

WEIHUA DU

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🔗 <https://stiglidu.github.io> 🌐 StigLidu 🗂 <https://scholar.google.com/citations?user=6CqQ4L8AAAAJ>

EDUCATION

Ph.D. Student in Language Technologies Institute

Carnegie Mellon University

📅 Aug. 2024 – Ongoing

📍 Pittsburgh, US

- Co-advised by Prof. Yiming Yang and Prof. Sean Welleck.
- Working on LLM agents, including improving robustness and capacity of agents, designing effective inference-time algorithms, and developing methods for long-context management towards complex tasks.

Bachelor of Engineering in Computer Science (Yao Class)

Tsinghua University

📅 Sep. 2020 – Jun. 2024

📍 Beijing, China

- GPA 3.94 / 4.00;
- Gold medalist at the 2018 China National Olympiad in Informatics (CNOI).

Visiting Student

Massachusetts Institute of Technology

📅 Feb. 2023 – Aug. 2023

📍 Cambridge, US

- Advised by Prof. Joshua B. Tenenbaum and Prof. Chuang Gan.
- Specializing in LLM Agents and Embodied AI.

RESEARCH EXPERIENCE

Research Intern

ByteDance Seed

📅 May. 2025 – Aug. 2025

📍 San Jose, US

- Advised by Dr. Jiecao Chen;
- **Research:** Reinforcement training for LLM agents and long-context management [10, 11].

Research Intern

MIT-IBM Watson AI Lab, Massachusetts Institute of Technology

📅 Feb. 2023 – Jun. 2024

📍 Cambridge, US / Remote

- Advised by Prof. Joshua B. Tenenbaum and Prof. Chuang Gan;
- **Research:** LLM Agents, Embodied AI, Multi-Agent Collaboration [3, 4, 6].

Research Intern

Shanghai Artificial Intelligence Laboratory

📅 Aug. 2023 – Jul. 2024

📍 Shanghai, China

- Advised by Dr. Wenwei Zhang and Dr. Kai Chen;
- **Research:** Iteration of InternLM, focusing on improving tool calling capabilities [5].

Research Intern

Institute for Interdisciplinary Information Sciences (IIIS)

📅 Jun. 2022 – Jan. 2023

📍 Beijing, China

- Advised by Prof. Yi Wu;
- **Research:** Reinforcement learning application for the building industry [1] and an RL algorithm for policy diversity [2].

PUBLICATION

(SORT BY PUBLICATION DATE IN DESCENDING ORDER. *DENOTES EQUAL CONTRIBUTION)

- [12] Training Proactive and Personalized LLM Agents [link] ArXiv
Authors: Weiwei Sun, Xuhui Zhou, **Weihua Du**, Xingyao Wang, Sean Welleck, Graham Neubig, Maarten Sap, Yiming Yang
- [11] Scaling LLM Multi-turn RL with End-to-end Summarization-based Context Management [link] ArXiv
Authors: Miao Lu, Weiwei Sun, **Weihua Du**, Zhan Ling, Xuesong Yao, Kang Liu, Jiecao Chen
- [10] Generalizable End-to-End Tool-Use RL with Synthetic CodeGym [link] ArXiv
Authors: **Weihua Du**, Hailei Gong, Zhan Ling, Kang Liu, Lingfeng Shen, Xuesong Yao, Yufei Xu, Dingyuan Shi, Yiming Yang, Jiecao Chen
- [9] ZeroTuning: Unlocking the Initial Token's Power to Enhance Large Language Models Without Training [link] ArXiv
Authors: Feijiang Han, Xiaodong Yu, Jianheng Tang, Delip Rao, **Weihua Du**, Lyle Ungar
- [8] Agentic-R1: Distilled Dual-Strategy Reasoning [link] EMNLP 2025
Authors: **Weihua Du**, Pranjal Aggarwal, Sean Welleck, Yiming Yang
- [7] Optimizing Temperature for Language Models with Multi-Sample Inference [link] ICML 2025
Authors: **Weihua Du**, Yiming Yang, Sean Welleck
- [6] Constrained Human-AI Cooperation: An Inclusive Embodied Social Intelligence Challenge [link] NeurIPS D&B 2024
Authors: **Weihua Du***, Qiushi Lyu*, Jiaming Shan, Zhenting Qi, Hongxin Zhang, Sunli Chen, Andi Peng, Tianmin Shu, Kwonjoon Lee, Behzad Dariush, Chuang Gan
- [5] T-Eval: Evaluating the Tool Utilization Capability of Large Language Models Step by Step [link] ACL 2024
Authors: Zehui Chen*, **Weihua Du***, Wenwei Zhang*, Kuikun Liu, Jiangning Liu, Miao Zheng, Jingming Zhuo, Songyang Zhang, Dahua Lin, Kai Chen, Feng Zhao
- [4] Building Cooperative Embodied Agents Modularly with Large Language Models [link] ICLR 2024
Authors: Hongxin Zhang*, **Weihua Du***, Jiaming Shan, Qinhong Zhou, Yilun Du, Joshua B. Tenenbaum, Tianmin Shu, Chuang Gan
- [3] HAZARD Challenge: Embodied Decision Making in Dynamically Changing Environments [link] ICLR 2024
Authors: Qinhong Zhou*, Sunli Chen*, Yisong Wang, Haozhe Xu, **Weihua Du**, Hongxin Zhang, Yilun Du, Joshua B. Tenenbaum, Chuang Gan
- [2] Iteratively Learn Diverse Strategies with State Distance Information [link] NeurIPS 2023
Authors: Wei Fu, **Weihua Du**, Jingwei Li, Sunli Chen, Jingzhao Zhang, Yi Wu
- [1] Automatic Truss Design with Reinforcement Learning [link] IJCAI 2023
Authors: **Weihua Du***, Jinglun Zhao*, Chao Yu, Xingcheng Yao, Zimeng Song, Siyang Wu, Ruifeng Luo, Zhiyuan Liu, Xianzhong Zhao, Yi Wu

SELECTED PRIZES

Outstanding Graduate of Yao Class	Top 20% graduates in Yao Class	Jun. 2024
SenseTime Scholarship	Top 30 undergraduates in AI within China	Dec. 2023
Zheng Geru Scholarship	Comprehensive Excellent Award in Tsinghua University, top 20%	Oct. 2023
Andrew C. Yao Award (Recognition Prize)	Scholarship in Yao Class, top 20%	Sep. 2023
Mr. and Mrs. Qu Yuzhi Scholarship	Academic & Sport Award in Tsinghua University	Oct. 2022
China Collegiate Programming Contest (CCPC), Weihai Site	Rank 4, Gold Medal	Nov. 2021
Mr. and Mrs. Huang Yicong Scholarship	Comprehensive Excellent Award in Tsinghua University, top 20%	Oct. 2021
China National Olympiad in Informatics (CNOI) 2018	Rank 32, Gold Medal	Aug. 2018

SERVICE

- **Reviewer:** ICML 2025, NeurIPS 2025, SCALR@COLM 2025, AAAI 2026, ICLR 2026
- **Student Organizing Committee:** LTI-SRS 2025
- **Student Supervision:**
 - Qiushi Lyu (2024, Undergraduate at PKU; now Ph.D. at UIUC)
 - Ningyuan Yang (2025, Undergraduate at THU)
 - Yinjie Wang (2025, Ph.D. at UChicago)
- **Volunteer:**
 - Student Development Center of Tsinghua University. (187 hrs documented volunteer service)