Daniel Dauner

Doctoral Researcher

daniel.dauner@gmail.com https://danieldauner.github.io Tübingen, Germany, 72076

Education

University of Tübingen, Germany

Feb 2024 – Now
Doctoral Student in Computer Science
- *Advisor:* Prof. Andreas Geiger
- *Scholarship:* International Max Planck Research School for Intelligent Systems (IMPRS-IS)

Apr 2021 – Aug 2023
Master of Science in Computer Science
- *Advisor:* Prof. Andreas Geiger
- *Thesis:* Vehicle Motion Planning using Data-Driven Simulation *(Grade: 1.0)*
- *Overall Grade:* 1.19 *(with distinction)*

Oct 2017 – Feb 2021
Bachelor of Science in Bioinformatics
- *Advisor:* Prof. Nico Pfeifer
- *Thesis:* Acetabulum fracture classification on a large cohort of CT images from German hospitals using 3D CNNs *(Grade: 1.0)*
- *Overall Grade:* 1.55

Teaching & Research

2020 – 2024
University of Tübingen, Germany

Research Assistant – Autonomous Driving
- *Chair:* Autonomous Vision Group, Prof. Andreas Geiger
- *Aug 2023 – Jan 2024:* Miscellaneous Topics in Autonomous Driving Research.

Research Assistant – Medical Informatics
- *Chair:* Methods in Medical Informatics, Prof. Nico Pfeifer
- *May 2021 – Aug 2021:* Acetabulum fracture classification with 3D CNNs on CT-Scans. Cooperation with the BG Clinic Tübingen.

Teaching Assistant – Probability Theory
- *Chair:* Probability Research Group, PD Elmar Teufl
- *Apr 2021 – Jul 2021:* Tutorials in Probability Theory (2 classes, 60+ students)
- *Apr 2020 – Jul 2020:* Tutorials in Probability Theory (1 class, 20 students)

Awards

2024
- **Valedictorian speaker:** Class of 2023/2024 – University of Tübingen
  I was selected to represent the 2023/2024 graduates in a valedictorian speech

2023
- **1st Place:** nuPlan Planning Challenge 2023 – Motional
  Our PDM planner won the international nuPlan challenge, with 25 competing teams.

2022

- **1st Place:** Deep Learning Competition – Cognitive Systems Group
  Our Autoencoder ranked first in the lecture competition with 16 participating teams.
- **1st Place:** Self Driving Cars Challenge (3/3), Modular Pipeline – Autonomous Vision Group
  My modular pipeline agent won the lecture competition, with 15 participating teams.

2021

- **1st Place:** Self Driving Cars Challenge (2/3), Reinforcement Learning – Autonomous Vision Group
  My reinforcement learning agent won the lecture competition, with 23 participating teams.
- **1st Place:** Self Driving Cars Challenge (1/3), Imitation Learning – Autonomous Vision Group
  My imitation learning agent won the lecture competition, with 34 participating teams.

2020

- **1st Place:** Artificial Intelligence Competition – Cognitive Systems Group
  Our Chess AI won the in class challenge, with 10+ participating teams.

Qualifications

Programming	Python, Java, C, C++, C#, R, MATLAB, Racket
Libraries	PyTorch, TensorFlow, JAX, NumPy, Numba, ROS, OpenCV
Software	Git, Inkscape, LaTeX, Office Suite
Languages	German (native), English (proficient), French (basic)

Invited Talks

- **Robert Bosch GmbH:** Synthesizing Driving Environments with Generative Models, *Renningen*, 13.09.2024.
- **Mercedes-Benz AG:** Vehicle Motion Planning using Data-Driven Simulation, *Sindelfingen*, 26.10.2023.

Publications

2024

[1] K. Chitta, **D. Dauner**, and A. Geiger, "Sledge: Synthesizing driving environments with generative models and rule-based traffic," in *European Conference on Computer Vision (ECCV)*, 2024.

2023

[2] **D. Dauner**, "Image reconstruction from event cameras for autonomous driving," in *International Conference on Learning Representations Workshop on Scene Representations for Autonomous Driving*, 2023.

[3] **D. Dauner**, M. Hallgarten, A. Geiger, and K. Chitta, "Parting with misconceptions about learning-based vehicle motion planning," in *Conference on Robot Learning (CoRL)*, 2023.