

Samira Huber

PhD Candidate | Embodied AI · Robot Learning · World Models

PhD candidate in **embodied AI** and **robot learning**, researching world models and foundation models. First-author publications at **CoRL** and **IROS**, with hands-on experience developing and deploying learning-based systems on physical robots using ROS2 and simulation.

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PROFESSIONAL EXPERIENCE

PhD Candidate: University of Kiel Embodied AI & Robotics World models and robot learning for real-world robotic autonomy Developing and evaluating learning-based systems in simulation and on physical robots First-author publications at CoRL 2026 and IROS 2026.	Sep 2025 – Present
CTO & Co-Founder: EcoCheck AI Systems & Entrepreneurship Spearheaded AI-powered CO ₂ accounting systems	Nov 2021 – Present
Freelancer: Software Development & AI Delivered custom AI-driven software solutions Provided specialized IT consulting for diverse clients	May 2022 – Aug 2025
Working Student: Tesla Inc., Brandenburg Developed scalable React-based web applications Full-Stack Development For production monitoring	Oct 2021 – Mar 2022
Working Student: Abusix Inc., Karlsruhe Full-Stack Development Built core product features Implemented frontend and backend solutions using React	Oct 2020 – Oct 2021
Working Student: Intelligent Media Systems AG, Karlsruhe ML Systems & APIs Trained scalable recommender systems Developed REST APIs and refactored platforms in Vue.js	May 2018 – Sep 2019

SELECTED RESEARCH

COOL: Curiosity-Driven Object Ownership Learning for Personalized Robotic Assistance First Author Embodied AI Personalized Robot Assistance Real-World Robotics ROS2	CoRL 2026
HUMEMBR: Learning Human Routines for Predictive Embodied Navigation First Author Embodied AI Human Behavior Modeling Real-World Navigation	IROS 2026
Hydra: A Navigation World Action Model with Discrete Latent Planning and Continuous Flow-Matching Execution Co-Author World Models Robot Navigation Real-World Robotics ROS	Submitted
PUSHER: Learning Vision-based Policies for Non-Prehensile Object Manipulation with Quadruped Robots Co-Author Reinforcement Learning Isaac Sim	Submitted
Evaluating Early Multimodal Fusion in Discrete Latent World Models for Robot Navigation Co-Author World Models	Submitted
Fire-Aware Navigation First Author Reinforcement Learning Isaac Sim	Work in Progress
BEHAVIOR Challenge Stanford Co-Author Vision-Language-Action Model Manipulation + Navigation	Work in Progress

EDUCATION

University of Lübeck <i>M.Sc. Entrepreneurship in Digital Technologies</i> , Grade 1.3 Thesis: Identification of barriers to sustainable shopping and methods to address them.	Oct 2020 – Dec 2022
Baden-Württemberg Cooperative State University <i>B.Sc. Information Technology</i> , Grade 1.8 Thesis: Implementation of a recommender system for web-based training platforms.	May 2018 – Sep 2020
Baden-Württemberg Cooperative State University <i>B.Eng. Mechatronics</i> (25 ECTS completed)	Aug 2017 – Apr 2018