

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, IIIS)

GPA: 3.952/4.000

Rank: 5/94 among Yao Class

RESEARCH INTERESTS

I am interested in generative model and computer vision, especially about relationship between generation, representation, comprehension and their application in the real world.

PUBLICATIONS

- [1] T. Li, Y. Tian, **Li, He**, M. Deng, and K. He, “Autoregressive image generation without vector quantization,” in *Advances in Neural Information Processing Systems*, A. Globerson, L. Mackey, D. Belgrave, *et al.*, Eds., vol. 37, Curran Associates, Inc., 2024, pp. 56 424–56 445. [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 EXPERIENCES

TBD

Jun 2025 - Sep 2025

Supervisors: Dr. Zhang Yuhui and Prof. Serena Yeung

Stanford (Onsite, UGVRI)

· TBD.

Autoregressive Vision Model

Jan 2024 - Jun 2025

Supervisors: Dr. Li Tianhong and Prof. He Kaiming

MIT (Onsite in 2025 Spring, RA)

- Autoregressive without vector quantisation [1], NeurIPS 2024 (**Spotlight**).
- Adversarial training in autoregressive model.
- Finetuning generation model from pretrained representation model.
- Co-training of representation and generation.
- Causal autoregressive with one-step method in image generation.

Sparsity for Diffusion Models

Oct 2023 - May 2024

Supervisors: Dr. Wang Kafeng, Prof. Chen Jianfei, and Prof. Zhu Jun

THU (Undergrad. Intern)

- Progressive $N : M$ sparsity for better sparse diffusion model [2], ICME 2025.

ACADEMIA & TEACHING SERVICES

Reviewer for ICCV 2025

2025

- Providing comments and suggestions for decision on the submitted papers.

Official TA for Machine Learning

Sep 2025 - Jan 2025

Instructor: Prof. Yuan Yang

THU

- Composing & rating homework and exams, hosting office hour and recitation class.

Official TA for Advanced Computer Graphics

Sep 2025 - Jan 2025

Instructor: Prof. Yi Li

THU

- TA for rendering-track project, composing & rating homework and exams, hosting tutorial class.

Unofficial TA for Object-Oriented Programming

Feb 2023 - July 2023

Instructor: Prof. Liu Zhiyuan

THU

- Helping students with their programming assignments and projects.

Student Association of Science and Technology (SAST)

Sep 2023 - Sep 2024

Department: AI Agent Department

THU-CST

- Participating in the regular activities and development of the SAST.

AWARDS & GRANTS

Academic Excellence Scholarship

2024

Tsinghua Alumni - Nanjing Turing Institute of Artificial Intelligence Scholarship

2024

Tsinghua Freshman Scholarship

2022

First prize in provincial CMO (Tianjin)

2020, 2021

First prize in provincial CPhO (Tianjin)

2020, 2021

First prize in CSP-S (Tianjin)

2019

SELECTED PROJECTS

KAN Exploration

Feb 2024 - July 2024

Repository: Computer Vision Meets KAN

- Classification by FFT/PCA preprocessing and Kolmogorov-Arnold Network, achieving higher accuracy.

GPU Graphics Renderer

Sep 2024 - Jan 2025

Repository: Physically Based Rendering on GPU for Interference and Dispersion

- GPU-based graphics renderer implemented in GLSL with original wave effect simulation feature.

Imitation Learning with Diffusion Policy

Sep 2024 - Jan 2025

Repository: Imitation Learning with Diffusion Policy

- Incorporating Low-Dimensional Self-Supervised Loss for Diffusion Policies in Imitation Learning.

AI Computing Acceleration on Chips

July 2024 - Sep 2024

Repository: Torus Network on Chips with Adaptive Balanced Routing

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