Niklas Schweiger

M.Sc. Student & Research Assistant · TU Munich

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Master's student at TU Munich and research assistant in Prof. Daniel Cremers' Computer Vision & AI group. Work focuses on inference-time alignment of diffusion and flow models. First-author paper accepted to ECCV 2026.

EDUCATION

M.Sc. Robotics, Cognition, Intelligence
Oct 2023 – Present

Technical University of Munich (TUM), Germany

- **Current GPA:** 1.4 (German scale)
- **Focus:** Machine learning, generative models, inference-time optimization
- **Exchange:** Chalmers University of Technology, Gothenburg, Sweden (Sep 2024 – Jan 2025)

B.Sc. Electrical Engineering & Information Technology
Oct 2020 – Sep 2023

Technical University of Munich (TUM), Germany

- **Final GPA:** 2.5 (German scale)
- **Specialization:** Artificial Intelligence and Machine Learning

EXPERIENCE

Research Assistant (HiWi)
Mar 2026 – Present

Chair for Computer Vision & Artificial Intelligence (CVAI), TU Munich

Research on inference-time alignment of diffusion and flow models in Prof. Daniel Cremers' group. First-author ECCV 2026 paper on trust-region noise optimization, also presented at the ReALM-GEN Workshop @ ICLR 2026. Concurrent with Master's thesis in the same group.

Internship – AI in Industrial Production
2023

Siemens AG

Developed a 3D feature matching system using CNN embeddings to automate part retrieval in manufacturing databases, bridging deep learning with industrial applications.

PUBLICATIONS

Schweiger, N., Ram, K., & Cremers, D. (2026). **Trust-Region Noise Search for Black-Box Alignment of Diffusion and Flow Models.** *European Conference on Computer Vision (ECCV), 2026. Also presented at ReALM-GEN Workshop @ ICLR 2026.*

AWARDS & ACHIEVEMENTS

2nd Place – TUM.ai Makeathon
Apr 2023

Built *Caire*, an app designed to overcome language barriers between nurses and patients using AI to extract medical information from natural speech. Awarded a €2,000 prize.

SKILLS & INTERESTS

Programming	Python (Advanced), PyTorch (Advanced), C/C++ (Intermediate), Matlab (Intermediate), LaTeX
Languages	German (Native), English (C1 – Professional working proficiency)
Interests	Football, Strength training & running, Guitar (10+ years), AI & Natural sciences