Hanhong Zhao

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EDUCATION

Massachusetts Institute of Technology
Undergraduate Study   Sep 2024 - Now

IIIS, Tsinghua University
Pre-College Program   Sep 2023 - Jun 2024

The High School Affiliated to Renmin University of China
Middle school   Sep 2018 - Jun 2024

Selected Coursework at MIT   6.S978: Deep Generative Models (graduate course), 6.7900: Machine Learning (graduate course), 6.8611: Quantitative Methods for NLP.

EXPERIENCES

Undergraduate Research in Computer Vision
Supervised by Professor Kaiming He   Sep 2024 - Now

Collaborating with Zhicheng Jiang & Qiao Sun, who are also undergraduate students at MIT.

- Gain experiences on image classification using ViT by reproducing the DeiT paper.
- Do experiments on image generation using Diffusion models and Flow Matching models.
- Become familiarized with JAX+TPU platform.

AWARDS

Gold Medal
53rd International Physics Olympiad   2023.7

PROJECTS

Speeding Up Diffusion Models with One-step Generators
2024.12   https://github.com/Hope7Happiness/6s978_project

Project for the course *6.S978: Deep Generative Models* at MIT, completed with teammate Zhicheng Jiang.

- Proposed a new method to speed up the training of diffusion models by using one-step generators (such as VAEs).
- Reduces NFE by half while maintaining the sample quality on the MNIST dataset.

Knowledge Database Project
2024.5   https://github.com/Hidden-Hyperparameter/LLM_project

Project for the course *Introduction to Large Language Model Application* at IIIS, Tsinghua University, completed in a team of 3.

- Apply Large Language Models to answer user questions based on the knowledge in user-provided documents, and provide sources for the answers.

- Support multiple document type, including PDF, Word, images and videos.

- Build a tagging system to maintain a reasonable speed even with a large number of documents.

Skills

Programming Languages: Python, C++
Tools: PyTorch, JAX
Languages: English (Fluent), Chinese (Native)

ADDITIONAL INFORMATION

Pre-College Program at IIIS, Tsinghua University
Some of my classes taken at the pre-college program at IIIS, Tsinghua University is shown below.

Year-Semester	Course Title	Credit	Grade
2023-Autumn	Introduction to Computer Science	3	A+
	Introduction to Programming in C/C++	2	A+
	Calculus A (1)	5	A+
	Linear Algebra	4	A+
	General Physics (2)	4	A+
2023-Spring	Introduction to Computer Systems	4	A+
	Introduction to Large Language Model Application	2	A
	Mathematics for Computer Science and Artificial Intelligence	4	A+
	Calculus A (2)	5	A+
	General Physics (1)	4	A