Tim Schopf

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Ⓣ Tim Schopf   ○ TimSchopf   🌐 timschopf.github.io

Professional Experience

Jan. 2025 – Present   **ScaDS.AI & Dresden University of Technology**
Postdoctoral Researcher
Conducting research on "evidence-based text generation with large language models (LLMs)", "detection and correction of LLM hallucinations", and "LLM agents for scientific discovery"

Sept. 2020 – Aug. 2024   **TUM Chair of Software Engineering for Business Information Systems**
Research Associate
Led the "NLP-KG" project, which used LLMs, retrieval augmented generation (RAG), and a KG to enhance scientific document search

Co-led the "CreateData4AI" project, which aimed to create an end-to-end pipeline for structured data generation from unstructured text corpora

Co-organized "hackaTUM", the official hackathon of the Department of Computer Science at the Technical University of Munich

Taught various software engineering and natural language processing courses in addition to supervision of thesis students

Nov. 2019 – Apr. 2020   **MHP Management and IT Consulting**
Master's Thesis Student
Researching defenses against adversarial attacks on deep neural networks for computer vision in the automotive industry

Oct. 2018 – Mar. 2019   **Mercedes-Benz Group**
Data Science Intern
Responsible for identifying dealer fraud using anomaly detection

Feb. 2018 – Sept. 2018   **KIT Institute for Technology and Management in Construction**
Student Research Assistant
Responsible for CAD modeling of 3D prints and Wiki database updates

Education

Jan. 2021 – Nov. 2025   **Technical University of Munich (TUM)**
Doctorate (Dr. rer. nat.) in Computer Science
Research Areas: Natural Language Processing and Knowledge Graphs

Oct. 2017 – Aug. 2020   **Karlsruhe Institute of Technology (KIT)**
Master of Science (M.Sc.) in Information Engineering and Management
Area of Specialization: Machine Learning and Data Science

Oct. 2012 – Sept. 2017   **Universities of Stuttgart & Hohenheim**
Bachelor of Science (B.Sc.) in Information Systems
Area of Specialization: IT in Business Enterprises

Selected Publications

1   **T. Schopf**, J. Vladika, M. Färber, and F. Matthes, "Natural language inference fine-tuning for scientific hallucination detection," in *Proceedings of the Fifth Workshop on Scholarly Document Processing@ACL (SDP@ACL 2025)*, A. Singh, Ed., Venice, Austria: Association for Computational Linguistics, Aug. 2025, pp. 344–352, ISBN: 979-8-89176-265-7. ⟆ URL: https://aclanthology.org/2025.sdp-1.33.

2   S. Meisenbacher, **T. Schopf**, W. Yan, P. Holl, and F. Matthes, "An improved method for class-specific keyword extraction: A case study in the German business registry," in *Proceedings of the 20th Conference on Natural Language Processing (KONVENS 2024)*, P. H. Luz de Araujo, A. Baumann, D. Gromann, B. Krenn, B. Roth, and M. Wiegand, Eds., Vienna, Austria: Association for Computational Linguistics, Sep. 2024, pp. 159–165. ⟆ URL: https://aclanthology.org/2024.konvens-main.18.

3   **T. Schopf** and F. Matthes, "NLP-KG: A system for exploratory search of scientific literature in natural language processing," in *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 3: System Demonstrations)*, Y. Cao, Y. Feng, and D. Xiong, Eds., Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 127–135. ⟆ URL: https://aclanthology.org/2024.acl-demos.13.

4   **T. Schopf**, D. Braun, and F. Matthes, "Evaluating unsupervised text classification: Zero-shot and similarity-based approaches," in *Proceedings of the 2022 6th International Conference on Natural Language Processing and Information Retrieval*, ser. NLPIR '22, Bangkok, Thailand: Association for Computing Machinery, 2023, pp. 6–15, ISBN: 9781450397629. ⟆ DOI: 10.1145/3582768.3582795.

5   **T. Schopf**, E. Gerber, M. Ostendorff, and F. Matthes, "AspectCSE: Sentence embeddings for aspect-based semantic textual similarity using contrastive learning and structured knowledge," in *Proceedings of the 14th International Conference on Recent Advances in Natural Language Processing*, R. Mitkov and G. Angelova, Eds., Varna, Bulgaria: INCOMA Ltd., Shoumen, Bulgaria, Sep. 2023, pp. 1054–1065. ⟆ URL: https://aclanthology.org/2023.ranlp-1.113.

6   P. Schneider, **T. Schopf**, J. Vladika, M. Galkin, E. Simperl, and F. Matthes, "A decade of knowledge graphs in natural language processing: A survey," in *Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing (Volume 1: Long Papers)*, Y. He, H. Ji, S. Li, Y. Liu, and C.-H. Chang, Eds., Online only: Association for Computational Linguistics, Nov. 2022, pp. 601–614. ⟆ URL: https://aclanthology.org/2022.aacl-main.46.

Skills & Certifications

Languages	🔖	German Native Speaker, Fluent in English
Computer Languages	🔖	Python, R, C++, Java, JavaScript, TypeScript
ML/DL Frameworks & Libraries	🔖	PyTorch, LangChain, Hugging Face, NumPy, SciPy, Pandas, scikit-learn, spaCy, NLTK, Gensim, Matplotlib, Seaborn
Other Technologies & Tools	🔖	FastAPI, SQL, MongoDB, Weaviate, Pinecone, Neo4j, Docker, HTML/CSS, LaTeX, Git, Next.js
Research	🔖	Academic research and teaching in the fields of Natural Language Processing, Knowledge Graphs, and Web Application Engineering
Personal	🔖	Personable, Strong Work Ethic, Organization, Excellent Communication Skills
Certifications	🔖	Professional Scrum Master™ (PSM I)