem5/lab4

- A network-on-chips project based on gem5.
- Implemented torus network and load-balanced adaptive routing algorithm with abundant experiments.

Recruiting System July 2023 - Sep 2023

Repository: IIIS-RecruitingSystem

- A recruiting system written by *Scala* and *Typescript*.
- The entire repository implements a type-safe front-end and back-end system.