Daniel Bin Schmid

danielbinschmid.com

LINKS

Me: **danielbinschmid.com**
Github:// **danielbinschmid**
LinkedIn:// **danielbinschmid**

COURSES

GRADUATE

TUM-DI-Lab
RL in Robotics (Practical)
OS in the Cloud (Seminar)
Guided Research
Statistical Foundations of Learning
Causality
Cloud-based Data Processing
Introduction to Deep Learning
Tech Challenge

UNDERGRADUATE

Operating Systems
Computer Architecture
Distributed Systems
Computer Vision
Computergraphics
Math for CS
Statistics
Theoretical CS
Media Informatics
Human-Computer-Interaction
Natural Language Processing
Software Engineering
Modern Cryptography
Information Security

SKILLS

PROGRAMMING

Languages:
Python • C • C++ • Java • Chisel • Julia • Shell • SQL • C# • Verilog • Assembly • LaTeX • JavaScript
Tools & Frameworks:
PyTorch • TensorFlow • ROS2 • Chipyard • Docker • Microsoft Azure • AWS • Matlab • Linux • Git

SOFT SKILLS

German (native)
English (C1)

HIGHER EDUCATION

TECHNICAL UNIVERSITY OF MUNICH (TUM) | M.Sc. Informatics

Okt 2022 - Present | Munich, Germany | Current GPA: 1,3/1,0

- **Specialisation:** Machine Learning and Analytics
- **Side specialisations:** Databases and Information Systems, Robotics
- **Research:** Causality and Deep Learning (DL), DL Theory, Hardware Acceleration for DL

UNIVERSITY OF STUTTGART | B.Sc. Media Informatics

Okt 2018 - Aug 2022 | Stuttgart, Germany | GPA: 1,9/1,0

- **Focuses:** Brain-Computer-Interfaces, Computer Vision, Human-Computer-Interaction

PROJECTS

CAUSALITY AND DEEP LEARNING | TUM-DI-LAB, Exploratory Research

Okt 2023 - Mar 2024 | TUM CAMP, Torr Vision Group (University of Oxford) | Project Page

- Research project about the application of Causality and Deep Learning for Medical Imaging
- Development of a method for causal generative AI with a CausalVAE + DDPM architecture

REINFORCEMENT LEARNING (RL) FOR ROBOTICS | Practical

Okt 2023 - Mar 2024 | TUM AIR | GitHub

- RL for quadcopter control in simulation & ROS2 software for real-life deployment.

HAND-GESTURE RECOGNITION | Practical

Okt 2022 - Feb 2023 | UnternehmerTUM | GitHub

- Real-time handgesture recognition application show-case for driver-vehicle interaction.

BRAIN-COMPUTER-INTERFACES | Bachelor's thesis

Jan 2022 - Sep 2022 | STAR, Uni Stuttgart | GitHub

- Deep Transfer Learning with EEGNet (a CNN for EEG processing) and online learning with Hyperdimensional Computing (HDC). Deployment of algorithms on a Smartwatch.

AI-ASSISTED GRAPHIC DESIGN | Practical

Okt 2021 - Feb 2022 | Perceptual UI, SimTech Cluster of Excellence of Uni Stuttgart

- Investigation and development of deep learning based saliency map prediction methods.

BRAIN-INSPIRED COMPUTING | Semester Project

Apr 2021 - Sep 2021 | STAR, Uni Stuttgart

- Development of hyperparameter search python framework for optimized training for HDC.

PART-TIME JOBS

RESEARCH ASSISTANT | TUM Chair of AI Processor Design (AI-Pro)

Okt 2023 - Apr 2024 | Munich, Germany

- **Responsibilites:** Leading small research team of three students; Co-advising two B.Sc. students on their thesis.
- **Topic:** Acceleration of Transformers: Sparsity, Fine-tuning, Quantization, RISC-V ISA design with Synopsis

MLOPS ENGINEER | Maurer Electronics GmbH

Feb 2023 - Jul 2023 | Munich, Germany

- **Responsibilites:** Integration of ML model inference into existing C++ Computer Vision software. Model versioning and pipeline automation.

TEACHING ASSISTANT | FMI, Uni Stuttgart

Okt 2020 - Feb 2021 | Munich, Germany

- **Responsibilites:** Teaching 46 students in basics of theoretical computer science (CS). Grading weekly homeworks and granting exam permissions.