

Philipp Ahrendt

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Software Engineer with experience in machine learning, computer vision, and distributed systems. Interested in the research and development of machine learning algorithms that solve real-world challenges.

Professional Experience

SEMRON SOFTWARE ENGINEER	Dresden, Germany 08/2025 - Present
<ul style="list-style-type: none">Designed and built an open-source framework enabling geographically distributed machine learning across heterogeneous hardware based on DiLoCo and SwarmImplemented orchestration, communication, and scheduling components to support efficient cross-region training and resource utilization	
Flox Robotics RESEARCH ENGINEER INTERN	Stockholm, Sweden 01/2024 - 10/2024
<ul style="list-style-type: none">Developed altitude-adaptive object detection for UAV imagery using multi-modal sensor inputs (RGB + altitude)Improved average precision of small object detection by 2% while reducing number of parameters by 75%	
SoundHound SOFTWARE ENGINEER	Berlin, Germany 04/2022 - 08/2022
<ul style="list-style-type: none">Extended voice assistance API to support a new German-language domain, enhancing natural language understanding and generation capabilitiesIncreased testing efficiency by enhancing a Python-based tool using pair-programming	
Ayrendoo COFOUNDER AND LEAD DEVELOPER	Berlin, Germany 06/2019 - 10/2020
<ul style="list-style-type: none">Developed a Swift-based social meetup app with map, group chat, and Firebase-backed data infrastructure	
ETAS K.K. - Subsidiary of Robert Bosch GmbH CYBERSECURITY ENGINEER INTERN	Yokohama, Japan 08/2019 - 01/2020
<ul style="list-style-type: none">Developed a Python-based interface enabling proprietary C-based hardware (CAN-bus) to integrate seamlessly with the open-source python-can toolCreated a testing suite to streamline the evolution of a penetration-testing tool, ensuring functionality after each code modification	
Artiminds Robotics GmbH JUNIOR SOFTWARE ENGINEER	Karlsruhe, Germany 07/2017 - 05/2019
<ul style="list-style-type: none">Developed C++ features for company software, including an export function that generated a template graph of robot instructions in a customer-ready Word documentEnhanced interface functionality and user-friendliness by refining existing features and implementing effective workarounds for critical legacy codeIntegrated a camera sensor for real-time image feed from a KUKA robot into company software using KUKA robot language without any prior experience	

Education

KTH Royal Institute of Technology/ Polytech Nice Sophia MSC: INTELLIGENT AUTONOMOUS SYSTEMS (DOUBLE DEGREE)	Stockholm, Sweden/ Nice, France 2022 - 2024
<ul style="list-style-type: none">Grade: A, Thesis: Investigating Altitude-Adaptive Methods for Enhancing Small Object Detection on UAVs	
Karlsruhe Institute Of Technology BSC: ELECTRICAL ENGINEERING AND COMPUTER SCIENCE	Karlsruhe, Germany 2016 - 2021
<ul style="list-style-type: none">Thesis: Detection and Classification of Higher Cognitive Functions using an EEG-based Brain-Computer Interface	

Skills & Interests

Skills	C++ Python Git Machine Learning ROS Computer Vision Linux PyTorch TensorFlow Control
Languages	Fluent in German, English, French
Course work	3D machine vision Advanced Deep Learning Applied Estimation Reinforcement Learning MPC
Interests	Intersection of Robotics and AI Tennis Effective Altruism Learning new skills