Damla Elmalı

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PROFILE

Electronics and Communication Engineering student with strong interest in Artificial Intelligence, Embedded Systems, and Robotics. Through Erasmus and university-based projects, I have strengthened my technical background and global perspective. I have gained hands-on experience in computer vision and autonomous systems, and I am eager to explore how AI can be applied to real-world engineering problems. Motivated to learn and contribute to research environments, I aim to take part in international projects that combine AI, hardware, and innovation.

EDUCATION

Yıldız Technical University, *B.Eng. in Electronics and Communication Engineering* Oct 2023 – present | İstanbul, Türkiye

AGH University of Science and Technology, *Bachelor of Engineering* Mar 2025 – Jul 2025 | Krakow, Poland
Participated in the Erasmus+ Exchange Program

Roketsan, *CAMPus (Learning and Development Camp for Engineers) Program - Online* Aug 2025 – Sep 2025 | İstanbul, Türkiye

Kabataş Erkek High School, *High School Degree* Sep 2016 – Jun 2021 | İstanbul, Türkiye

EXPERIENCE

TÜBİTAK 2247-C Scholarship Program, *Undergraduate Researcher* Feb 2026 – Present | İstanbul, Türkiye
- Selected as a scholarship researcher for the project "AI-Aided Design and Optimization of Next-Generation Frequency Selective Surfaces (FSS)" (Project No: 6780) under the supervision of Assoc. Prof. Peyman Mahouti at Yıldız Technical University.

National Technology Initiative, *IC Design Specialization Program Trainee* Jan 2026 – Present | Online
- Undergoing intensive training on RTL Design (Verilog), RISC-V Architecture, and UVM verification.
- Focusing on full IC design flow including FPGA prototyping, Synthesis, and Physical Design (DRC/LVS).

TEI Aviation Engines School, *Program Participant* Jan 2026 – Present | Online
- Acquiring technical knowledge in aviation engine control systems, avionics, and embedded hardware certification standards

YTU Applied Artificial Intelligence Lab, *Undergraduate Student Researcher* Oct 2025 – Present | İstanbul, Türkiye
- Collaborating with faculty members to contribute to research projects and publications in artificial intelligence and machine learning.
- Currently conducting literature reviews and initial implementations in Quantum Machine Learning (QML) and Federated Learning.

TurkNet - Fiber Operations Intern Sep 2025 – Sep 2025 | İstanbul, Türkiye
- Explored OSI Model and FTTx/FTTH technologies while strengthening networking fundamentals (TCP/IP, routing, switching).
- Participated in fiber cabling inspections and observed field operations.

Artificial Intelligence and Technology Academy, *Program Scholar* Dec 2024 – Jul 2025 | İstanbul, Türkiye
- Organized with the support of Google Turkey, the Ministry of Industry and Technology, and the Presidential Digital Transformation Office, in collaboration with the Entrepreneurship Foundation and T3 Entrepreneurship Center.

YTU AESK Autonomous Vehicle Team, *Object and Lane Detection Unit Member* Oct 2023 – Feb 2025 | İstanbul, Türkiye
Acquired knowledge in control, behavioral planning, sensor fusion, and localization through teamwork.
- Object Detection: Implemented YOLOv8/v9 with PyTorch in ROS using Python & C++ for detecting and classifying traffic elements on custom and public datasets.
- Lane Detection: Applied image processing with OpenCV in ROS; studied and implemented the TwinLiteNet algorithm.

SKILLS

- **Programming:** Python (PyTorch, TensorFlow), C/C++, MATLAB, AVR Assembly
- **Embedded, Electronics & IC Design:** Embedded Systems, Analog & Digital Circuit Design, PSpice, OrCAD, Cadence Virtuoso
- **AI, Computer Vision & Robotics:** Machine Learning, Deep Learning (CNN, RNN), Federated Learning, Image Processing, Object Detection, ROS
- **Communication Systems & Engineering Tools:** Digital Communications, Signal Processing, Git, GitHub, Proteus

CERTIFICATES

Supervised Machine Learning: Regression and Classification
Successfully completed online non-credit course authorized by DeepLearning.AI and Stanford University and offered through Coursera

Artificial Intelligence and Technology Academy (YZTA) – Graduation Certificate
Certificates earned during the program: Ideathon Participation, Hackathon Participation, Bootcamp Participation, Web Application Development Completion, Entrepreneurship Trainings Completion and Google Project Management: Specialization

PROJECTS

Traffic Sign Segmentation and Orientation Estimation for Autonomous Vehicles, Apr 2025 – present
TÜBİTAK 2209-A Research Project - Ongoing
- Currently developing a deep learning-based system for real-time traffic sign segmentation and orientation detection
- Working with YOLO, OpenCV, and Python for image processing and model training
- Responsible for dataset preparation, annotation, and performance evaluation of the detection pipeline

LANGUAGES

English
Upper Intermediate

German
Beginner