

UTKU BUĞRA YILMAZ
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LinkedIn | GitHub | Medium | Portfolio
Ankara/Turkey

EDUCATION

Giresun University

BSc in Computer Engineering | GPA: 3.26/4 Giresun, Turkey | Oct 2021 – June 2025

EXPERIENCE

Freelance FinTech Project | Machine Learning & Backend Engineer

Remote | Sep 2025 – Oct 2025

- **High-Performance AI Engine:** Engineered a BIST100 stock prediction model using **LightGBM**, achieving **~0.67 Weighted F1-Score** and **0.97 Sharpe Ratio** with **~230% backtest return**, outperforming baseline models.
- **Scalable Backend & LLM Integration:** Architected a robust **FastAPI** and **Docker** infrastructure, integrating **DeepSeek LLM** to power a multilingual (TR/EN/DE/KO) financial news summarization system and chatbot.
- **MLOps & Standardization:** Established end-to-end **MLOps** practices by creating comprehensive Model Cards, Data Dictionaries, and Runbooks to ensure system reproducibility and maintainability.

Tech Stack: Python, FastAPI, Docker, PostgreSQL, LightGBM, Scikit-learn, Pandas, NumPy, DeepSeek LLM, Git

Giresun University IT Department | Part-Time Software Engineer

Giresun, Turkey | Sep 2024 – June 2025

- Conducted R&D on **Data Security**, developing innovative **Steganography** methods and optimizing **Metaheuristic Algorithms** (SFOA) for enhanced encryption.

Tech Stack: MATLAB, Python (OpenCV/Scikit-learn), Cryptographic Libraries

Giresun University IT Department | Software Development Intern

Giresun, Turkey | Jul 2024 - Aug 2024

- Engineered a **Real-Time Face & Emotion Recognition System** using custom-trained **CNN architectures**, achieving **87% accuracy** in validation tests.

Tech Stack: Python, TensorFlow, OpenCV.

MAN Türkiye A.Ş | Software Development Intern

Ankara, Turkey | Jul 2023 - Aug 2023

- Developed **Backend Systems** using **C#** and **SQL** in the **R&D department**, configuring and testing **AUTOSAR stacks (BSW modules)** for automotive embedded systems and **ECU integration**

Freelance AI & Backend Developer / Mentor | Bionluk / Superprof / Fiverr

Remote | Jan 2022 – Present

- Delivered **50+ projects** including **AI Chatbots**, **Python Automation Scripts**, and **YOLO-based Computer Vision** solutions, maintaining a **4.9/5** rating.
- Mentored **15+ students** in **Python**, **Algorithms**, and **Data Structures**, improving student performance by **40%**.

PROJECTS

postaX: ML-Enhanced Smart Mail System | Team Lead & IoT Developer

(Graduation Project) – Giresun University, Turkey | Oct 2024 – June 2025

- Engineered a secure IoT ecosystem integrating **Arduino BLE33** and **ESP32-CAM** via optimized **I2C communication**, ensuring seamless synchronization between sensors and vision modules.
- Implemented a **Telegram Chatbot** with **OTP (One-Time Password)** authentication for secure delivery and designed an **Offline Failover Mode** that utilizes pre-generated keys during network outages.
- Deployed **TinyML-based Anomaly Detection** algorithms directly on the edge to identify unauthorized access patterns and trigger real-time alerts without cloud dependency.

Tech Stack: Python, C++ (Embedded), Arduino, ESP32-CAM, TinyML, Telegram API, I2C, RFID

Aytar Drone: Autonomous Search & Rescue System | Software Developer

Teknofest Semi-Finalist – Giresun, Turkey | Feb 2024 – Jun 2024

- Achieved **Teknofest Semi-Finalist** status (90/100 score) by developing voice-controlled drone software.
- Implemented **MFCC Analysis** to filter propeller noise and detect human cries, integrating a **Multi-language NLP** module for emergency keywords.
- Designed an algorithm to estimate **GPS coordinates** based on sound source direction.

Tech Stack: Python, SpeechRecognition, OpenCV, MFCC, Google Speech API, NLP, Raspberry Pi

SKILLS & CERTIFICATES

Technical Skills

- **AI/Data:** Python (Advanced), LightGBM, XGBoost, TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, Pandas, NumPy, SHAP, CNN, NLP.
- **Backend/DevOps:** FastAPI, REST APIs, Docker, Git, MLOps, PostgreSQL, SQL.
- **Hardware:** Arduino (I2C/UART), ESP32, Raspberry Pi, Embedded Systems.

Certificates & Languages

- **Certs:** Autosar Architecture (Udemy), CS50's Python (HarvardX), Ethical Hacking (Udemy).
- **Languages:** Turkish (Native), English (B2), German (A1).