Yuheng Wu

Curriculum Vitae

☎ *650-833-8588*
✉ *yuhengwu@stanford.edu*

Research Interests

Effcient reasoning for large language model, test-time methods, verification, formal methods, machine learning system, hardware-software co-design.

Education

09.2024 – now **Stanford University**, Stanford, California, USA.
Master of Science in Electrical Engineering, GPA: 4.06

09.2020 – 06.2024 **Wuhan University**, Wuhan, Hubei, P.R.China.
Bachelor of Engineering in Electronic Information Engineering, GPA: 3.98

Publications

Preprint

Preprint **Yuheng Wu**, Azalia Mirhoseini, and Thierry Tambe. "On the Role of Temperature Sampling in Test-Time Scaling," *Arxiv Preprint*, Oct. 2025
`https://arxiv.org/abs/2510.02611`

Conference

EMNLP'25 **Yuheng Wu**, Jianwen Xie, Denghui Zhang, and Zhaozhuo Xu. "DEL-ToM: Inference-Time Scaling for Theory-of-Mind Reasoning via Dynamic Epistemic Logic," *in Proceedings of the Conference on Empirical Methods in Natural Language Processing*, Nov. 2025

EMNLP'25 Anjiang Wei*, **Yuheng Wu***, Yingjia Wan, Tarun Suresh, Huanmi Tan, Zhanke Zhou, Sanmi Koyejo, Ke Wang, and Alex Aiken. "SATBench: Benchmarking LLMs' Logical Reasoning via Automated Puzzle Generation from SAT Formulas," *in Proceedings of the Conference on Empirical Methods in Natural Language Processing*, Nov. 2025

COLM'25 Anjiang Wei, Tarun Suresh, Jiannan Cao, Naveen Kannan, **Yuheng Wu**, Kai Yan, Thiago S. F. X. Teixeira, Ke Wang, and Alex Aiken. "CodeARC: Benchmarking Reasoning Capabilities of LLM Agents for Inductive Program Synthesis," *in Proceedings of the Conference on Language Modeling*, Oct. 2025.
`https://openreview.net/forum?id=Q5pVZCrrKr`

CVPR'24 Yang Yu*, Erting Pan*, Xinya Wang, **Yuheng Wu**, Xiaoguang Mei, and Jiayi Ma. "Unmixing before Fusion: A Generalized Paradigm for Multi-Source-Based Hyperspectral Image Synthesis," *in Proceedings of the Conference on Computer Vision and Pattern Recognition*, Jun. 2024.
`https://ieeexplore.ieee.org/document/10656158`

Journal

NPJ AI **Yuheng Wu**, Wentao Guo, Zirui Liu, Heng Ji, Zhaozhuo Xu, and Denghui Zhang. "How Large Language Models Encode Theory-of-Mind: A Study on Sparse Parameter Patterns," *Nature Partner Journals on Artificial Intelligence*, 1, 20, 2025.
`https://www.nature.com/articles/s44387-025-00031-9`

Workshop

NeurIPS'25 **Yuheng Wu** and Thierry Tambe. "On the Role of Temperature Sampling in Test-Time Scaling," *in Efficient Reasoning Workshop and Foundations of Reasoning in LMs Workshop at the Conference on Neural Information Processing Systems*, Dec. 2025

ICML'25 **Yuheng Wu**, Jianwen Xie, Denghui Zhang, and Zhaozhuo Xu. "DEL-ToM: Inference-Time Scaling for Theory-of-Mind Reasoning via Dynamic Epistemic Logic," *in Efficient Systems for Foundation Models Workshop at the International Conference on Machine Learning*, Jul. 2025

ICLR'25 **Yuheng Wu**, Wentao Guo, Zirui Liu, Zhaozhuo Xu, and Denghui Zhang. "Sensitivity Meets Sparsity: The Impact of Extremely Sparse Parameter Patterns on Theory-of-Mind of Open-Source Large Language Models," *in Open Science for Foundation Models Workshop at the International Conference on Learning Representations*, Apr. 2025.

Experience

05.2025 – now **Research Intern**, Test-Time Methods for LLM Reasoning, Stanford University.
Mentor/Collaborator: **Thierry Tambe** and **Azalia Mirhoseini**

03.2025 – 09.2025 **Research Intern**, Logical Reasoning and Formal Methods, Stanford University.
Mentor/Collaborator: **Alex Aiken** and **Sanmi Koyejo**

06.2024 – 09.2025 **Research Intern**, Reasoning and Interpretability, Stevens Institute of Tech. & UIUC.
Mentor/Collaborator: **Zhaozhuo Xu**, **Denghui Zhang**, and **Heng Ji**

09.2023 – 05.2024 **Research Intern**, Multi-Spectral Computational Imaging, Wuhan University.
Mentor/Collaborator: **Xiaoguang Mei** and **Jiayi Ma**

Honors and Awards

2021, 2023 National Scholarship, Ministry of Education, P.R.China

2021, 2022, 2023 Merit Student, Wuhan University

2023 Outstanding Young Volunteer, Wuhan University

2022 Yu Gang - Song Xiao Scholarship, Wuhan University

Service

Reviewer NeurIPS 2025, ER@NeurIPS 2025, ES-FoMo@ICML 2025, SCI-FM@ICLR 2025, IEEE Transactions on Neural Networks and Learning Systems, Pattern Recognition, IEEE Transactions on Image Processing

Grader EE 263: Matrix Methods, Stanford University, 2025 Fall

Presentations

Invited Talk