

HE LI

Personal Website ◇ Github Profile ◇ Google Scholar

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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

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 **liwe2024autoregressiveimagegenerationvector**, 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 **wang2024sparsedmsparseefficientdiffusion**, 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 activities 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 & GRANTS

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

KAN Exploration Feb 2024 - July 2024

Repository: CV-KAN

- Exploring KAN's usage in computer vision, developing a thorough report.
- Classification through FFT-processed and PCA-processed image, achieve higher accuracy.

GPU Graphics Renderer Sep 2024 - Jan 2025

Repository: ACG-Project

- GPU-based graphics renderer implemented in GLSL with original wave effect simulation feature.
- Won 2nd place in the most popular project poll in the ACG course (Rendering Track).

Imitation Learning with Diffusion Policy Sep 2024 - Jan 2025

Repository: ISR_Project

- Incorporating Low-Dimensional Self-Supervised Loss for Diffusion Policies in Imitation Learning.
- Improved Samples Efficiency and Computation Efficiency.

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.