Keyu Wang

📱 (+49) 1525 6272814 | ✉ keyu.wang@student.uni-tuebingen.de | 🎓 Google Scholar | ⭘ GitHub | 🔗 LinkedIn

EDUCATION

University of Tuebingen   Tuebingen, Germany
M.Sc. in Machine Learning   *Oct. 2024 – Present*

Cumulative GPA: 1.28 (Germany System: 1.0 is the best, 5.0 is the lowest)
Relevant coursework: Non-convex Optimization of Deep Learning, etc.

Southeast University   Nanjing, China
B.Eng. in Artificial Intelligence   *Sep. 2020 – Jun. 2024*

Cumulative GPA: 3.79/4.00, Top 10% (Chinese System: 4.0 is the best, 0 is the lowest)
Relevant coursework: Linear Algebra, Calculus, Optimization, Probability Statistics & Stochastic Processes, Data Structures, Database, Distributed Systems, Machine Learning, Deep Learning, Natural Language Processing, etc.

RESEARCH INTERESTS

- **Machine Learning Systems:** Efficient and scalable training, fine-tuning, deployment and inference via fundamental optimization & system co-design, such as quantization and sparsity.
- **Optimization:** Optimization and theoretical understanding in Modern Machine Learning and Deep Neural Networks.
- **Generative AI:** Large Language Models, Diffusion Models, Multimodal Large Language Models.
- **XAI & Trustworthy :** Safe & Explainable Language Models, Neuro-symbolic AI, etc.

PUBLICATIONS & PREPRINTS

Conference paper

[1] **Can Large Language Models Understand DL-Lite Ontologies? An Empirical Study.**
Keyu Wang, Guilin Qi, Jiaqi Li and Songlin Zhai. In Findings of the Association for Computational Linguistics: EMNLP 2024, pages 2503–2519. https://aclanthology.org/2024.findings-emnlp.141/

[2] **An Embedding-based Approach to Inconsistency-tolerancy Reasoning with Inconsistent Ontologies.**
Keyu Wang, Site Li, Jiaye Li, Guilin Qi and Qiu Ji. In Proceedings of The 12th International Joint Conference on Knowledge Graphs (IJCKG 2023). https://arxiv.org/abs/2304.01664

Preprint

[1] **Embedding Ontologies via Incorporating Extensional and Intensional Knowledge.**
Keyu Wang, Guilin Qi, Jiaoyan Chen, Yi Huang and Tianxing Wu. In arXiv, 2024. https://arxiv.org/abs/2402.01677

RESEARCH EXPERIENCE

Knowlegde Science & Engineering Lab, Southeast University   Nanjing, China
Undergraduate researcher | Supervisor: Prof. Dr. Guilin Qi   *Jan. 2022 – Jul. 2024*

- Investigated on neuro-symbolic knowledge representation and reasoning, especially, reasoning and embedding with knowledge-based and web-based systems such as knowledge graphs and ontologies.
- Led three research projects and produced three first-author manuscripts, two of which were accepted by EMNLP 2024 Findings and IJCKG 2023, respectively.

INTERNSHIP

BSH Home Appliances Holding (China) Co., Ltd   Nanjing, China
Research intern | Mentor: Rick Du, Huilong An   *Jul. 2023 – Jun. 2024*

- **AI enabled efficient R&D in Wash Machine/Dryer:** Bridged the logical and casual relationships among hardware platform, program design, test standard, intermediate data and performances of Bosch and Siemens wash machines, especially, built a predictive model via deep learning to predict washing performances.

Extracurricular

Study advisor for freshman undergraduates   Sep. 2022 − Jun. 2023

Engineering leader & co-founder of Artificial Intelligence Association of Southeast University [SEU-131AIClub]
                                                                               May 2022 − Jun. 2023

Student lecturer for the course *An Entertaining Introduction to AI* at *the Second Class for Students* held jointly by
SEU-131AIClub and the Department of CSE of Southeast University   Sep. 2022 − Dec. 2022

Skills

Programming: Python (PyTorch), C/C++, Java, etc.

Tools: VS Code, Jupyter Notebook, Shell, MATLAB, HTML/CSS/JavaScript, LaTeX, MarkDown, etc.

Languages: Chinese (Native), English (IELTS 7.5).