Moritz Zöllner

zoellner@purdue.edu • moritzzoellner • moritz-zoellner

Education

Purdue University — **West Lafayette (IN), USA**
M. Sc. Computer Science — *2025 - 2027*
Two-year scholarship awarded by the German Academic Exchange Service (DAAD)
Coursework: *Imitation Learning, Artificial Intelligence, Guided Robot Learning, Motion Planning*
Current GPA: 4.0 / 4.0

University of Göttingen — **Göttingen, Germany**
M. Sc. Applied Computer Science — *Summer 2025*
Visiting semester (Coursework: *Machine Learning, Sensor Data Fusion*)
GPA: 1.0 / 1.0

Leipzig University of Applied Sciences — **Leipzig, Germany**
B. Eng. Computer Science and Telecommunications Technology — *2021 - 2025*
Dual study program accompanied by corporate partner Deutsche Telekom AG
GPA: 1.0 / 1.0, *Class rank*: 1st / 42

Carl-Zeiss-Gymnasium Jena — **Jena, Germany**
German Abitur (General qualification for university entrance) — *2017 - 2021*
State-funded STEM-focused high school
GPA: 1.0 / 1.0

Research & Work Experience

SCALE Robotics Lab, Purdue University — **West Lafayette (IN), USA**
Research Assistant — *09/2025 – present*
Mentor: Prof. Rohan Paleja
- Researching safety mechanisms for learned robot policies in environments shared by humans and robots
- Investigating inference-time guidance of diffusion policies using natural language constraints specified by Signal Temporal Logic (STL)

Leipzig University of Applied Sciences — **Leipzig, Germany**
Research Associate — *04/2025 - 08/2025*
Mentor: Prof. Dr. Konrad Schöbel
- Trained humanoid robot "Booster K1" using reinforcement learning framework to withstand pushing forces
- Setup full pipeline from training the robot in IsaacGym to hardware deployment
- Developed an open-source Python package (pyrope) for digital exercises with integrated feedback

Carl Zeiss Microscopy GmbH — **Jena, Germany**
R&D Intern — *10/2024 - 03/2025*
Mentor: Pavlos Iliopoulos & Prof. Dr. Konrad Schöbel
- Conducted research on motor control optimization in the Automation & Industry department
- Bachelor's thesis: "*Application of Input Shaping Methods to the Motorized Control of a Microscope*"

Deutsche Telekom AG — **Erfurt, Germany**
Co-op Intern — *10/2021 - 09/2024*
- Worked in Software Engineering across different subsidiary organizations (Telekom MMS, Telekom IT)
- Developed front- and backend applications, Kubernetes-based microservices, and database scripts

Teaching Experience

Purdue University — **West Lafayette (IN), USA**
Graduate Teaching Assistant — *01/2026 - 03/2026*
- Supporting the course *AI Essentials: A Non-Technical Introduction* in the Department of Political Science

Leipzig University of Applied Sciences — **Leipzig, Germany**
Student Assistant — *06/2023 - 09/2024*
- Drafted the curriculum for undergraduate courses in mathematics and theoretical computer science
- Developed digital exercises with integrated feedback for STEM courses

Awards & Prizes

Master's:

2025 - 2027: **Graduate Scholarship** for study abroad, *German Academic Exchange Service*

Bachelor's:

01/2026: **Thesis Award** "Applied Digitalization", *Actemium / Leipzig University of Applied Sciences*

06/2025: **Award** for best bachelor's thesis, *Leipzig University of Applied Sciences*

06/2025: **Award** for graduating top of the class, *Leipzig University of Applied Sciences*

Abitur:

07/2021: **Rector's Award** for best research project, *University of Applied Sciences Jena*

07/2021: **Graduation Award** for outstanding achievements in physics, *German Physical Society*

Competitions:

05/2021: **1st prize** at the state competition of the *Thuringian Physics Olympiad*

03/2021: **1st prize** at the regional, **Special Prize** at the state competition of *JugendForscht*

Publications

K. Schöbel, J. Merker, P. Brassel, **M. Zöllner**, H. Hain: *PyRope – Ein codebasierter Ansatz für E-Assessment in MINT-Fächern*, in: Proc. DELFI 2025 (accepted).

Languages

German: native

English: fluent — *TOEFL iBT Score: 118/120 - November 20, 2024*

French: basic knowledge — *5 years of high school*

Skills

Programming & Systems:

Python, C, C++, Java, JavaScript ▪ Linux, Git, Docker, LaTeX ▪ Raspberry Pi, Arduino

Machine Learning & Robotics:

Reinforcement Learning, Imitation Learning, Diffusion Models ▪ PyTorch, IsaacGym, OpenCV ▪ Motion Planning, Signal Temporal Logic (STL)