

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	August 2025 – Present
<i>Visiting Student Researcher at CodeX - The Stanford Center for Legal Informatics</i>	Stanford, CA, USA
Technical University of Munich - M.Sc. Informatics	October 2022 – Present
<i>Current GPA: 1.8; 3.7/4</i>	Munich, Germany
Carnegie Mellon University	January 2024 – May 2024
<i>Exchange Student in School of Computer Science & Heinz College; Deans List Heinz College (4.26/4.0)</i>	Pittsburgh, PA, USA
Technical University of Munich - B.Sc. Information Systems	October 2018 – September 2022
<i>Graduated GPA: 1.6; 3.4/4</i>	Munich, Germany
National University of Singapore	January 2022 – May 2022
<i>Exchange Student in School of Computation</i>	Singapore
Gymnasium Nonnenwerth	August 2010 – June 2018
<i>Abitur; Graduated GPA: 1.2; 3.8/4</i>	Remagen, Germany

Experience

Software Engineer & Consultant (freelancing work)	February 2024 – Present
<i>Salesboat Performance Marketing GmbH</i>	<i>Remote; client based in Austria</i>
<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	September 2024 – November 2024
<i>Digital Product School by UnternehmerTUM, LSBG Hamburg</i>	<i>Munich, Germany</i>
<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	July 2024 – September 2024
<i>Roland Berger GmbH</i>	<i>Munich, Germany</i>
<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	March 2023 – February 2024
<i>JST-Practical Course (TUM), La Famiglia GmbH, Parloa GmbH</i>	<i>Garching, Germany</i>
<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)	October 2021 – December 2021
<i>TNG Technology Consulting GmbH</i>	<i>Unterföhring, Germany</i>
<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)	October 2020 – June 2021
<i>ProSiebenSat.1 Tech Solutions GmbH</i>	<i>Unterföhring, Germany</i>
<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	October 2019 – March 2020
<i>TUM School of Computation, Information and Technology</i>	<i>Garching, Germany</i>
<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

Bavarian State Ministry of Science, Research and Art

Awarded for academic stay at Stanford University 2025

Deutschlandstipendium Scholarship

German Federal Ministry of Education and Research

Awarded for academic year 2023 – 2024

Generation Developer Scholarship

Check24 GmbH - <https://www.talents.check24.de/gendev>

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