

# Kai Zhang

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## EDUCATION

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### The Ohio State University

Ph.D. in Computer Science and Engineering

• GPA: 4.0/4.0

Ohio, USA

Aug 2022-May 2027 (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

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### Google DeepMind

Student Researcher; Host: Yi Luan and Hexiang (Frank) Hu

Washington, USA

Aug 2023-Present

### OSU NLP Group, The Ohio State University

Research Assistant; Advisor: Yu Su

Ohio, USA

Aug 2022-Present

### 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

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

### 1. 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.

### 2. 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.

### 3. 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.

### 4. Aligning Instruction Tasks Unlocks Large Language Models as Zero-Shot Relation Extractors

Kai Zhang, Bernal Jiménez Gutiérrez, Yu Su

In Findings of ACL, 2023.

### 5. 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.

### 6. 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.

7. **Unified and Incremental SimRank: Index-free Approximation with Scheduled Principle**  
Fanwei Zhu, Yuan Fang, Kai Zhang<sup>†</sup>, Kevin Chen-Chuan Chang, Hongtai Cao, Zhen Jiang, and Minghui Wu  
In IEEE TKDE, 2021.
8. **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.
9. **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.
10. **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.
11. **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.
12. **TOI-CNN: A Solution of Information Extraction on Chinese Insurance Policy**  
Lin Sun\*, Kai Zhang<sup>\*†</sup>, Fule Ji, and Zhenhua Yang  
In NAACL-HLT, 2019.

## PREPRINTS

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1. **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, Ruojia Zhao, Xinheng Lyu, and Lin Yang.  
arXiv:2305.15072, 2023.
2. **Adaptive Chameleon or Stubborn Sloth: Unraveling the Behavior of Large Language Models in Knowledge Conflicts**  
# Jian Xie\*, Kai Zhang\*, Jiangjie Chen, Renze Lou, and Yu Su  
arXiv:2305.13300, 2023.
3. **Automatic Evaluation of Attribution by Large Language Models**  
Xiang Yue, Boshi Wang, Kai Zhang, Ziru Chen, Yu Su, and Huan Sun  
arXiv:2305.06311, 2023.
4. **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

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WWW 2023 Student Travel Award	2023
Honor for Seeking Truth & Commencement Student Speaker (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

## TALK

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### Aligning LLM Instruction Tasks for Zero-Shot Relation Extraction.

University of Notre Dame NLP Seminar. March 2023

AI TIME Seminar. May 2023

ACL'23 Matching Workshop. Jul 2023

## SERVICES

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### **PC Member/Reviewer:**

ARR (since 22); CCKS'22-23; EMNLP'22-23; ACL'23

WWW'23; KDD'23; SDM'24

AAAI'23-24; NeurIPS'23; ICLR'24