

Can Mizrakli

+49 155 10886744 | can.mizrakli@student.kit.edu | mizraklican@gmail.com | GitHub | LinkedIn | Google Scholar

RESEARCH INTERESTS

Imitation learning, state space models, robot manipulation, vision-language-action models, cross-embodiment transfer, reinforcement learning

EDUCATION

Karlsruhe Institute of Technology

Karlsruhe, Germany

Master of Science in Computer Science

2025 – 2027

- Specializations: Human-Centered Machine Intelligence; Robotics and Automation
- GPA: 3.60/4.00 (1.6 in German scale)

TED University

Ankara, Turkey

Bachelor of Science in Computer Engineering

2021 – 2025

- Minor in Business Administration and Management
- Secondary focus in Applied Data Analytics and Machine Learning

PUBLICATIONS

Can Mizrakli, Tolga Kurtulus Capin. “TDSal: A Task-Based Top-Down Saliency Prediction Model” [Arxiv]. 2026

- Accepted for publication to the LNCS proceedings of Computer Graphics International (CGI 2026).
- Proposes a task-driven visual saliency model that conditions attention prediction on natural-language task descriptions.

RESEARCH EXPERIENCE

Imitation Learning with State Space Models | *PyTorch*, *Mamba*

Oct 2025 – now

- Investigating whether SSM recurrence, used as a primary temporal backbone rather than a shallow add-on, improves long-horizon, memory-dependent robot manipulation.
- Designed a Mamba-2 architecture that jointly processes vision, language, and proprioception, paired with a flow-matching action head for chunked action prediction, on the Franka Emika Panda at the **Intuitive Robots Lab, KIT**.
- Achieved around 96% success on the LIBERO-Spatial benchmark; with ongoing evaluation on LIBERO-Goal, LIBERO-Object, and RoboTwin2.0 to test generalization.
- Conducting this research under the supervision of Pankhuri Vanjani, with Rudolf Lioutikov.

Research Assistant, Computer Vision for Human Computer Interaction (CV:HCI) Lab Jun 2026 – now

- Supporting VLA adaptation for ARMAR-6/7 humanoids and bimanual Franka Emika platforms through Isaac Sim workflows, hardware interfacing, teleoperation support, and model-robot integration.
- Contributing to a research project focused on reducing manual human supervision required to adapt vision-language-action foundation models to new robot embodiments.
- Conducting this research under the supervision of Dr.-Ing. David Schneider.

TDSal: Task-Based Top-Down Saliency Prediction | *Computer Vision*, *Visual Attention*

2024 – 2025

- Developed a task-driven visual saliency prediction model integrating YOLO-based visual features with Sentence-BERT task embeddings through transformer-based multimodal fusion.
- Evaluated the model using CC, KLDiv, SIM, NSS, and AUC-Borji, achieving NSS 3.53 and AUC-Borji 0.9489.
- Accepted to CGI 2026 LNCS proceedings; supervised by Prof. Tolga Kurtuluş Çapın.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, SQL, Julia

Frameworks and Libraries: PyTorch, TensorFlow, HuggingFace, OpenCV, YOLO

Tools: Git, Linux, Streamlit, LaTeX

Simulation/Hardware: Isaac Sim, Franka Emika Panda, ARMAR-6/7

LANGUAGES

Languages: Turkish (Native), English (C1, IELTS 8.0), German (A1.2), Spanish (A1)