WU Lyucheng

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EDUCATION

Chu Kochen Honors College, Zhejiang University (ZJU), China College of Computer Science & Technology, ZJU, China

09/2021-06/2025 09/2021-06/2025

- Major: Computer Science and Technology, Bachelor of Science
- Overall GPA: 3.78/4.0 (86.42/100) | Top 15%
- Core Courses: C Programming, Computing Systems, Digital Logic Design, Machine Learning and Data Analysis, Database System, Advanced Data Structure & Algorithm Analysis, Computer Organization, Object-oriented Programming, Computer Networks, Compiler Principle, Software Engineering, Natural Language Processing
- Math Courses: Mathematical Analysis, Linear Algebra, Game Theory, Mathematical Modeling, Probability Theory & Mathematical Statistics, Discrete Mathematics

RESEARCH INTERESTS

Artificial Intelligence, Natural Language Processing, Multimodal Large Language Model, Fine-tuning, Steering

<u>PUBLICATIONS</u>

Wu, L. (2025). An Empirical Analysis of Steering Multimodal Large Language Models (in progress). A second-author paper, pending publication (from work during the NUS Summer Research).

RESEARCH & PROJECT EXPERIENCE

ZJU Graduation Thesis & Project: An Empirical Analysis of Steering MLLMs

09/2024-present

Research Assistant, ZJU-Ant Group Joint Research Center for Knowledge Graphs | Supervisor: Prof. Ningyu Zhang

- Conducted research to optimize MLLMs with the "Steering" method, aiming to enhance their safety
- Implemented LM-Steers, a steering method of LLM output word embeddings, on MLLM; completed testing on VLSafe, achieved positive results
- Compared the performance of steering in single versus hybrid transformer architectures

NUS Summer Research Project: Research on the Chinese Large Language Model Database

06/2024-09/2024

Research Assistant, High Performance Computing for Artificial Intelligence (HPC-AI) Lab, National University of Singapore (NUS) | Supervisor: Prof. Yang You

- Created the world's first Chinese Presupposition Dataset to evaluate LLMs' reasoning abilities with implicit assumptions in Chinese
- Defined the methodology for constructing the dataset based on literature reviews, with particular reference to *On LLMs-Driven Synthetic Data Generation, Curation, and Evaluation: A Survey*
- Devised the research's algorithms (data generating pipeline); employed GPT-4 for automated generation of presupposition sentence pairs; generated and processed data for 1,500 simple and 1,400 complex cases

MindSpore Model Development Challenge, Huawei Technologies Co., Ltd.

07/2024-08/2024

- Team Leader
 - Fine-tuned a Llama2-based model to enhance mathematical abilities, using LoRA and prompt-tuning techniques
 - The model achieved an accuracy score of 51.38%, ranked 5th out of 104 in a competition, and won a gold prize along with a 10,000 RMB award (5,000 for each member)

EXTRACURRICULAR ACTIVITIES

BaiDangHai Community Service, Hangzhou

07/2022-09/2023

• Engaged in community improvement work, including aspects like culture, environment, and safety

HONORS AND SCHOLARSHIPS

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Gold Prize, MindSpore Model Development Challenge, Huawei Technologies	2024
First-class Scholarship for Outstanding Students, ZJU	2024
Five-star Volunteer (250+ hours), ZJU	2023
Third-class Scholarship for Outstanding Students, ZJU	2022
Model Student of Excellent Academic Performance, ZJU	2022-2024

SKILLS

English: TOEFL: 107 | GRE: 321

Computer Languages: C, C++, Python, Verilog | LLMs: Transformer, Chameleon, BERT

Software Skills: Dev C++, Visual Studio, VS Code, Pycharm, Anaconda, Matlab, PyTorch, Yuque