

# Baha BüyüKateş

Computer Engineer | Industrial AI & Data Engineering

EU Citizen – No Visa Sponsorship Required – Available Immediately

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## Profile

Industrial AI and Data Engineering-oriented Computer Engineer with hands-on experience in designing end-to-end data-driven systems using IoT sensor streams, ERP/MES data, and machine learning models. Experienced in real-time data ingestion, analytical data modeling, production KPIs (OEE, MTBF, MTTR), ML pipelines, and LLM-based decision support systems. Focused on Industrial AI, Data Engineering, and Applied Machine Learning roles.

## Technical Skills

- **Data Engineering & Analytics:** SQL, PostgreSQL, Star Schema, Materialized Views, KPI (OEE, MTBF, MTTR), Power BI, Excel
- **Programming:** Python, SQL, C#, JavaScript
- **Machine Learning & AI:** PyTorch, Scikit-learn, TensorFlow, Time-Series Modeling, Feature Engineering
- **LLM & RAG:** Sentence-Transformers, ChromaDB, Prompt Engineering, Ollama, OpenAI
- **Industry 4.0 & IoT:** MQTT, Mosquitto, OPC UA, PLC, SCADA
- **Backend & APIs:** FastAPI, REST, Async Architectures
- **DevOps (Foundational):** Docker, Docker Compose, CI/CD (GitHub Actions), Basic Jenkins
- **Enterprise Systems:** SAP S/4HANA, SAP Fiori

## Work Experience

**AI Trainer** Oct 2025 – Present  
*Outlier* Remote

- Improved logical reasoning and code generation capabilities of large language models (LLMs).
- Worked on prompt engineering, data labeling, and quality assurance workflows.

**C# .NET Developer Intern** Aug 2024 – Sep 2024  
*Prestij Information Systems R&D* Bursa, Turkey

- Developed scalable modules for Hospital Information Systems (HIS) using .NET and SQL Server.
- Participated in Git-based version control and code review processes.

**IT Intern** Jul 2024  
*Sanofi* Lüleburgaz, Turkey

- Supported IT operations including hardware, network, and system maintenance.
- Gained hands-on exposure to SAP S/4HANA and SAP Fiori modules.

**IT Intern** Aug 2023 – Sep 2023  
*Kırklareli State Hospital* Kırklareli, Turkey

- Provided infrastructure and network support, contributing to reduced system downtime.

## Selected Projects

### SmartFact – End-to-End Industrial AI & Smart Factory Platform

Industrial AI platform integrating IoT sensor streams, ERP/MES data, machine learning, and LLM-based decision support into a unified production-oriented system.

#### Technologies:

- Python, FastAPI, Uvicorn, Pydantic
- MQTT, Mosquitto, paho-mqtt
- PostgreSQL (Star Schema, Materialized Views)
- Pandas, NumPy

- PyTorch (LSTM – Time Series), Scikit-learn (Random Forest)
- Sentence-Transformers, ChromaDB, Ollama, OpenAI
- Docker, Docker Compose
- Embedded HTML, CSS, Vanilla JavaScript, Canvas API

#### Responsibilities & Contributions:

- Designed a real-time MQTT-based data pipeline for industrial IoT sensor streams with analytical data modeling in PostgreSQL.
- Implemented automated production KPIs including OEE, MTBF, MTTR, downtime Pareto analysis, and supplier performance metrics.
- Developed LSTM-based predictive maintenance models on time-series sensor data and Random Forest models on ERP/MES production data.
- Built a RAG-based LLM assistant for ISO 10816 standards, maintenance procedures, and natural language alarm/OEE analysis.
- Deployed the platform as a production-like PoC using Docker Compose with a single-command startup.

#### Drumveil Ritual – Audio Time-Series Deep Learning

Deep learning project focused on time-series and signal-based audio analysis for automatic drum transcription.

#### Technologies:

- Python
- PyTorch, Demucs, Librosa

#### Responsibilities & Contributions:

- Built time-series and spectral feature extraction pipelines on raw audio signals.
- Addressed real-world deep learning challenges such as data imbalance and dimensional mismatches during model training.

### Education

#### Trakya University

Bachelor of Engineering, Computer Engineering

Edirne, Turkey

Sep 2021 – Jan 2026

#### GEN Academy

AI & Software Development Program

Remote

Sep 2024 – Jun 2025

### Certifications

- AWS DevOps – Continuous Delivery
- Docker & Kubernetes Fundamentals
- Apache Spark Essentials
- Microsoft Azure AI Essentials
- Industrial Automation & IoT

### Languages

Turkish (Native)   English (B2)   German (A2 – progressing to B2)