Yuchen Zhou

Date of birth: 06/04/1994
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Research Interests: **Knowledge Graphs, Ontology, Large Language Models, Sustainability Standards**

WORK EXPERIENCE

05/2022- 07/2024	**Researcher** *fortiss, Munich, Germany* - The automation of organizational sustainability reporting using semantic web technologies (ontology and knowledge graphs). - Verifiable domain-specific standards mapping with the synergy of knowledge graphs and large language models.
01/2020- 08/2021	**Student Assistant** *Institute of Applied Informatics and Formal Description Methods (AIFB), KIT* - Development of methods for the analysis of semantically represented data. - Building a web application for client-side visualizing and optimizing SPARQL query plans with JavaScript and Python.

EDUCATION

10/2017- 08/2021	**M.Sc. Information Engineering and Management** *Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany* Grade: 1.8 (above average) **Master's thesis:** Risk Hedging for Renewable Generators with Battery **(Grade 1.0)** Storage Using a Deep Reinforcement Learning Strategy - Generated an energy supply strategy on the spot market with the reinforcement learning model for the renewable energy operator to hedge against the market risks.
09/2012- 07/2016	**B.Sc. Information Management and Information Systems** *Beijing University of Posts and Telecommunications (BUPT), Beijing, China* (University in Project 211) Grade: 2.1 National scholarship for 2 years (2014-2016) Bachelor's thesis: Research of the mobile APP using behavioral characteristics of the digital network generation

Selected Publications

Zhou, Yuchen; Gu, Xin; Junsheng Ding; Sirou, Chen; and Perzylo, Alexander: Accessing the Capabilities of KGs and LLMs in Mapping Indicators within Sustainability Reporting Standards. Accepted for publication in 20th International Conference on Semantic Systems (SEMANTICS), 2024.

Zhou, Yuchen; Cao, Yuan; and Perzylo, Alexander: Towards Digital Sustainability Reporting: An Ontology for Mapping of Indicators in GRI and ESRS. Submission accepted in 20th International Conference on Semantic Systems (SEMANTICS), 2024.

Zhou, Yuchen; Perzylo, Alexander: OntoSustain: Towards an Ontology for Corporate Sustainability Reporting. International Semantic Web Conference (ISWC), 2023.

Zhou, Yuchen; Henni, Sarah; and Staudt, Philipp, "Managing Intermittent Renewable Generation with Battery Storage using a Deep Reinforcement Learning Strategy" (2022). Wirtschaftsinformatik 2022 Proceedings. 3.

Reference

Prof. Dr. Daniel Mendez	Professor for Software Engineering at the Blekinge Institute of Technology, Sweden
	Head of the Requirements Engineering division at fortiss
	mendez@fortiss.org +49 (89) 3603522 168
Alexander Perzylo	Head of the Platform Enginieering division at fortiss
	perzylo@fortiss.org
Dr.-Ing. Tobias Käfer	Substitute professor, Institute AIFB, KIT, Karlsruhe
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Technique and tools

Programming language	Python
	JavaScript
Data analysis	R (project experience in text mining with tm package)
Database	SQL (experience in MySQL)
	SPARQL

Language skills

English – Full Professional Proficiency
Germany – Advanced (DSH2)
Chinese – Native