

# Curriculum Vitae

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## Education:

- 01.04.2023 – 30.09.2025      **RWTH Aachen, M.Sc. in Computer Engineering** with a focus on **Machine Learning, Embedded Systems, Robotics and Computer Networks**
- Master's Thesis in field of 3D Object Detection: **Analysis of Uncertainty Estimates for Transformer-based Radar-, Camera-, and LiDAR-driven 3D Object Detectors**
- 01.10.2019 – 31.03.2023      **RWTH Aachen, B.Sc. in Electrical Engineering, Information Technology und Computer Engineering**
- Major: **Information and Communication Technology**
  - Bachelor's Thesis in the field of Neuromorphic Hardware: **Evaluation of data representations for a memristor-based matrix-vector-multiplication engines**

## Work Experience:

- 15.04.2025 - today      **Software Development Internship at Porsche Engineering, Department of Connected Car and Infotainment Testing**
- Lead and developed an HMI automation tool using Visual Language Models and several Computer Vision frameworks to automate test cases regarding the functionality for all infotainment systems developed by Porsche.
  - Built CI/CD pipelines and automation scripts for software flashing and testing on infotainment system ECUs
- 01.12.2024 - 04.04.2025      **Automotive Cybersecurity Internship at ETAS, Department of Offboard Security**
- Aided in the development of a SIEM system designed for the automotive use cases
  - Built a prototype machine learning model to generate accurate SIEM queries from natural language

	<ul style="list-style-type: none"> <li>- Analyzed real-world cyberattack on vehicles and explored how existing systems could detect them</li> </ul>
15.04.2024 - 31.10.2024	<p><b>Research Assistant at IKA RWTH Aachen, Department of Vehicle Intelligence &amp; Automated Driving</b></p> <ul style="list-style-type: none"> <li>- Development of a Lane Analysis Algorithm using YoloPv2, Inverse Perspective Mapping and Bayesian Filtering</li> <li>- Implementation of ROS2 nodes to deploy the algorithm on a semi-autonomous vehicle</li> </ul>
01.03.2023 - 31.04.2024	<p><b>Research Assistant at WZL RWTH Aachen, Department of Robotics</b></p> <ul style="list-style-type: none"> <li>- Conducted robot measurements (MABI 100 Robot)</li> <li>- Development and training of deep learning models to predict torque in robot joints</li> <li>- Development of MATLAB scripts to generate robot trajectories for robot experiments</li> </ul>
01.04.2022 - 31.07.2023	<p><b>Laboratory Computer Science Tutor (C++) at MMI RWTH Aachen</b></p>
14.06.2021 - 31.07.2022	<p><b>Research Assistant at IAEW RWTH Aachen, Department of Intelligent Grids</b></p> <ul style="list-style-type: none"> <li>- Development of a Python framework to visualize hybrid AC/DC grids via OpenStreetMap</li> <li>- Planning and modeling of hybrid AC/DC grids (C++ and Python) using the Genetic algorithm</li> </ul>
<b>Technical Skills:</b>	Deep Learning, GenAI, Robotics, Sensors, Embedded Systems, µController Programming, Communication Protocols, CI/CD, APIs, Databases, Control Systems
<b>Programming &amp; Tools:</b>	Python (PyTorch, OpenCV...), C/C++, Rust, Linux, FreeRTOS, Git, Docker, ROS2, SQL, Jenkins, Postman, KiCad, Azure, Jira, Confluence,
<b>Soft Skills:</b>	Problem-Solving, Analytical, Pragmatic, Reliable, Creative, Team-Oriented
<b>Language Skills:</b>	<p>German: Deutsches Sprachdiplom (DSD) 2: C1-Level</p> <p>English: IELTS Certificate: C1-Level (7.5 CEFR Level)</p>
<b>Interests &amp; Hobbies:</b>	autonomous systems, Formula 1, football, working out