

Seymen Alper

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Professional Summary

Computer Engineering student with a year of experience as a TÜBİTAK STAR Research Assistant at ITU Power Electronics Lab, building data acquisition systems, automated testing workflows, and Grafana dashboards for EV battery research. Comfortable working across the full pipeline — from hardware communication (SCPI, MQTT) to data analysis (NumPy, Pandas) and visualization. Currently applying these skills in an ML-focused senior design project and expanding into cloud deployment.

Education

B.Sc in Computer Engineering (English), MEF University, Istanbul Expected June 2026

Relevant Courses: Natural Language Processing, Artificial Intelligence, Human-Computer Interaction

Professional Experience

TÜBİTAK STAR Research Assistant, Istanbul Technical University Power Electronics Lab January 2025 – January 2026

Electric Vehicle Battery Systems R&D Project

- Built Python-based GUI application (Tkinter) for controlling \$15K+ laboratory test equipment (Prodigit/Keithley) via SCPI over USB and Ethernet, replacing ~\$1,000 commercial software solutions
- Developed data acquisition system for battery performance metrics (voltage, current, temperature)
- Implemented MQTT-based IoT pipeline via Raspberry Pi for vehicle diagnostics, collecting OBD-II and GPS data for field testing

R&D Intern, IQ Vizyon Digital Transformation, Istanbul August 2024 – September 2024

- Developed Node-RED flows and Grafana dashboards for industrial IoT monitoring with automated email alerting for machine downtime events
- Tracked and stored machine efficiency metrics in InfluxDB; built Android prototype (Kotlin) to display real-time sensor data

Technical Projects

Smart Pause – Digital Wellness System (Senior Design Project) September 2025 – Present

- Building ML-based smartphone addiction intervention system using Random Forest (scikit-learn) and StudentLife dataset for behavioral pattern recognition
- Developing FastAPI backend with Android app (Kotlin) and Firebase Firestore for real-time data storage and intervention delivery logic
- Containerizing with Docker for Google Cloud Run deployment; applying cloud-native development practices

Skills

Programming	Python (primary), Kotlin, Bash
Data & Analysis	NumPy, Pandas, Matplotlib, scikit-learn, Statistical Analysis
Monitoring & IoT	Grafana, InfluxDB, MQTT, Raspberry Pi, Node-RED, SCPI, Serial/USB/Ethernet
Backend & Cloud	FastAPI, Docker, Google Cloud Run, Firebase Firestore, MongoDB
Dev Tools	Git, Linux
Languages	Turkish (Native), English (Upper Intermediate)

Leadership & Activities

President, Mefkûre Club, MEF University 2025 – Present

- Lead team organizing charitable events (220-person Ramadan dinner, fundraising initiatives) and volunteer programs
- Built QR-based attendance tracking system using Google Sheets and Apps Script, improving event management efficiency