Xiaxia Wang (王夏霞)

Wolfson Building, Parks Road, Oxford, OX1 3QD, United Kingdom
Email: xiaxia.wang@cs.ox.ac.uk, Homepage: https://xiaxia-wang.github.io/

About Me

Currently, I am a Ph.D. student in the Department of Computer Science of University of Oxford. I am a member of the Data and Knowledge Group, advised by Prof. Bernardo Cuenca Grau, Prof. Ian Horrocks, and Dr. David Tena Cucala. Before that, I achieved my M.S. degree of Computer Technology from Nanjing University in 2022. I worked in Websoft Research Group, supervised by Prof. Gong Cheng and Prof. Yuzhong Qu. I obtained my B.S. degree of Information and Computing Science from Nanjing University of Aeronautics and Astronautics in 2019.

Education

University of Oxford *Oct. 2022 – Now*
Ph.D. student of Computer Science
Advisors: Prof. Bernardo Cuenca Grau, Prof. Ian Horrocks, Dr. David Tena Cucala

Nanjing University *Sept. 2019 – June 2022*
M.S. degree of Computer Technology
Supervisors: Prof. Gong Cheng and Prof. Yuzhong Qu

Nanjing University of Aeronautics and Astronautics *Sept. 2015 – June 2019*
B.S. degree of Information and Computing Science
GPA: 4.5/5.0, Ranking: 1/70

Research Interests

My research interests include **neuro-symbolic reasoning**, **knowledge graphs**, and **semantic search** technologies applied in intelligent systems.

Currently I focus on interpreting machine learning models for knowledge graph reasoning using symbolic rules, aiming to achieve both **effective** and **explainable** systems. I have also worked on semantic search approaches applied in dataset search systems, including data summarization, query analysis, and information retrieval.

Publications (Reverse Chronological)

1. **Xiaxia Wang**, David Tena Cucala, Bernardo Cuenca Grau, Ian Horrocks
   Faithful Rule Extraction for Differentiable Rule Learning Models.
   In Proc. of the 12th International Conference on Learning Representations (ICLR 2024).
2. **Xiaxia Wang**, Gong Cheng
   A Survey on Extractive Knowledge Graph Summarization: Applications, Approaches, Evaluation, and Future Directions.
   In Proc. of the 33rd International Joint Conference on Artificial Intelligence (IJCAI 2024).
3. Qiaosheng Chen, Weiqing Luo, Zixian Huang, Tengteng Lin, **Xiaxia Wang**, Ahmet Soylu, Basil Ell, Baifan Zhou, Evgeny Kharlamov, Gong Cheng
   ACORDAR 2.0: A Test Collection for Ad Hoc Dataset Retrieval with Densely Pooled Datasets and Question-Style Queries.
   In Proc. of the 47th International ACM SIGIR Conference (SIGIR 2024).

4. **Xiaxia Wang**, Gong Cheng, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu
BANDAR: Benchmarking Snippet Generation Algorithms for (RDF) Dataset Search.
In IEEE Transactions on Knowledge and Data Engineering 35(2) (TKDE 2023).
5. Tengteng Lin, Qiaosheng Chen, Gong Cheng, Ahmet Soylu, Basil Ell, Ruoqi Zhao, Qing Shi, **Xiaxia Wang**, Yu Gu, Evgeny Kharlamov
ACORDAR: A Test Collection for Ad Hoc Content-Based (RDF) Dataset Retrieval.
In Proc. of the 45th International ACM SIGIR Conference (SIGIR 2022).
6. **Xiaxia Wang**, Tengteng Lin, Weiqing Luo, Gong Cheng, Yuzhong Qu
CKGSE: A Prototype Search Engine for Chinese Knowledge Graphs.
In Data Intelligence 4(1) (DI 2022).
7. **Xiaxia Wang**, Gong Cheng, Tengteng Lin, Jing Xu, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu
PCSG: Pattern-Coverage Snippet Generation for RDF Datasets.
In Proc. of the 20th International Semantic Web Conference (ISWC 2021).
8. **Xiaxia Wang**, Tengteng Lin, Weiqing Luo, Gong Cheng, Yuzhong Qu
Content-Based Open Knowledge Graph Search: A Preliminary Study with OpenKG.CN.
In Proc. of the 2021 China Conference on Knowledge Graph and Semantic Computing (CCKS 2021).
9. **Xiaxia Wang**, Jinchi Chen, Shuxin Li, Gong Cheng, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu
A Framework for Evaluating Snippet Generation for Dataset Search.
In Proc. of the 18th International Semantic Web Conference (ISWC 2019).
10. **Xiaxia Wang**, Gong Cheng, Evgeny Kharlamov
Towards Multi-Facet Snippets for Dataset Search.
In Proc. of the 6th International Workshop on Dataset PROFILing and Search (PROFILES 2019).
11. Jinchi Chen, **Xiaxia Wang**, Gong Cheng, Evgeny Kharlamov, Yuzhong Qu
Towards More Usable Dataset Search: From Query Characterization to Snippet Generation.
In Proc. of the 28th ACM International Conference on Information and Knowledge Management (CIKM 2019).

[DBLP Page] [Google Scholar] [Semantic Scholar]

Awards and Honors

- IJCAI-AIJ Travel Grant *2024*
- Outstanding Master Thesis of Jiangsu Computer Society *2023*
- Outstanding Master Thesis of Nanjing University *2023*
- Bosch Scholarship on 'Collaborative AI in Production' (fully funded for Ph.D. program) *2022*
- National Scholarship *2021*
- ISWC Student Grant *2021*
- First-Class Academic Scholarship of Nanjing University *2020 – 2022*
- Outstanding Graduate Student of Nanjing University *2019, 2021*
- Jiangsu Financial Leasing Scholarship *2019*
- Huawei Scholarship *2018*
- First-Class Outstanding Student Scholarship *2016 – 2019*

Teaching Assistant

- Database Systems Implementation *Hilary Term 2023*
  – Giving weekly classes and marking problem sheets
  – Classes rated by students: 4.27/5.00

- Graph Theory and Algorithms *Spring 2022*
- Graph Theory *Spring 2021, Spring 2020*
  – Marking problem sheets, answering questions, and invigilation
  – For about 70 undergraduate and graduate students

Academic Services

Program Committee

- International Conference on Information and Knowledge Management (CIKM) *2020 – 2024*
- International Conference on Learning Representations (ICLR) *2025*
- International Semantic Web Conference (ISWC) *2022 – 2023*
- International Conference on Knowledge Representation and Reasoning (KR) *2024*

Review Committee

- Journal of Web Semantics

Others

- Oxford Women in Computer Science Society (OxWoCS): Conference Officer *2023 – 2024*
  – Co-chair of the 10th OxBridge Women in Computer Science Conference (held in Oxford)
  – Oxford Officer of the 11th OxBridge Women in Computer Science Conference (held in Cambridge)
- IJCAI: Assistant Workflow Chair *2023*

Language Skills

- Chinese (Mandarin): Native
- English: Bilingual

Updated at: *August 2024*