

Tobias Michael Schamel

M.Sc. Informatics Student at TUM
Focuses in Software Engineering and Machine Learning

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🌐 <https://github.com/sirtobsi>

Education

Stanford University <i>Visiting Student Researcher at CodeX - The Stanford Center for Legal Informatics</i>	August 2025 – Present Stanford, CA, USA
Technical University of Munich - M.Sc. Informatics <i>Current GPA: 1.3; 3.7/4</i>	October 2022 – Present Munich, Germany
Carnegie Mellon University <i>Exchange Student in School of Computer Science & Heinz College; Deans List Heinz College (4.26/4.0)</i>	January 2024 – May 2024 Pittsburgh, PA, USA
Technical University of Munich - B.Sc. Information Systems <i>Graduated GPA: 1.6; 3.4/4</i>	October 2018 – September 2022 Munich, Germany
National University of Singapore <i>Exchange Student in School of Computation</i>	January 2022 – May 2022 Singapore
Gymnasium Nonnenwerth <i>Abitur, Graduated GPA: 1.2; 3.8/4</i>	August 2010 – June 2018 Remagen, Germany

Experience

Software Engineer & Consultant (freelancing work) <i>Salesboat Performance Marketing GmbH</i>	February 2024 – Present Remote; client based in Austria
<ul style="list-style-type: none">• Developing end-to-end data analysis tool for data retrieval, transformation, and visualization of sales and advertising data• Designed cloud-native microservice architecture integrating with existing internal dashboard tools and identity provider• Created administrative tool for non-technical users to manage master data and user access in a secure environment• Achieved overall cost savings of 90% for the client by replacing legacy data provider with highly scalable system	
Software Engineer <i>Digital Product School by UnternehmerTUM, LSBG Hamburg</i>	September 2024 – November 2024 Munich, Germany
<ul style="list-style-type: none">• Conducted iterative user research (20+ interviews) to understand problem domain and collect feedback on possible solutions• Developed AI-led system for bus-control centers to monitor traffic, prioritize incidents, and deploy mitigation strategies	
Strategy Consulting Intern <i>Roland Berger GmbH</i>	July 2024 – September 2024 Munich, Germany
<ul style="list-style-type: none">• Worked on portfolio steering for a leading development bank and liquidation planning of a payment provider• Performed quantitative analysis on historical project data, conducted peer analysis, supported client workshop preparation• Researched and created shareholder seminar on liquidation timeline and loss carryforward, designed data-archiving strategy	
Co-Program Manager & Technical Project Lead <i>JST-Practical Course (TUM), La Famiglia GmbH, Parloa GmbH</i>	March 2023 – February 2024 Garching, Germany
<ul style="list-style-type: none">• Scoped project and defined requirements in collaboration with CTPO and other stakeholders• Led teams of 13 and 16 student developers across two semesters• Managed projects: 1. Start-up tracking through data scraping & analysis; 2. RAG Chatbot customization & eval. platform• Screened applications (400 applicants, 15% acceptance rate), managed stakeholders, prepared workshops	
Junior Consultant (working student)	July 2022 – November 2023
Junior Consultant (intern) <i>TNG Technology Consulting GmbH</i>	October 2021 – December 2021 Unterföhring, Germany
<ul style="list-style-type: none">• Developed price-calculation and KPI-tracking tools for a pharmaceutical wholesale company for use in 200+ pharmacies	
IT Product Management (working student) <i>ProSiebenSat.1 Tech Solutions GmbH</i>	October 2020 – June 2021 Unterföhring, Germany
<ul style="list-style-type: none">• Coordinated and led digital signature solution setup: internal system integration, vendor management, and internal billing• Piloted digital signature in the HR department; fully rolled out for company-wide use	
Teaching Assistant for IN0006 - Introduction to Software Engineering	April 2020 – September 2020
Teaching Assistant for IN0002 - Fundamentals of Programming <i>TUM School of Computation, Information and Technology</i>	October 2019 – March 2020 Garching, Germany
<ul style="list-style-type: none">• Prepared presentation materials and led weekly tutorial sessions• Assisted in exam creation and definition of grading schema; lead grading team; graded weekly submissions and exams	

Projects

CEAT-FC (*ongoing*): Researching effective retrieval and agentic systems to detect false statements and deceptive behavior in cross-examinations and court hearings; building a scalable prototype for stakeholder demos; project with Stanford CodeX; used Next.js, pgvector, Langgraph, transformers, Terraform, GCP (selection)

PokerAI Competition: Led backend team of five engineers for the CMU Data Science Club PokerAI Competition 2024 & 2025; designed backend and database architecture, distributed implementation tasks across team members, and collaborated across teams to ensure seamless integration; mentored individual team members and supported less-experienced developers; used Express.js, Prisma; competition can be found [here \(2025\)](#) and [here \(2024\)](#), code can be found [here](#)

Graph-Learning Based Fashion Recommendation System: Researched graph-based fashion recommendation systems to provide personalized recommendations for customers; developed graph design to capture domain-specific relationships; evaluated three different graph-based recommending approaches: random walk, graph embedding, and graph neural network; focused on fairness of recommendation algorithms; done as part of TUM Data Innovation Lab in collaboration with inovex GmbH; used Neo4j, PyTorch; full paper can be accessed [here](#)

Hestia 3D Kitchen Planner: Designed and implemented kitchen planner using Apple RoomPlan generated 3D model and custom style sheets to edit cross platform on iOS and web; done through iPraktikum TUM course for BSH Home Appliances GmbH; used Swift, Firebase, Three.js; web application can be accessed [here](#)

Sensor-Driven Tracking Platform: Led a team of four students in developing the frontend for warehouse operators and managers used to link tracking devices to container shipments; built a responsive web app with internationalization; done through JST Seminar TUM course for Forto Logistics AG & Co. KG; used React.js

LowestCommonAncestorExtractor: Created a library for structured (hierarchy preserving) extraction of terms and conditions from online shop websites; thesis project; used Python, Selenium; paper and code can be accessed [here](#)

Awards & Honors

International Scholarship <i>Bavarian State Ministry of Science, Research and Art</i>	Awarded for academic stay at Stanford University 2025
Deutschlandstipendium Scholarship <i>German Federal Ministry of Education and Research</i>	Awarded for academic year 2023 – 2024
Generation Developer Scholarship <i>Check24 GmbH - https://www.talents.check24.de/gendev</i>	Awarded for academic year 2022 – 2023

Publications

Tobias Schamel, Daniel Braun, and Florian Matthes. 2022. [Structured Extraction of Terms and Conditions from German and English Online Shops](#). In Proceedings of the Fifth Workshop on e-Commerce and NLP (ECNLP 5), pages 181–190, Dublin, Ireland. Association for Computational Linguistics.

Technical Skills

Programming Languages: Java, JavaScript, TypeScript, C++, Python, Swift, SQL

Frameworks/Libraries (selection): *Java:* Java Spring Boot, JUnit; *JS/TS:* Express.js, Angular, React, Next.js, Prisma; *Python:* NumPy, Pandas, Pyndatic, PyTorch, Scikit-learn, Langgraph, FastAPI SQLAlchemy, Selenium

Cloud: Google Cloud (incl. Firebase), AWS, Coolify

DevOps: Git, Docker, Kubernetes, Terraform, Google Cloud Build, GitHub Actions

Other

Natural Languages – German (native), English (fluent), French (limited proficiency)

Münchner Tafel e.V. volunteer – Collecting food donations from supermarkets & distribution to persons in need