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

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.

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.

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.

PROGRAMS

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 Jan 2026 – Present | Online
- Acquiring technical knowledge in aviation engine control systems, avionics, and embedded hardware certification standards

McKinsey Forward Program Oct 2025 – Dec 2025 | Online
- Completed a structured learning program focused on problem solving, analytical thinking, data-driven decision making, and professional communication, using real-world business and consulting case frameworks.

Roketsan CAMPus (Learning and Development Camp for Engineers) Program Aug 2025 – Sep 2025 | Online
- Selected participant in an engineering development program focused on rocket and missile technologies, avionics systems, propulsion concepts, quality standards, and systems-level engineering, with exposure to AI applications in defense R&D.

Artificial Intelligence and Technology Academy, *Program Scholar* Dec 2024 – Jul 2025 | Online
- 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.

Aspire Institute Aspire Leaders Program Jan 2025 – Mar 2025 | Online
- Selected participant in a highly competitive global leadership program emphasizing systems thinking, ethical leadership, and social impact.

Miuul Machine Learning Camp Sep 2024 – Nov 2024 | Online
- Attended and successfully completed 6-weeks long Machine Learning Bootcamp

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

Miuul Machine Learning Camp
- Attended and successfully completed 6-weeks long Machine Learning Bootcamp

YGA Future Role Model Women in Tech Program
- Selective 8-week program focused on technology and social impact.Covered data storytelling, productivity with AI, cybersecurity, blockchain, web & cloud technologies, and sustainable tech solutions.

Google Project Management: Professional Certificate
- Completed 6 courses (65+ hours)

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, Bootcamp Participation, Web Application Development Completion, Entrepreneurship Trainings Completion and Google Project Management: Specialization

PROJECTS

Traffic Sign Segmentation and Orientation Estimation for Autonomous Vehicles, *TÜBİTAK 2209-A Research Project - Ongoing* Apr 2025 – Present
- 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

DC Motor Speed and Direction Controller with ATmega328PB Jun 2025 – Jul 2025
- Designed and implemented a DC motor control system using ATmega328PB and L298N driver.

LANGUAGES

English
Upper Intermediate

German
Beginner