

# Chengsong Huang

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[Google Scholar](#) ◊ [Github](#)

## EDUCATION

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**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

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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)

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\* 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 Backdoor-ing](#)”, *arXiv preprint arXiv:2210.07543*, 2022.

## EXPERIENCE

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<b>Tencent AI Lab Seattle</b>	Jun. 2025 - Aug. 2025
Research intern (Mentor: Wenhao Yu)	
R-Zero: Self-Evolving Reasoning LLM from Zero Data	
<b>Sea AI lab (SAIL)</b>	Jan. 2023 - Jun. 2023
Research intern (Mentor: Qian Liu)	
LoraHub: Efficient Cross-Task Generalization via Dynamic LoRA Composition	
<b>USC INK lab</b>	May. 2022 - Jan. 2023
Research intern (Mentor: Xiang Ren, Bill Yuchen Lin)	
On Grounded Planning for Embodied Tasks with Language Models	

## SKILLS

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- **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

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First Prize in Scholarship for Outstanding Students at Fudan University	Dec. 2021
Awarded a Scholarship of Shanghai City	Nov. 2022

## SERVICE

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