Mehmet Emin Meydanoğlu

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Experience

ITU AUV Team   **Istanbul, Turkiye**

Co-Lead of Autonomous Software   *Sep 2025 – Present*
Autonomous Software Team Fellow   *Sep 2024 – Sep 2025*

Leading the development of the **autonomous systems stack** for the team's underwater vehicles, designed for both **academic research** and international competitions. **Achieved 3rd place worldwide at RoboSub 2025**.

All work is open-source and available at github.com/itu-auv/auv-software.

Primary focus on high-level autonomous planning and its intersection with perception.

- Learning-based navigation and manipulation policies, learning from **imitation-reinforcement**.
- **Vision Transformers (ViT/i.e., DINO)** for world feature extraction/ visual embeddings as observations.
- Visual SLAM, sensor based localization with sensor fusion, conventional path planning and tracking, 6-DOF AUV control, YOLO perception pipeline.

Keywords: Autonomous system design, Imitation Learning, Reinforcement Learning, Computer Vision (ViT, DINO, YOLO), autonomous planning, state estimation (EKF), control theory, SLAM, simulation, ROS, Python, C/C++, Docker, Git.

Education

Istanbul Technical University   **Istanbul, Turkiye**
B.S. Mathematical Engineering *(GPA: 3.42/4.00)*   *Sept 2023 – Present*

Leadership & Interests

Philosophy and Science Communication & Content Creation: Running a YouTube channel producing content on numerous fields of analytical philosophy; philosophy of **mind** (consciousness, AI, intelligence), **life** (mainly Stoicism), **science** (mainly physics), **religion**. Simplifying complex concepts for a general audience.

Sports: Tennis, Running, Cycling.