

Zijie Zhou

CONTACT INFORMATION	College of Artificial Intelligence China University of Petroleum (Beijing)	Voice: (+86) 188 0102 9366 E-mail: zjzhouzh@gmail.com
RESEARCH INTERESTS	Large language models, natural language processing, reinforcement learning, machine learning, deep learning	
EDUCATION	<b>China University of Petroleum (Beijing)</b> Master of Engineering in Artificial Intelligence (expected) <ul style="list-style-type: none"> <li>• GPA: 3.82 / 4.00   Rank: 3 / 31</li> <li>• Course: Methods of Optimization, Introduction to Artificial Intelligence, Semantic Web and Knowledge Graph</li> </ul>	Beijing, China Aug. 2023 - Jun. 2026
	<b>China University of Petroleum (Beijing)</b> Bachelor of Engineering in Artificial Intelligence <ul style="list-style-type: none"> <li>• GPA: 3.45 / 4.00   Rank: 5 / 33</li> <li>• Course: Machine Learning, Reinforcement Learning, Fundamentals of Deep Learning, Python</li> </ul>	Beijing, China Aug. 2019 - Jun. 2023
ACADEMIC EXPERIENCE	<b>University of California, Riverside</b> <i>Efficient Reinforcement Learning for Large Language Models</i> <ul style="list-style-type: none"> <li>• Designed Speculative GRPO RL algorithm combining fast draft model generation with reward computation from a large target model to improve LLM training and inference efficiency.</li> <li>• Conducted experiments demonstrating 2× inference speedup while maintaining 95% of baseline accuracy.</li> </ul>	Riverside, CA, USA Jul. 2025 - Oct. 2025
	<b>Peking University</b> <i>Efficient Code Generation via Reinforcement Learning</i> <ul style="list-style-type: none"> <li>• Proposed DC-GRPO, a reinforcement learning framework with dynamic pruning and multi-level rewards for LLM-based Solidity code generation.</li> <li>• Improved Eff@5 metric to 13.4% on a 1.5B code LLM, achieving 1.2% improvement over standard GRPO and outperforming all baseline methods.</li> </ul>	Beijing, China Apr. 2025 - Jun. 2025
	<b>Zhejiang University</b> <i>Multi-objective Solidity Code Generation with Large Language Models</i> <ul style="list-style-type: none"> <li>• Developed a DPO-based framework for joint optimization of correctness, gas efficiency, and security in LLM-driven Solidity code generation.</li> <li>• Achieved 66.7% Pass@5, 58.9% Gas@5, and 62.5% Secure@5 on Qwen2.5-7B model; reduced ERC-20 gas cost by 12%. Paper accepted at ASE 2025.</li> </ul>	Zhejiang, China Feb. 2025 - Apr. 2025
	<b>China University of Petroleum (Beijing)</b> <i>Reinforcement Learning (RL) for LLM-based Multi-hop Table QA</i> Advisor: Prof. Dandan Zhu, Dr. Yanming Yang (Wuhan University, collaborative advisor) <ul style="list-style-type: none"> <li>• Developed a RL enhanced table retrieval framework integrating structured and unstructured table data to improve LLM reasoning capability.</li> <li>• Designed a cell-level table retrieval pipeline, reducing token consumption by retrieving specific cell values instead of entire tables.</li> <li>• Analyzed reward signals through systematic visualization to identify and mitigate instabilities, resulting in more stable training convergence.</li> <li>• Achieved promising preliminary results demonstrating improved reasoning consistency.</li> </ul>	Beijing, China Jun. 2025 - Present

	<b>Xi'an Jiaotong University</b>	Xi'an, China
	<i>Small Object Detection via Multi-scale Knowledge Distillation</i>	Feb. 2024 - May 2024
	<ul style="list-style-type: none"> <li>• Second author; co-developed a multi-scale knowledge distillation framework that transfers hierarchical features from teacher to student for small object detection.</li> <li>• Proposed a bidirectional feature fusion structure incorporating a Convolutional Attention Feature Fusion (CAFF) module and Pyramid Pooling Loss to enhance multi-layer aggregation.</li> <li>• Demonstrated significant performance gains over traditional baselines; paper accepted at ICANN.</li> </ul>	
PAPERS IN PREPARATION	<b>Zijie Zhou</b> , Dandan Zhu, Jianyu Wang, Yanming Yang, Xuhao Chen, Xu Liu. <i>TRAG-RL: Reinforcing Table Understanding in LLMs via Reinforcement Learning</i> .	
PUBLICATIONS	Yuqi Li, <b>Zijie Zhou</b> , Junjia Du, Junhao Dong, Xin Yin, Renye Yan, Yingli Tian, Tingwen Huang. <i>A Preference-Driven Methodology for Efficient Code Generation</i> .	
	Zhiyuan Peng, Xin Yin, <b>Zijie Zhou</b> , Chenhao Ying, Chao Ni, Yuan Luo. <i>PrefGen: A Preference-Driven Methodology for Secure Yet Gas-Efficient Smart Contract Generation</i> . ASE 2025.	
	Lingyu Wang, <b>Zijie Zhou</b> , Guanqun Shi, Junkang Guo, Zhigang Liu. <i>Small Object Detection Based on Bidirectional Feature Fusion and Multi-scale Distillation</i> . ICANN 2024.	
	Yi Zhao, Dandan Zhu, Fei Wang, Xinpeng Dai, Huishen Jiao, <b>Zijie Zhou</b> . <i>An intelligent drilling guide algorithm design framework based on high interactive learning mechanism</i> . Petroleum Science.	
TEACHING EXPERIENCE	<b>Principle of artificial intelligence</b> <i>Teaching Assistant, B.Sc AI course in CUPB</i>	<i>Sep. 2024 - Nov. 2024</i> Beijing, China
	<b>Python for data analysis</b> <i>Teaching Assistant, B.Sc course in CUPB</i>	<i>Apr. 2024 - Jun. 2024</i> Beijing, China
WORKING EXPERIENCE	<b>Innovation Business Center of Yidu Cloud</b> <i>Algorithm Intern</i> Developed GRU-based multi-label models for disease prediction with competitive Top-10 performance; cleaned and linked internal medical records via SQL and Pandas to enable effective downstream business analysis.	Beijing, China <i>Feb. 2023 - Aug. 2023</i>
	<b>PERCENT Technology, International Business Department</b> <i>Machine Learning Research Assistant</i> Improved Chinese-to-English machine translation by 2%, delivering the deployed model; additionally led multilingual data standardization and contributed to sentiment classification system design.	Beijing, China <i>Aug. 2022 - Feb. 2023</i>
HONORS AND AWARDS	Graduate Study Scholarship, 2023 Undergraduate Study Scholarship, 2022 Technology Innovation Advanced Individual Award, 2022 and 2023 Honorable Mention, Interdisciplinary Contest In Modeling, 2021 Outstanding Undergraduate Student Cadre, 2020	
LANGUAGES AND SKILLS	<ul style="list-style-type: none"> <li>• Languages: Mandarin (Native), English (Fluent), French (Beginner)</li> <li>• Technical Skills: Deployment and fine-tuning of LLMs, Python, PyTorch, RLHF</li> <li>• Tools: Git, Docker, LangChain, VREL, ChatGPT, Microsoft Office, LaTeX.</li> </ul>	