

EDUCATION

University of Freiburg, M.Sc. in Computer Science *Freiburg, Germany*
Specialization in AI, 1.8 GPA (1.0 best grade) *Oct 2021 - Sep 2024*
Master's Thesis: 'Label Efficient LiDAR Panoptic Segmentation', supervised by Prof. Dr. Abhinav Valada
Master's Project: 'Visually Guided Natural Sound Generation', supervised by Prof. Dr. Thomas Brox

Bilkent University, B.Sc. in Mechanical Engineering *Ankara, Turkey*
Specialization in Robotics and Control, 3.3 GPA (4.0 best grade) *Sep 2016 - Jun 2021*
Minor: Computer Science 3.6 GPA (4.0 best grade)
Bachelor's Thesis: 'Autonomous Magneto-Rheological Suspension', supervised by Prof. Dr. Yegan Erdem

WORK EXPERIENCE

Robotics Engineer *Freiburg, Germany*
Robot Learning Laboratory, University of Freiburg *Jan 2024 - Sep 2024*

- Developed new applications for a [quadruped robot](#) using state-of-the-art methods.
- Developed domain adaptable traversability estimation network leveraging vision foundation models. (Paper will be published soon)
- Maintained hardware and software for optimal robot performance.
- Used sensor data (LiDAR, Camera, IMU, GPS) in vision tasks like perception, mapping, and navigation.
- Supervisors: [Iana Zhura](#), [Prof. Dr. Abhinav Valada](#)
- Tech Stack: **Python, PyTorch, ROS, C++**

Deep Learning Engineer *Freiburg, Germany*
Autonomous Intelligent Systems Laboratory, University of Freiburg *Oct 2022 - Jan 2024*

- Implemented state-of-the-art computer vision algorithms into open-source robotics library [OpenDR](#) on [Github](#).
- Developed asynchronous visual-SLAM algorithms optimized for domain adaptation with continual learning. ([CoVIO](#) acknowledgements @ CVPR W 2023)
- Developed visual-LiDAR depth prediction model.
- Supervisors: [Niclas Voedisch](#), [Prof. Dr. Wolfram Burgard](#)
- Tech Stack: **Python, PyTorch, ROS/ROS2, Distributed Training**

Student Software Engineer *Freiburg, Germany*
Cytana, BICO *Nov 2021 - Aug 2022*

- Developed internal scripts for data processing and assisted the software team with custom solutions.
- Implemented automated REST API tests for E2E and integration testing using PyTest, achieving 90% coverage of the company's core software product.
- Documented and tracked test activities using XRay and JIRA, ensuring transparency and traceability.
- Tech Stack: **Python, PyTest, REST API, Docker**

Research Assistant *Ankara, Turkey*
Systems Laboratory, Bilkent University *Jan 2021 - July 2021*

- Developed a smart control allocation system to detect and mitigate driver-induced oscillations.
- Conducted simulations and human experiments in virtual environments to validate system performance.

Micro-Nano Fluids Laboratory, Bilkent University *Feb 2019 - Jan 2021*

- Developed classical image processing algorithms to extract physical attributes data of the droplet from high-speed camera-recorded experiment videos. [\[paper\]](#)
- Tech Stack: **Python, MATLAB, Simulink, Unreal Engine**

PROJECTS

Clustering segmentation on iBOT [\[code\]](#) *Freiburg, 2022*

- Developed semantic segmentation algorithm using several clustering methods using iBOT features.
- Tech Stack: **Python, PyTorch, Scikit-learn, W&B**

TALKS

- Paper Review: Understanding Collapse in Non-Contrastive Siamese Representation Learning. [\[video\]](#)

SKILLS & ACCOMPLISHMENTS

- Languages:** Turkish (native), English (fluent), German (intermediate)
- Technical:** Python, C++, Java, Git, ROS
- Honors & Grants:** Comprehensive Scholarship Bilkent University (2016-2021), Dean's List at Bilkent University (5 times, 2016-2021)