

HE LI

Personal Website ◇ Github Profile

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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 Machine Learning System.

RESEARCH EXPERIENCE

Generative Auto-regressive Model [1]

Jan 2024 - Present

Supervisors: Dr. Li Tianhong and Prof. He Kaiming

MIT

- Ran experiments for exploring the property of MAGE model.
- Found the randomness from location-temperature can be replaced by randomness from token-temperature, which enables a flexible generating order of patches.
- Explored the usage of GMM-style encoding on MAGE.
- Adapted the model to generate the pictures used in the paper.

Sparsity for Diffusion Models [2]

Oct 2023 - May 2024

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

THU

- 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 (simulated annealing).
- Finished the hardware acceleration rate testing.

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>.

ACHIEVEMENTS

Tsinghua Freshman scholarship

Fall 2022, 2023

First prize in provincial CMO (Tianjin)

Fall 2020, 2021

First prize in provincial CPhO (Tianjin)

Fall 2020, 2021

First prize in CSP-S (Tianjin)

Winter 2019

SKILLS

Programming Languages

Python, C/C++

Machine Learning Tools

Pytorch, Numpy