Xiangyu Zeng

Computer Science and Technology
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Education

- **M.Sc. in Computer Science and Technology** *09.2022-07.2025*
  University of Electronic Science and Technology of China (UESTC) **GPA: 3.77/4.00**
- **B.Eng. in Software Engineering** *09.2017-07.2022*
  Chengdu University of Technology (CDUT) **GPA: 3.60/5.00**

Research Interests

My research is in Deep Learning and Artificial Intelligence, specifically in areas such as large language models (**LLMs**), Artificial General Intelligence (**AGI**), like LLM-based Agent, and Generative Artificial Intelligence (**GAI**), including diffusion models. I am dedicated to merging insights from cognitive science to advance towards AGI.
And currently, my research focuses on enhancing the **representation** and **reasoning** capabilities of large-scale models such as Transformers and Vision Transformers by integrating concepts from **memory** and **reflective** mechanisms.

Publications

Xiangyu Zeng, Jie Lin*, Piao Hu, Ruizheng Huang, Zhicheng Zhang, "A Framework for Inference Inspired by Human Memory Mechanisms", *International Conference on Learning Representations (**ICLR**)*, 2024.

Xiangyu Zeng, Jie Lin*, Piao Hu, Zhihao Li, Tianxi Huang, "SDMTR: A Brain-inspired Transformer for Relation Inference", *Artificial Intelligence and Statistics (**AISTATS**)*, 2024.

Jie Lin*, **Xiangyu Zeng**, Yulong Pan, Shangqing Ren, Yige Bao, "Intelligent Inspection Guidance of Urethral Endoscopy Based on SLAM with Blood Vessel Attentional Features", *Cognitive Computation*, 2024.

Shuo Quan, Mengyu Sun*, **Xiangyu Zeng**, Xuliang Wang, Zeya Zhu, "Time Series Classification Based on Multi-Dimensional Feature Fusion", *IEEE Access*, 2023.

Patents

Jie Lin, **Xiangyu Zeng**, Piao Hu, Yulong Liang, Yi Bai, "A Comprehensive Evaluation Method for Enterprise Database Systems", Chinese Patent CN202310448064.7, 2023.

Jie Lin, Xinyu Xiao, Yulong Liang, Yi Bai, **Xiangyu Zeng**, Yong Wang, "A Method for Predicting Positive Margins of Prostate Cancer Based on 3D Feature Computation", Chinese Patent CN202310029875.3, 2023.

Internship Experience

- **China Telecom Research Institute** *06.2022-12.2022*
  Beijing, China

Honors and Awards

- National encouragement scholarship *11.2019*
- Excellent student cadre of the CDUT *10.2020*
- Grade A certificate of comprehensive performance conferred by Sichuan Province *07.2021*
- National encouragement scholarship *11.2021*
- Outstanding graduate of CDUT *06.2022*
- Outstanding graduate student of the UESTC *11.2023*
- Outstanding student of the Laboratory of Intelligent Collaborative Computing at the UESTC *12.2023*
- Academic young achievers of the UESTC *03.2024*
- Excellent student cadre of the UESTC *04.2024*
- Outstanding graduate student of the UESTC *05.2024*
- Outstanding party member of the UESTC *07.2024*

Leadership Experience

- Deputy squad leader *09.2018-06.2022*
- President of the computer science and technology association *06.2021-06.2022*
- Assistant director of the practice department, party affairs center *09.2022-09.2023*
- Party branch secretary *06.2023-06.2024*
- Youth League Branch Secretary *09.2022-06.2025*

Contests

- The Hua Cup National College Student Mathematics Competition *12.2019*
- National E-Commerce "Innovation, Creation, Entrepreneurship" Challenge Competition for College Students *06.2021*
- China International College Students' Innovation Competition *09.2021*
- The Hua Cup National College Student Mathematics Competition *12.2022*

Teaching Assistant

Fundamental of Software Technology, G0815920.03 (UESTC)

Operating System Experiment, 0852116005 (UESTC)

Academic Activities

- Poster Present at ICLR'2024 *Vienna, 05.2024*
- Poster Present at AISTATS'2024 *Valencia, 05.2024*