

Curriculum Vitae



**DANIEL
MOTZ**

APPLICANT

Friedrich Answin Daniel
Motz

Residing in Jena

+49 3641 297 5289

info@daniel-motz.de

Education

Friedrich Schiller University Jena

2020-present

M. Sc. Computer Science (expected graduation: summer term 2026)

B. Sc. Computer Science (2020–2025)

- *Minor in Philosophy*
- *PsychoChor (2023) & Collegium Vocale (2024)*

www.uni-jena.de

Georgius Agricola Grammar School (Chemnitz)

2012-2020

Advanced linguistic profile

Language certifications: English (C1), Russian (B2), Spanish (B1)

www.gym-agricola.de

Work Experience

DFG Project HisQu

2026-present

Research Assistant (MEPHISTO Working Group)

- *Development of a research data infrastructure for historical sources to capture, version, and analyze heterogeneous primary data*
- *Contributions to system architecture, data modeling, and ETL workflows in an interdisciplinary research consortium*
- *Collaboration with Germania Sacra, the University of Erfurt, and the German Historical Institute in Rome*

hisqu.uni-jena.de

DFG Project HisQu

2025-2026

Research Assistant (MEPHISTO Working Group)

Development of the grammar development environment Paredros

hisqu.uni-jena.de

MEPHISTO Working Group

2023-2025

Student Research Assistant

Development of exercise series for the lectures »Introduction to Artificial Intelligence« and »Social Network Analysis with Python«, groundwork for the grammar development environment Paredros

mephisto.uni-jena.de

Junior Professorship Digital Humanities

2022

Student Research Assistant

Full-stack development on the 4DCity viewer

www.4dcity.org

ViaDirekt U+V GmbH

Full-stack software
development

2018-present

Junior IT Consultant

2023

Functional and (team-)lead responsibilities in IT consulting and software development for medical care centers, physicians, pharmacies, and tax advisory firms

IT administrator

2020

IT support assistant

2018

www.mandant3.de

Projects

Paredros — Interactive grammar debugger for ANTLR

2024-present

Development of a debugging tool to analyze and visualize parser and grammar behavior in ANTLR4

- Design of a listener-based debugging architecture (Python)
- Analysis and instrumentation of ANTLR4 grammars
- Development of a graphical user interface (React, TypeScript)

github.com/HisQu/paredros-app

Query by Graph — Visual query language for knowledge graphs

2024

Bachelor's thesis: Development of a system to model SPARQL queries graphically without writing code

- Design of a domain-specific visual query language
- Development of a compiler from visual graph queries to SPARQL (Rust)
- Implementation of an interactive user interface (Vue, TypeScript)
- Focus on accessibility of complex knowledge-graph queries

query.daniel-motz.de

Competency Question Manager

2024

Web-based tool for managing, analyzing, and structuring competency questions between domain experts and ontology engineers in data science projects

- Designed and implemented on behalf of the DLR Institute of Data Science
- Team development as a university software engineering project

cq.daniel-motz.de

Marjapussi Online

2022-2023

Online gaming platform for the Finnish card game »Marjapussi«

Development of the user interface (Vue 3) and parts of the game logic (Rust & Python)

www.marjapussi.de

Mandant3 — Accounting document capture software

2018-present

Cloud-based application for document capture for small and medium-sized businesses

- Consulting for healthcare professionals (physicians, pharmacists)
- Software maintenance and improvements (InterSystems IRIS)
- Development of integrations with NOVENTI awintaONE

www.mandant3.de

Skills

Focus areas	Languages / frameworks	Software engineering	Tools
<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Data modeling</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">NLP</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">ML</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">SymAI</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Systems & network architecture</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Software architecture</div> </div>	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Python</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">C/C++</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Rust</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Scheme</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Go</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">TypeScript</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">React</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Vue</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">TailwindCSS</div> </div>	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Functional & declarative programming</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Modularization</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Debugging & profiling</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">API design</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Testing</div> </div>	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">UNIX/POSIX</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Typst</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">L^AT_EX</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Git/GitHub</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">CI/CD</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Docker</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">NGINX</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">sklearn</div> </div>
<p>if english_translation { »Research« } else { »Forschung« }</p>		<p>if english_translation { »Language certifications (CEFR)« } else { »Sprachzertifikate (CEFR)« }</p>	
		<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Englisch (C1)</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Russisch (B2)</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px;">Spanisch (B1)</div> </div>	

if english_translation { »Literature review« } else
{ »Literaturrecherche« }

if english_translation { »Interdisciplinary research« }
else { »Interdisziplinäre Forschung« }

if english_translation { »Academic writing« } else
{ »Wissenschaftliches Schreiben« }

Academic Awards

Best Poster Award	2023
Award for »The Long Road to Artificial General Intelligence«	
<i>AI Summer School 2023, Prof. Alexander Breuer</i>	
ai.uni-jena.de	
CertiLingua®	2020
Label of excellence for intercultural competencies	
<i>Europe-wide initiative for the certification of intercultural competencies</i>	
www.certilingua.net	

Volunteering

Octavians e.V.	2nd place at the International Vocal Competition in Tampere	2025-present
Bass		
<i>German a-cappella vocal ensemble and non-profit association</i>		
www.octavians.net		
Jugendbildungsförderung Chemnitz e.V.		2023-present
Chief Financial Officer (Volunteer)		
<ul style="list-style-type: none"> • <i>Planning and financial coordination of the nationwide campaign »UNS GEHT'S GUT?!« in cooperation with the Federal Student Conference (2025–present)</i> • <i>Financial responsibility for a non-profit organization</i> • <i>Strategic planning</i> 		
www.jbf-chemnitz.de		
√WURZEL e.V.		2020-present
Teacher at the math academy for pupils in grades 8 to 12		
<i>Non-profit organization promoting mathematics in schools and universities; publisher of a mathematics journal for young adults</i>		
www.wurzel.org		
StadtSchülerRat Chemnitz	Managing Director	2016-2022
Chairman, former Managing Director	2021	
<i>Democratic representation of ~25,000 students in the city of Chemnitz</i>		
www.ssr-chemnitz.de		
	Chairman	2020
	State delegate	2018