

WeizhiFei

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Introduction

My research investigate knowledge representation and reasoning from a mathematical perspective, including:

Neural graph database: reasons complex logical queries over large, incomplete knowledge graphs.

Prompt compression: compresses inputted prompt of LLMs to facilitate long context inference.

Knowledge editing: modify parametric knowledge quickly and precisely in LLMs.

I have three papers accepted by ACL (the Top NLP conference) and one paper accepted by KDD (the Top data mining conference). I also possess strong Python programming skills, specializing in PyTorch and Hugging Face.

Education

Tsinghua University, Ph.D. candidate in Computational Mathematics 2022.09 - now

- General Scholarship of Tsinghua University (2023,2024)

Central South University, Bachelor of Applied Mathematics 2018.09 - 2022.06

- Outstanding Graduate; Rank: Top 3%

Publications

[ACL]Wasserstein-Fisher-Rao Embedding: Logical Query Embeddings with Local Comparison and Global Transport
Zihao Wang, **Weizhi Fei**, Hang Yin, Yangqiu Song, Ginny Y Wong, Simon See

Findings of Association for Computational Linguistics(ACL) 2023, Top Conference[link]

[ACL] Extending Context Window of Large Language Models via Semantic Compression

Weizhi Fei, Xueyan Niu, Pingyi Zhou, Lu Hou, Bo Bai, Lei Deng, Wei Han

Findings of Association for Computational Linguistics(ACL) 2024, Top Conference[link]

[ACL]Extending Complex Logical Queries on Uncertain Knowledge Graphs

Weizhi Fei, Zihao Wang, Hang Yin, Yang Duan, Yangqiu Song

Main conference of Association for Computational Linguistics 2025, Top Conference [link]

[KDD]EFOk-CQA: Towards Knowledge Graph Complex Query Answering beyond Set Operation

Hang Yin, Zihao Wang, **Weizhi Fei**, Yangqiu Song

Dataset and benchmark track of Knowledge Discover and Data-mining (KDD) 2025, Top Conference (Oral) [link]

Internship

Machine Learning Researcher, Prompt Compression, Huawei – Beijing 2023.03|2024.03

- Whole process of development of prompt compression algorithm based on large language model: responsible for the the pipeline design and coding implementation, resulting in three patents.

Machine Learning Researcher, Knowledge Editing, Huawei – Beijing 2024.03|2025.03

- Whole process of development of knowledge editing framework for large language model: responsible for the the pipeline design and coding implementation, resulting in one patents.