

Mingchen Li

University of Massachusetts, Amherst

Email: mingchenli@umass.edu

Mobile: 470-815-7917

Blog

Github

SUMMARY

My primary research focus on natural language processing and data mining, encompassing key areas such as **Language Model, Knowledge Graph, Information Extraction, Question Answering, Text Classification, and Link Prediction.**

EDUCATION

- **University of Massachusetts, Amherst** Massachusetts, US
PHD student in Computer Science 09.2024-
- **Georgia State University** ATL, US
M.S. in Computer Science 01.2021-12.2022

EXPERIENCE AND PROJECTS

- **University of Minnesota Twin Cities** 01.2023-09.2024
Researcher
 - **Topic:** Link prediction, Information extraction, Retrieval-based Language Model, Question answering
- **Computer Science, Georgia State University** 01.2021-12.2022
Graduate research assistant
 - **Topic:** Zero shot link prediction and question answering over knowledge graph

PUBLICATIONS AND PATENTS

- 14) **Mingchen Li**, Anne Blaes, Steven Johnson, Hongfang Liu, Hua Xu, Rui Zhang. CancerLLM: A Large Language Model in Cancer Domain. [PDF], [Code].
- 13). **Mingchen Li**, Zaifu Zhan, Han Yang, Yongkang Xiao, Jiatan Huang, Rui Zhang. Benchmarking Retrieval Augmented Large Language Models in Biomedical NLP: Application, Robustness, and Self-Awareness, 2024.[PDF], [Code].
- 12). **Mingchen Li**, Halil Kilicoglu, Hua Xu, Rui Zhang. BiomedRAG: A Retrieval augmented Large Language Model for Biomedicine. Preprint 2024. [PDF], [Code].
- 11). **Mingchen Li**, Chen Ling, Rui Zhang, Liang Zhao. A Condensed Transition Graph Framework for Zero-shot Link Prediction with Large Language Models. **ICDM 2024**. [PDF], [Code].
- 10). **Mingchen Li**, Lifu Huang. Understand the Dynamic World: An End-to-End Knowledge Informed Framework for Open Domain Entity State Tracking. **SIGIR 2023**. [PDF], [Code].
- 9). **Mingchen Li**, Rui Zhang. How far is Language Model from 100% Few-shot Named Entity Recognition in Medical Domain. **JAMIA 2024**. [PDF], [Code].
- 8). **Mingchen Li**, Junfan Chen, Samuel Mensah, Nikolaos Aletras, Xiulong Yang, Yang Ye. A Hierarchical N-Gram Framework for Zero-Shot Link Prediction. **EMNLP 2022 Findings**. [PDF], [Code]
- 7). **Mingchen Li**, Shihao Ji. Semantic Structure based Query Graph Prediction for Question Answering over Knowledge Graph. **COLING 2022**. [PDF], [Code].
- 6). **Mingchen Li**, Zili Zhou, Yanna Wang. Multi-Fusion Chinese WordNet (MCW): Compound of Machine Learning and Manual Correction. **CICLing 2019**. [PDF].
- 5). Huixue Zhou, **Mingchen Li**, Yongkang Xiao, Han Yang, Rui Zhang. LEAP: LLM instruction-example adaptive prompting framework for biomedical relation extraction. **JAMIA 2024**. [PDF], [Code].
- 4). Han Yang, **Mingchen Li**, Huixue Zhou, Yongkang Xiao, Qian Fang, Rui Zhang. One LLM is not Enough: Harnessing the Power of Ensemble Learning for Medical Question Answering.[PDF], [Code].
- 3). **Mingchen Li**, Zili Zhou, Yanna Wang. Solving the Chinese Physical Problem Based on Deep Learning and Knowledge Graph. **ICITE 2019**. [PDF].
- 2). Yanna Wang, Zili Zhou, **Mingchen Li**, Yantian Hu, Zheng Su, Dezhi Rong and Ning Zhang. An intelligent collection system for testing paper. Publication number: CN107908752A. (1st student author).
- 1). Zili Zhou, Yanna Wang, Jinghu Zhang, Ning Zhang, **Mingchen Li**, Dezhi Rong. An intelligent hardware control method driven by knowledge graph. Publication number: CN107272521B. (2st student author).

SKILLS SUMMARY

- **Languages:** Python, Java, SQL(Oracle), Unix, Linux, JSON, C++, C
- **Frameworks:** TensorFlow, Pytorch, MySQL, MongoDB, Neo4j, Transformers, Scikit-Learn, Pandas, PyCaret, PiML, Vaex