DANIEL SCHEUCHENSTUHL

Curriculum Vitae

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INFO

Results-oriented AI & Robotics Research Engineer with 14+ years of software engineering experience and deep expertise in Computer Vision, Generative AI, and MLOps. Proven track record of transitioning research into scalable, production-ready systems at Siemens, including the deployment of Industrial Vision Foundation Models. Polyglot engineer with strong experience in designing robust model lifecycles for latency-critical applications. Passionate about pushing the boundaries of AI and driving the research-to-production transition of cutting-edge technology.

PROFESSIONAL EXPERIENCE

AI & Robotics Research Engineer

Siemens AG Austria

October 2023 - ongoing Vienna, Austria

- Led the end-to-end evaluation and deployment of a SOTA Vision-Language-Action (VLA) model to guide research-to-production transitions.
- Led the production deployment of Industrial Vision Foundation Models, achieving a 50× reduction in inference latency and accelerated data engineering workflows by 100× using Ray, enabling few-shot visual quality inspection for industrial applications.
- Architected a robust and scalable end-to-end system for edge AI, establishing engineering best practices and mentoring juniors.
- Collaborated cross-functionally with research, engineering, and product teams to transition experimental AI prototypes into robust and scalable solutions.

Working student

Siemens AG Austria

August 2020 - September 2023 Vienna, Austria

- Integrated AI and robotics to automate visual quality inspection tasks

Project assistant

Vienna University of Technology

September 2020 - July 2022 Vienna, Austria

- Contributed to research projects and held student seminars

Summer internship

Siemens AG Austria

September 2019 Vienna, Austria

- Implemented a PID controller for load sharing in smart grids

CORE COMPETENCIES

- Rapid Prototyping
- Research-to-Production
- Scalable AI Architecture
- Cross-Functional Engineering
- Generative & Multimodal AI

EXTRACURRICULAR ACTIVITIES

F1Tenth - Autonomous driving competition

ICRA 2022 (Team Scuderia Segfault)

May 2022 Philadelphia, USA

- Third place in the time-trials and the head-to-head competition

F1Tenth - Autonomous driving competition

IROS 2021 (Team Scuderia Segfault)

September 2021 Prague, Czech Republic

- First place in the time-trials and the head-to-head competition

EDUCATION

Diplom-Ingenieur (Dipl.-Ing./MSc)

Vienna University of Technology

November 2020 - September 2023

Master program: Computer Engineering

Bachelor of Science (BSc)

Vienna University of Technology

October 2017 - November 2020

Bachelor program: Computer Engineering

Matura (A-Levels)

HTL Wels für Informationstechnologie

September 2011 - June 2016

ENGINEERING SKILLS

Key Areas

- Artificial Intelligence focusing on Machine Perception/Computer Vision and Generative AI
- Embodied AI/Robotics (industrial applications and autonomous driving)

Software Engineering

- Programming Languages: Python, C, Java, C++, Bash, Go
- Frameworks/Libraries: PyTorch, TensorFlow, OpenCV, Numpy, ROS, Ray, Slurm
- DevOps/MLOps: Git, CI/CD, Docker
- Experience with distributed systems, cloud computing (distributed training) & edge computing

AI & ML

- Vision-Language-Action (VLA) models, Generative AI, Computer Vision, Foundation Models (SAM)
- Learning paradigms: Unsupervised Learning, Supervised Learning, Reinforcement Learning, Imitation Learning, Self-Supervised Learning

Embedded Systems & Hardware Integration

- Microcontrollers
- Digital Design & Computer Architecture (FPGAs)

Complementary Skills

- Formal Methods
- Extensive hands-on experience with Unix/Linux systems
- Network engineering experience with Cisco and Siemens devices

Additional Skills

- Driving license: B

HOBBIES & INTERESTS

- Running, gym, hiking, skiing, obstacle course racing (e.g. Spartan Race), gaming
- Science & technology, traveling, music, cooking, culture

LANGUAGES

German ●●●●●

English ●●●●○

Spanish ●○○○○

SELECTED PUBLICATIONS & RESEARCH

Synthetic training data generation for controllable learning of image recognition in recycling

Published @Springer Nature Link, 2026

- Developed a novel procedural alpha-matting based dataset generation approach that creates new compositions and labels simultaneously using limited real data.

Attentional Neural Network based Dynamic Object Detection for Autonomous Multi-Agent Systems

Master Thesis @TU Wien, 2023

- Developed a human-attention inspired perception pipeline for autonomous racing, demonstrating superior robustness on Out-of-Distribution (OOD) data compared to SOTA baselines.

Enhancing Robot Learning through Learned Human-Attention Feature Maps

Published @RAP4Robots workshop at ICRA, 2023

- Proposed novel feature map enhancement techniques to improve the data efficiency of robot learning agents.

Timing Analysis of TSN-Enabled OPC UA PubSub

Published @18th IEEE International Workshop on Factory Communication Systems (WFCS), 2022

- Analyzed Worst-Case Execution Time (WCET) for real-time industrial networks, ensuring deterministic performance for distributed control systems.