# **Zifeng Ding**

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# Education

Ludwig Maximilian University of Munich, Ph.D. in Computer Science	Jun 2021 – Feb 2025
Technical University of Munich, MSc in Electrical and Computer Engineering	Oct 2018 - Mar 2021
East China Normal University, BEng in Electrical Engineering	Sept 2014 - Jun 2018
Professional & Academic Experience	

University of Cambridge, Research Associate (Advisor: Prof. Andreas Vlachos) Oct 2024 – present Working at Cambridge NLP Group on two main topics: (1) automated fact-checking to counter hallucination and misinformation, including the creation of a real-world dataset of 1,297 image-text claims annotated with questionanswer (QA) pairs and web-based evidence, developed with human annotators; (2) temporal reasoning with LLMs, proposing benchmarks to evaluate LLMs' ability to forecast future outcomes with confidence and to plan under interdependent temporal constraints.

### CAMEL-AI.org & Eigent AI, Visiting Research Scientist

Leading the Loong project, focused on building an agentic synthetic data generation environment for LLM posttraining using Python-based verifiers and LLM agents. Created a high-quality seed dataset of 8,729 examples across 12 domains (e.g., logic, graph theory), each paired with executable code and semantically verified answers. Developed a few-shot prompting pipeline to generate diverse, verifiable QA pairs. Currently fine-tuning LLMs with reinforcement learning (RL) on the generated data to showcase the potential of RL with verifier feedback.

University of Oxford, Visiting Researcher (Supervisor: Prof. Michael Bronstein) Apr 2024 – Oct 2024 Worked on temporal graph representation learning using state space models; proposed a method that achieved stateof-the-art performance while reducing inference time by up to 40% and GPU memory usage by up to 45% compared to prior approaches.

Ludwig Maximilian University of Munich, Ph.D. Student (Supervisor: Prof. Volker Tresp) Jun 2021 – Feb 2025 Worked on temporal knowledge graphs (TKGs) and natural language processing, including: (1) initiating the first studies on inductive knowledge representation learning for TKGs, leveraging meta-learning and LLMs; and (2) developing the first question answering framework for forecasting over TKGs by combining language models with graph representation learning to answer natural language questions about future events.

#### Siemens AG, Ph.D. Student

Responsible for applying graph machine learning and LLMs to industrial use cases, with a focus on identifying critical supply chains in supply chain knowledge graphs (KGs). Designed a retrieval-augmented generation (RAG) system that engages in multi-turn dialogue to retrieve critical information from the KG and generate answers based on the retrieved content. The system has been successfully integrated into the company's internal workflow.

# **Selected First Author Publications**

Full Publication List: https://scholar.google.com/citations?user=8RapuD4AAAAJ&hl=en

- Ding, Z., Yan, S., Yuan, Z., Hu, X., Lin, F., Vlachos, A., TCP: a Benchmark for Temporal Constraint-Based Planning, under review (2025).
- Ding, Z., Li, Y., He, Y., Norelli, A., Wu, J., Tresp, V., Bronstein, M., Ma, Y., DyGMamba: Efficiently Modeling Long-Term Temporal Dependency on Continuous-Time Dynamic Graphs with State Space Models, TMLR (2025).
- Ding, Z., Wu, J., Wu, J., Xia, Y., Xiong, B., Tresp, V., Temporal Fact Reasoning over Hyper-Relational Knowledge Graphs, EMNLP (2024).
- Ding, Z., Cai, H., Wu, J., Ma, Y., Liao, R., Xiong, B., Tresp, V., zrLLM: Zero-Shot Relational Learning on • Temporal Knowledge Graphs with Large Language Models, NAACL (2024) Oral.
- Ding, Z., Qi, R., Li, Z., He, B., Wu, J., Ma, Y., Meng, Z., Chen, S., Liao, R., Han, Z., Tresp, V., . ForecastTKGQuestions: A Benchmark for Temporal Question Answering and Forecasting over Temporal Knowledge Graphs, ISWC (2023).



Mar 2025 - present

Jun 2021 – Aug 2024

• Han, Z.\*, <u>Ding, Z.\*</u>, Ma, Y., Gu, Y., Tresp, V., Learning Neural Ordinary Equations for Forecasting Future Links on Temporal Knowledge Graphs, EMNLP (2021),\*Equal contribution.

## <u>Skills</u>

**Technical skills**: proficient in Python, PyTorch, Linux; working knowledge of C/C++ and git.

Language skills: Chinese (Native), English (Full Professional), German (Limited Working).

## Honors & Awards

European Network of AI Excellence Centres (ELISE) Scholarship	Apr 2024
Honorable Mention of Automated Knowledge Base Construction (AKBC) 2022	Nov 2022
Community Services	

Reviewer of ACL Rolling Review, NeurIPS 2023-2025, ICLR 2025, COLM 2025, ICML 2023. Area Chair of the Temporal Graph Learning Workshop @ KDD 2025. Organizer of the 8th Fact Extraction and VERification (FEVER) workshop @ ACL 2025.