

TIANBAO XIE

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RESEARCH FOCUS AREAS

My primary area of focus is Natural Language Processing and Artificial Intelligence, and I'm passionate about key problems in building applications to liberate human employees from labor. I am particularly interested in the following subfields: executable language grounding (XLANG), structured knowledge grounding, semantic parsing/code generation, as well as applications and advancements pertaining to Large Language Models (LLMs). Furthermore, I am eager to explore the intersection of this research with other fields such as Reinforcement Learning (RL) and robotics.

EDUCATION

The University of Hong Kong • Hong Kong Aug. 2022 – Jun. 2026 (expected)
Ph.D. • Natural Language Processing with Dr. Tao Yu (core), Dr. Lingpeng Kong and Prof. Kao, Benjamin C.M.
Harbin Institute of Technology • Harbin Aug. 2018 – Jun. 2022
Bachelor of Engineering • *Computer Science* • *Honors School*

PROJECTS & PUBLICATIONS (SELECTED)

OSWorld: Benchmarking Multimodal Agents for Open-Ended Tasks in Real Computer Environments Oct. 2023 – Apr. 2024
Arxiv
Tianbao Xie, Danyang Zhang, Jixuan Chen, Xiaochuan Li, Siheng Zhao, Ruisheng Cao, Toh Jing Hua, Zhoujun Cheng, Dongchan Shin, Fangyu Lei, Yitao Liu, Yiheng Xu, Shuyan Zhou, Silvio Savarese, Caiming Xiong, Victor Zhong, Tao Yu
OpenAgents: An Open Platform for Language Agents in the Wild Mar. 2023 – Oct. 2023
3.5k stars on GitHub
Tianbao Xie*, Fan Zhou*, Zhoujun Cheng*, Peng Shi*, Luoxuan Weng*, Yitao Liu*, Toh Jing Hua, Junning Zhao, Qian Liu, Che Liu, Leo Z. Liu, Yiheng Xu, Hongjin Su, Dongchan Shin, Caiming Xiong, Tao Yu
Text2Reward: Automated Dense Reward Function Generation for Reinforcement Learning Feb. 2023 – Sep. 2023
ICLR 2024 Spotlight
Tianbao Xie*, Siheng Zhao*, Chen Henry Wu, Yitao Liu, Qian Luo, Victor Zhong, Yanchao Yang, Tao Yu
Binding Language Models in Symbolic Languages Feb. 2022 – Oct. 2022
ICLR 2023 Spotlight
Zhoujun Cheng*, **Tianbao Xie***, Peng Shi, Chengzu Li, Rahul Nadkarni, Yushi Hu, Caiming Xiong, Dragomir Radev, Mari Ostendorf, Luke Zettlemoyer, Noah A. Smith, Tao Yu
UnifiedSKG: Unifying and Multi-Tasking Structured Knowledge Grounding with Text-to-Text Language Models Jun. 2021 – Jan. 2022
EMNLP 2022 Oral
Tianbao Xie*, Chen Henry Wu*, Peng Shi, Ruiqi Zhong, Torsten Scholak, Michihiro Yasunaga, Chien-Sheng Wu, Ming Zhong, Pengcheng Yin, Sida I. Wang, Victor Zhong, Bailin Wang, Chengzu Li, Connor Boyle, Ansong Ni, Ziyu Yao, Dragomir Radev, Caiming Xiong, Lingpeng Kong, Rui Zhang, Noah A. Smith, Luke Zettlemoyer, Tao Yu

HONORS (SELECTED)

Hong Kong PhD Fellowship UGC, Hong Kong SAR, Apr. 2022
Kwang-Hua Scholarship Kwang-Hua Education Foundation, China, Nov. 2021
National Scholarship, twice Ministry of Education, China, Oct. 2020, Oct. 2019
MCM, Meritorious Winner Consortium for Mathematics and Its Application, America, Apr. 2020

COMMUNITY WORK

Reviewer ACL, EMNLP, ARR, ICLR
Others OpenAgents (over 2k stars), Chain-of-ThoughtsPapers (over 1.5k stars), XLang paper reading, etc

MISCs

- Programming languages: Python \gg SQL \approx Java $>$ C/C++
- Frameworks: OpenAI APIs & LangChain, etc. $>$ transformers $>$ PyTorch $>$ stable-baselines-3 & gym $>$ Flask (a little) + Bash, Git, Markdown, L^AT_EX, etc.
- Background Knowledge: NLP (LLMs, semantic parsing, structured knowledge, etc.) \gg RL $>$ Robotics $>$ CV