Muhammet Özmen



Computer Engineer | Embedded Software Engineer

Mardin, Türkiye (open to relocation) | +90 505 716 8200
ozmen.muhammet@outlook.com | mozmen.dev
linkedin.com/in/muhammetozmen | github.com/muhammetozmen

PROFILE

Computer Engineer working where hardware meets software. Built UART/I2C/GPIO communication, embedded Linux and real-time computer vision applications in C/C++ and Python on ESP8266, Raspberry Pi, NVIDIA Jetson Nano and Arduino. Developed MAVLink-based ground station software for the Teknofest UAV competition and delivered Embedded Linux training on Jetson Nano. Seeking to contribute to embedded systems projects in defense, aerospace and industrial domains.

EXPERIENCE

Robotics and Coding Instructor Oct 2026 – Present
Bahçeşehir Uğur Okulları, Mardin
- Teach hands-on robotics coding covering microcontrollers, sensors and motor control; design the course content and projects myself.

Intern Software Engineer Feb 2025 – Jul 2025
Winton Software and Innovation, İskenderun/Hatay
- Set up a headless Linux system on NVIDIA Jetson Nano and integrated OpenCV-based image processing and hardware control into a C++ application.
- Developed the cross-platform control interface and backend workflows end to end with Qt (Widgets/QML).
- Added API integration and voice command support to an LLM-based grading automation system built for universities.

Software Intern (Short-Term) Jul 2025 – Aug 2025
Winton Software and Innovation, İskenderun/Hatay
- Designed the communication architecture between ESP8266 and Raspberry Pi for an LLM-powered smart home prototype.
- Completed integration tests validating hardware-software communication over UART, I2C and GPIO.

PROJECTS

- **Esenlik – Teknofest 2025 International UAV Competition, Semi-Finalist**. Developed the ground station interface software handling ground station–UAV communication over MAVLink.
- **Autonomous Turret with Target Detection and Tracking – Capstone Project**. Implemented real-time target detection with YOLO and automatic aiming through stepper motor control.
- **LLM-Powered Voice-Controlled Smart Home Electricity System**. Designed a voice-controlled home automation prototype with ESP8266, relay modules, Raspberry Pi and a Qt interface.
- **Gesture-Controlled Robotic Hand with Mediapipe – Open Source**. Built a robotic hand prototype using Mediapipe hand tracking and Arduino-based servo control.

EDUCATION

B.Sc. in Computer Engineering Oct 2021 – Aug 2025
İskenderun Technical University, İskenderun/Hatay | GPA: 3.30 / 4.00
- **Relevant coursework**: Microprocessors (AA), Embedded Software Systems (BA), Circuit Elements (AA), Circuit Elements Laboratory (AA), Digital Design Laboratory (BA), Data Structures (AA), Computer Architecture (BB)

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Python, Bash
- **Hardware Platforms**: ESP8266, ESP32, Raspberry Pi, NVIDIA Jetson Nano, Arduino (AVR)
- **Communication Protocols**: UART, I2C, SPI, GPIO, MAVLink, MQTT, TCP/IP
- **Embedded Linux**: Headless system setup, serial communication, logging, Bash scripting
- **Computer Vision and AI**: OpenCV, YOLO, Mediapipe, real-time object detection on embedded devices
- **Academic Level**: STM32 (ARM Cortex-M), FreeRTOS, digital design, basic circuit design
- **Tools**: Git, GitHub, Qt (Widgets/QML), Linux

LEADERSHIP AND COMMUNITY

- **Co-founder, GÖK-TECH (Oct 2024 – Jun 2025)**. Built industry partnerships and coordinated the development of 10+ TÜBİTAK and Teknofest student projects.
- **Computer Science Chair, IEEE İSTE Student Branch (Jun 2022 – Oct 2023)**. Organized Python programming trainings and hands-on engineering workshops.
- **Vice President, İSTE UAV Community (Oct 2024 – Jun 2025)**. Ran project management and mentoring for new members.
- **Instructor Mentor, Turkey Technology Team Foundation (T3) (Mar 2023 – Present)**. Taught robotics coding and basic electricity; prepared training materials.

LANGUAGES

Turkish: Native **| English**: B2 (Berlitz certificate, 2024)