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 Machine Learning System.

RESEARCH EXPERIENCE

Generative Auto-regressive Model [1] Jan 2024 - Sep 2024
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