Zijie Lin

(+86) 13724741991 — lzj741@mail.ustc.edu.cn

Education

University of Science and Technology of China **Sep 2019 – Jul 2023**
Bachelor of Engineering in Computer Science and Technology ***GPA:*** *3.61/4.3* ***Department Rank:*** *49/176 (Top 30%)*

University of Science and Technology of China **Sep 2023 – Jul 2026(expected)**
Master of Engineering in Computer Science and Technology

Publications

AutoP2C: An LLM-Based Agent Framework for Code Repository Generation from Multimodal Content in Academic Papers
Preprint. Under Review.
Zijie Lin, Yiqing Shen, Qilin Cai, He Sun, Jinrui Zhou, Mingjun Xiao
Abstract: We designed a multi-agent framework based on large language models that process both textual and visual content from research papers to generate complete code repositories. We prompt the large language model with high-quality repositories to distill common patterns and devise a divide-and-conquer task-planning step that helps the model produce more detailed, code-level file descriptions, thereby enhancing its ability to generate complete code repositories.

Internship Experiences

Assistant Research Algorithm Engineer-IFlytek **Apr 2024– Jun 2024**
Multimodel chemical large model *Hefei, China*

- Used visual fine-tuning to enhance the understanding of chemical knowledge in large chemical models
- Investigated the disadvantages of existing large language models in the field of chemistry knowledge

Project Experiences

Research on Technologies for Task Planning and Decision-Making in Manned–Unmanned Collaborative Operations **Oct 2023– May 2024**
Reinforcement Learning *Hefei, China*

- Investigated the limitations of the existing reinforcement learning methods in dealing with online decisions
- Participated in the design of a two-stage cooperative framework to increase the human participation rate in the early stage of training and accelerate the convergence speed of reinforcement learning. In the later stage, only the behaviors that are difficult to determine will be sent to human experts

Chinese Academy of Sciences Basic and cross Frontier Research project **Apr 2024– Apr 2028**
Precise recognition of custom scientific charts and symbols in LM *Hefei, China*

- Summarize the classifications and corresponding proportions of molecular pattern recognition errors, including ring perception errors, bond classification errors, and difficulties in recognizing stereochemistry, etc.
- Combining the rule-based recognition method and the powerful understanding of language capabilities by large chemical models, the recognition of complex molecular diagrams is abstracted as a step-by-step image captioning problem

Honors and Awards

Outstanding Student Scholarship, USTC *November, 2022*
First-Class Outstanding Student Scholarship, USTC *November, 2021*
Outstanding Student Scholarship, USTC *November, 2020*

Skills

Languages: Mandarin (native), English (intermediate), Cantonese(native)
Programming Languages: Python, C/C++
Deep Learning Frameworks: PyTorch, HuggingFace, Transformers