

Kai Zhang

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EDUCATION

The Ohio State University Ph.D. in Computer Science and Engineering • GPA: 4.0/4.0	Ohio, USA Aug 2022-May 2026 (Expected)
Zhejiang University City College B.E. in Computer Science and Technology • GPA: 3.99/4.0 (93.51/100) Rank: 1/118	Zhejiang, China Sept 2016-Jun 2020

RESEARCH EXPERIENCE

OSU NLP Group, The Ohio State University Research Assistant; Advisor: Yu Su	Ohio, USA Aug 2022-Present
Google DeepMind Student Researcher; Host: Yi Luan, Hexiang (Frank) Hu, and Ming-Wei Chang	Washington, USA Aug 2023-Mar 2024
STCA Semantics and Knowledge Team, Microsoft Research Intern; Host: Chongyang Tao and Tao Shen	Beijing, China Mar 2022-July 2022
Minds, Machines, and Society Group, Dartmouth College Research Intern; Advisor: Soroush Vosoughi	New Hampshire, USA Jun 2020-Sept 2020
THU NLP Group, Tsinghua University Research Assistant; Advisor: Zhiyuan Liu	Beijing, China Nov 2019-Mar 2021
CCAI, Zhejiang University City College Research Assistant; Advisors: Lin Sun and Fanwei Zhu	Zhejiang, China Jan 2018-Nov 2019

SELECTED PUBLICATIONS

(* indicates equal contribution, † indicates first student author, # indicates work (co-)supervised by me.)

- MMMU: A Massive Multi-discipline Multimodal Understanding and Reasoning Benchmark for Expert AGI**
Xiang Yue, Yuansheng Ni, Kai Zhang, Tianyu Zheng, Ruoqi Liu, Ge Zhang, Samuel Stevens, Dongfu Jiang, Weiming Ren, Yuxuan Sun, Cong Wei, Botao Yu, Ruibin Yuan, Renliang Sun, Ming Yin, Boyuan Zheng, Zhenzhu Yang, Yibo Liu, Wenhao Huang, Huan Sun, Yu Su, and Wenhui Chen
In CVPR (**Oral**), 2024.
- Adaptive Chameleon or Stubborn Sloth: Revealing the Behavior of Large Language Models in Knowledge Conflicts**
Jian Xie*, Kai Zhang*, Jiangjie Chen, Renze Lou, and Yu Su
In ICLR (**Spotlight**), 2024.
- MUFFIN: Curating Multi-Faceted Instructions for Improving Instruction-Following**
Renze Lou, Kai Zhang, Jian Xie, Yuxuan Sun, Janice Ahn, Hanzi Xu, Yu Su, and Wenpeng Yin
In ICLR, 2024.
- ImagenHub: Standardizing the Evaluation of Conditional Image Generation Models**
Max Ku, Tianle Li, Kai Zhang, Yujie Lu, Xingyu Fu, Wenwen Zhuang, and Wenhui Chen
In ICLR, 2024.
- UMIE: Unified Multimodal Information Extraction with Instruction Tuning**
Lin Sun*, Kai Zhang*, Qingyuan Li*, and Renze Lou
In AACL (**Oral**), 2024.

6. **PathAsst: Redefining Pathology through Generative Foundation AI Assistant for Pathology**
Yuxuan Sun, Chenglu Zhu, Sunyi Zheng, Kai Zhang, Zhongyi Shui, Xiaoxuan Yu, Yizhi Zhao, Honglin Li, Yunlong Zhang, Ruoja Zhao, Xinheng Lyu, and Lin Yang
In AAAI (Oral), 2024.
7. **Automatic Evaluation of Attribution by Large Language Models**
Xiang Yue, Boshi Wang, Ziru Chen, Kai Zhang, Yu Su, and Huan Sun
In Findings of EMNLP, 2023.
8. **MagicBrush: A Manually Annotated Dataset for Instruction-Guided Image Editing**
Kai Zhang*, Lingbo Mo*, Wenhui Chen, Huan Sun, and Yu Su
In NeurIPS Datasets and Benchmarks, 2023.
9. **Unifier: A Unified Retriever for Large-Scale Retrieval**
Tao Shen, Xiubo Geng, Chongyang Tao, Can Xu, Guodong Long, Kai Zhang, and Daxin Jiang
In KDD, 2023.
10. **ChatDoctor: A Medical Chat Model Fine-Tuned on a Large Language Model Meta-AI (LLaMA) Using Medical Domain Knowledge**
Yunxiang Li, Zihan Li, Kai Zhang, Ruilong Dan, and You Zhang
In Cureus, 2023.
11. **Aligning Instruction Tasks Unlocks Large Language Models as Zero-Shot Relation Extractors**
Kai Zhang, Bernal Jiménez Gutiérrez, and Yu Su
In Findings of ACL, 2023.
12. **LED: Lexicon-Enlightened Dense Retriever for Large-Scale Retrieval**
Kai Zhang, Chongyang Tao, Tao Shen, Can Xu, Xiubo Geng, Binxing Jiao, and Daxin Jiang
In WWW (Oral), 2023.
13. **GradTS: A Gradient-Based Automatic Auxiliary Task Selection Method Based on Transformer Network**
Weicheng Ma, Renze Lou, Kai Zhang, Lili Wang, and Soroush Vosoughi
In EMNLP, 2021.
14. **Unified and Incremental SimRank: Index-free Approximation with Scheduled Principle**
Fanwei Zhu, Yuan Fang, Kai Zhang†, Kevin Chen-Chuan Chang, Hongtai Cao, Zhen Jiang, and Minghui Wu
In IEEE TKDE, 2021.
15. **Contributions of Transformer Attention Heads in Multi- and Cross-lingual Tasks**
Weicheng Ma*, Kai Zhang*, Renze Lou, Lili Wang, and Soroush Vosoughi
In ACL (Oral), 2021.
16. **Open Hierarchical Relation Extraction**
Kai Zhang*, Yuan Yao*, Ruobing Xie, Xu Han, Zhiyuan Liu, Fen Lin, Leyu Lin, and Maosong Sun
In NAACL-HLT, 2021.
17. **Adversarial Language Games for Advanced Natural Language Intelligence**
Yuan Yao, Haoxi Zhong, Zhengyan Zhang, Xu Han, Xiaozhi Wang, Kai Zhang, Chaojun Xiao, Guoyang Zeng, Zhiyuan Liu, and Maosong Sun
In AAAI, 2021.
18. **RpBERT: A Text-image Relation Propagation-based BERT Model for Multimodal NER**
Lin Sun*, Jiquan Wang*, Kai Zhang, Fangsheng Weng, and Yindu Su
In AAAI, 2021.
19. **TOI-CNN: A Solution of Information Extraction on Chinese Insurance Policy**
Lin Sun*, Kai Zhang*†, Fule Ji, and Zhenhua Yang
In NAACL-HLT, 2019.

PREPRINTS

1. **MagicLens: Self-Supervised Image Retrieval with Open-Ended Instructions**
Kai Zhang, Yi Luan, Hexiang Hu, Kenton Lee, Siyuan Qiao, Wenhua Chen, Yu Su, and Ming-Wei Chang
arXiv:2403.19651, 2024.
2. **TravelPlanner: A Benchmark for Real-World Planning with Language Agents**
Jian Xie*, Kai Zhang*, Jiangjie Chen, Tinghui Zhu, Renze Lou, Yuandong Tian, Yanghua Xiao, and Yu Su
arXiv:2402.01622, 2024.
3. **Deductive Beam Search: Decoding Deducible Rationale for Chain-of-Thought Reasoning**
Tinghui Zhu*, Kai Zhang*, Jian Xie, and Yu Su
arXiv:2401.17686, 2024.
4. **Multimodal Question Answering for Unified Information Extraction**
Yuxuan Sun*, Kai Zhang*, and Yu Su
arXiv:2310.03017, 2023.
5. **Is Prompt All You Need? No. A Comprehensive and Broader View of Instruction Learning**
Renze Lou, Kai Zhang, and Wenpeng Yin
arXiv:2303.10475, 2023.

SELECTED HONORS & AWARDS

WWW 2023 Student Travel Award	2023
Honor for Seeking Truth & Valedictorian (Top 1), Zhejiang University City College	2020
National Scholarship (Top 1%), Ministry of Education of P.R.China	2019
Chinese College Students Self-Motivated Stars (Top 200 in China), All-China Students' Federation	2019
Merit-based Scholarship (Top 1%), Zhejiang University City College	2017-2019
Zhejiang Province Scholarship (Top 1%), Department of Education of Zhejiang	2017

MENTORING

Renze Lou (ZUCC BS → PSU PhD); 2019-2022; Instruction Tuning
Jian Xie (ZUCC BS → FDU MS); 2019-Present; Tool-Augmented LLMs, Language Agent
Yuxuan Sun (ZUCC BS → ZJU PhD); 2019-Present; Multimodality, Medical AI
Tinghui Zhu (FDU BS → FDU MS); 2023-Present; Reasoning

SERVICES

PC Member/Reviewer:
ARR (since 22); CCKS'22-23; EMNLP'22-23; ACL'23; NAACL'24
WWW'23; KDD'23; SDM'24
AAAI'23-24; NeurIPS'23; ICLR'24; ICML'24; COLM'24
CVPR'24