

Chengsong Huang

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EDUCATION

Washington University in St. Louis

Sep. 2023 - Present

St. Louis, MO

Advisor: Prof. Jiaxin Huang

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

Fudan University

Sep. 2019 - Jun. 2023

Shanghai, China

Software School of Fudan University

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. He, Y.*, Huang, C.*., Li, Z.*., Huang, J. and Yang, Y. “VisPlay: Self-Evolving Vision-Language Models from Images. *arXiv preprint arXiv:2511.15661*, 2025.
3. Yu, W., Liang, Z., Huang, C., Panaganti, K., Fang, T., Mi, H. and Yu, D. “Guided Self-Evolving LLMs with Minimal Human Supervision”. *arXiv preprint arXiv:2512.02472*, 2025.
4. Huang, C., Huang, L., Leng, J., Liu, J., and Huang, J. “Efficient Test-Time Scaling via Self-Calibration”. *arXiv preprint arXiv:2503.00031*, 2025.
5. 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.
6. 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.
7. 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.
8. 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.

9. Leng, J., **Huang, C.**, Zhu, B., and Huang, J. “[Taming Overconfidence in LLMs: Reward Calibration in RLHF](#)”. *ICLR*, 2025.
10. **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.
11. 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.
12. 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.
13. Gu, C., **Huang, C.**, Zheng, X., Chang, K., and Hsieh, C. “[Watermarking Pre-trained Language Models with Backdooring](#)”, *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.