Mingchen Li

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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

- **UMass Amherst** — Massachusett, 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-Present
  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. Preprint 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