

# WEIHUA DU

@ weihua@cs.cmu.edu ☎ (+1) 347 251 2777 / (+86) 180 6877 8796 📧 GHC 6711, Carnegie Mellon University, Pittsburgh, PA, US  
🔗 <https://stiglidu.github.io> 🌐 StigLidu 🗂 <https://scholar.google.com/citations?user=6CqQ4L8AAAAJ>

## EDUCATION

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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.

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), leading to direct admission into Tsinghua University.

Visiting Student

**Massachusetts Institute of Technology**

📅 Feb. 2023 – Aug. 2023

📍 Cambridge, US

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

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

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[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

## RESEARCH EXPERIENCE

### Research Assistant

**Language Technologies Institute (LTI), Carnegie Mellon University**

Aug. 2024 – Ongoing

Pittsburgh, US

- Co-advised by Prof. Yiming Yang and Prof. Sean Welleck;
- Research: LLM inference-time algorithms [7, 9] and post-training [8, 11]; LLM Agents [10].

### 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), Tsinghua University**

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].

## 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)