

MEHMET BAHA DURSUN

Robotics Engineer | baha.dursun123@gmail.com | Odense, Denmark | D-type visa, Work permit 90 hours

Portfolio: renbago.github.io/MehmetBahaDursun | GitHub: github.com/Renbago | LinkedIn: linkedin.com/in/mehmet-baha-dursun

PROFESSIONAL SUMMARY

Robotics Engineer with 400+ robots deployed in real-world applications, specializing in localization, SLAM, and dynamic/static obstacle detection, now expanding into robot learning and manipulation. I built the core localization stack at Saha Robotik and now lead its move into robot learning and manipulation (OpenArm, LeRobot, and vision-language-action policies), working remotely from Denmark. MSc candidate in Advanced Robotics at the University of Southern Denmark, with dVRK surgical robot-learning research (diffusion policy) as a part-time student researcher. Experienced in ROS 2/ROS, imitation learning, and team leadership; managed the localization for Turkey's largest autonomous service-robot deployment (187,514 m²).

PROFESSIONAL EXPERIENCE

Robotics Engineer | Saha Robotik, Istanbul, Turkey | November 2023 - Present

- Designed and built the core localization and mapping architecture for 400+ autonomous waiter/cargo robots operating 24/7 in commercial environments.
- Managed complete project lifecycle for Turkey's first 24/7 autonomous airport guide robot at Istanbul Airport, covering 187,514 m² with 25 km minimum daily travel. ([video](#), [project page](#))
- Since relocating to Denmark, work remotely; now advise mainly on localization while focusing on the company's OpenArm and vision-language-action robot-learning stack.
- Leading a new bimanual mobile-manipulation project for restaurant table clearing that covers OpenArm hardware, teleoperation, data collection, and vision-language-action / LeRobot policies, toward a planned Eurostars collaboration between SDU and Saha. ([project page](#), [recommendation letter](#))
- Built the dynamic and static obstacle-detection algorithm and worked on the MPPI (Model Predictive Path Integral) planning and control side, alongside the localization stack.
- Led ROS training program, providing remote and on-site instruction to university students in Azerbaijan.
- Technologies: ROS 2, C/C++, Python, SLAM, Localization, Obstacle Detection, MPPI.

Student Research Assistant (Part-Time) | University of Southern Denmark (SDU), dVRK Surgical Robotics | October 2025 - May 2026

- Built the full learning-based control pipeline for a bimanual suturing task on the physical da Vinci Research Kit (dVRK), end to end: synchronized data collection, LeRobot dataset conversion, diffusion-policy training, ROS 1 deployment, and closed-loop evaluation on the real robot. ([project page](#), [result video](#))
- Diagnosed a vision-encoder failure with representation probes (decoder feature-inversion adapted from LeWorldModel, Yann LeCun et al.) and improved policy behavior by moving from a ResNet to a fine-tuned DINOv2 encoder with state-dropout.
- Bridged the gap between simulated/theoretical models and real-world execution on a surgical robotics platform.
- Supervised by Associate Professor Iñigo Iturrate. ([profile](#), [recommendation letter](#))
- Technologies: dVRK, ROS 1, PyTorch, Diffusion Policy, DINOv2, Python, C++.

TECHNICAL SKILLS

Programming: C/C++, Python, MATLAB | **Robotics:** ROS 2, ROS, SLAM, Localization, Sensor Fusion, Control Systems, Path Planning, Motion Planning | **Computer Vision:** OpenCV, YOLO, Object Detection | **Robot Learning:** PyTorch, Diffusion Policy, Imitation Learning | **Tools:** GitHub, Git, Linux, Docker | **Soft Skills:** Team Leadership, Project Management

EDUCATION

Master of Science in Advanced Robotics | University of Southern Denmark, Odense | August 2025 - Present

- Full scholarship recipient.

Bachelor of Science in Mechatronics Engineering | Kocaeli University, Turkey | August 2019 - October 2024

- GPA: 3.2 / 4.0.

CERTIFICATIONS

IELTS Overall Band Score: 6.5 (Listening: 7.5, Reading: 7.0, Writing: 5.5, Speaking: 5.5).

VOLUNTEER EXPERIENCE

Team Lead → Mentor | KOU-Mekatronom Autonomous Vehicle Team, Kocaeli University | November 2021 - Present

- Led a 20-member student team developing autonomous vehicle systems for international competitions.
- Selected and led a five-person squad to the Bosch Future Mobility Challenge on-site final, the only Turkish finalist (Top 24 of 160 global teams). ([project page](#), [code](#), [video](#))
- Achieved 6th place in two consecutive Teknofest Robotaxi competitions.
- Managed project planning, resource allocation, and technical development for the autonomous-driving stack.
- Open-sourced project code and tutorials to support future cohorts.
- Led the team through 2024 and continue to mentor since then; as of 2026 still a mentor, with limited time on critical points.
- Technologies: C++, Python, MATLAB, OpenCV, YOLO, ROS, Computer Vision, Path Planning.

Volunteer Teacher | Bambu Voluntary Teaching Platform | January 2021 - August 2021

- Provided STEM tutoring for middle- and high-school students during the COVID-19 pandemic.

REFERENCES

Professor Metin Aydın | Kocaeli University

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Asst. Prof. Suat Karakaya | Kocaeli University

Email: suat.karakaya@kocaeli.edu.tr | [Recommendation letter](#)

Jacob Pilegaard | R&D Software Manager, Universal Robots

[Contact information to be provided upon request]

Associate Professor Iñigo Iturrate | University of Southern Denmark (dVRK project supervisor)

Profile: portal.findresearcher.sdu.dk/en/persons/iñigo-iturrate