

Chengsong Huang

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EDUCATION

Washington University in St. Louis

Sep. 2023 - Present

Advisor: Prof. Jiaxin Huang

St. Louis, MO

Ph.D. in Computer Science (GPA 4.0/4.0)

Fudan University

Sep. 2019 - Jun. 2023

Software School of Fudan University

Shanghai, China

B.S. in Software Engineering (GPA 3.82/4.0) rank 1%

RESEARCH INTERESTS

My research focuses on advancing the capabilities and accessibility of Large Language Models (LLMs). My interests include:

- **Efficient LLMs:** Developing and analyzing methods to make LLMs more computationally efficient. My experience includes work on parameter-efficient fine-tuning (PEFT) and speculative decoding to accelerate inference speed.
- **Self-Improving Language Models:** Designing frameworks that enable LLMs to iteratively refine their own outputs. This includes research on self-correction and learning from machine-generated feedback to autonomously enhance model performance.

RESEARCH PAPERS (SELECTED)

* stands for equal contribution or alphabetical ordering.

1. **Huang, C.**, Yu, W., Wang, X., Zhang, H., Li, Z., Li, R., Huang, J., Mi, H. and Yu, D. “**R-Zero: Self-Evolving Reasoning LLM from Zero Data**”. *arXiv preprint arXiv:2508.05004*, 2025.
2. **Huang, C.**, Huang, L., Leng, J., Liu, J., and Huang, J. “**Efficient Test-Time Scaling via Self-Calibration**”. *arXiv preprint arXiv:2503.00031*, 2025.
3. Li, Z., Yu, W., **Huang, C.**, Liu, R., Liang, Z., Liu, F., ... and Yu, D. “**Self-Rewarding Vision-Language Model via Reasoning Decomposition**”. *arXiv preprint arXiv:2508.19652*, 2025.
4. Huang, L., **Huang, C.**, Leng, J., Huang, D., and Huang, J. “**POSS: Position Specialist Generates Better Draft for Speculative Decoding**”. *arXiv preprint arXiv:2506.03566*, 2025.
5. Leng, J., **Huang, C.**, Huang, L., Lin, B. Y., Cohen, W. W., Wang, H., and Huang, J. “**CrossWordBench: Evaluating the Reasoning Capabilities of LLMs and LVLMs with Controllable Puzzle Generation**”. *Conference of Language Modeling (COLM)*, 2025.
6. **Huang, C.**, Huang, L., and Huang, J. “**Divide, Reweight, and Conquer: A Logit Arithmetic Approach for In-Context Learning**”. *arXiv preprint arXiv:2410.10074*, 2024.
7. Leng, J., **Huang, C.**, Zhu, B., and Huang, J. “**Taming Overconfidence in LLMs: Reward Calibration in RLHF**”. *ICLR*, 2025.
8. **Huang, C.***, Liu, Q.*, Lin, B.*, Pang, T., Du, C., and Lin, M. “**LoraHub: Efficient Cross-Task Generalization via Dynamic LoRA Composition**”, *Conference on Language Modeling (COLM)*, 2024.

9. Chen, L., **Huang, C.**, Zheng, X., Lin, J., and Huang, X. “[TableVLM: Multi-modal Pre-training for Table Structure Recognition](#)”, *Association for Computational Linguistics (ACL)*, 2023.
10. Lin, B.*, **Huang, C.***, Liu, Q., Gu, W., Sommerer, S., and Ren, X. “[On Grounded Planning for Embodied Tasks with Language Models](#)”, *AAAI Conference on Artificial Intelligence (AAAI)*, 2023.
11. Gu, C., **Huang, C.**, Zheng, X., Chang, K., and Hsieh, C. “[Watermarking Pre-trained Language Models with Backdoor-ing](#)”, *arXiv preprint arXiv:2210.07543*, 2022.

EXPERIENCE

Tencent AI Lab Seattle

Jun. 2025 - Aug. 2025

Research intern (Mentor: Wenhao Yu)

R-Zero: Self-Evolving Reasoning LLM from Zero Data

Sea AI lab (SAIL)

Jan. 2023 - Jun. 2023

Research intern (Mentor: Qian Liu)

LoraHub: Efficient Cross-Task Generalization via Dynamic LoRA Composition

USC INK lab

May. 2022 - Jan. 2023

Research intern (Mentor: Xiang Ren, Bill Yuchen Lin)

On Grounded Planning for Embodied Tasks with Language Models

SKILLS

- **Programming Languages:** Proficient in Python, SQL and Java.
- **Libraries & Frameworks:** Expertise in PyTorch, TensorFlow, Hugging Face Transformers, and Scikit-learn.
- **Tools & Platforms:** Proficient with Git and Wandb. Experience working with LSF and Slurm.

HONORS AND AWARDS

First Prize in Scholarship for Outstanding Students at Fudan University

Dec. 2021

Awarded a Scholarship of Shanghai City

Nov. 2022

SERVICE

Conference Reviewer: NAACL 2024-present, ACL 2024-present, EMNLP 2024-present, ICLR 2024-present.