Deniz Balcı

AI Engineer
Eskişehir, Turkey | +90 553 696 4026 | sea-97@hotmail.com
github.com/SirmaXX | linkedin.com/in/deniz-soft | medium.com/@dbsirmax | orcid.org/0009-0007-9403-8040

Summary

I am a statistician and software developer specializing in probabilistic modeling, modern language models, and scalable system engineering. Having recently completed my MSc in Statistics at Eskişehir Technical University, my work bridges the gap between rigorous mathematical theory and production-ready Artificial Intelligence (AI) architectures. Unlike traditional statisticians, I engineer end-to-end, multi-tenant software systems, from developing custom simulation algorithms to researching RAG architectures. My core technical stack relies on Python, Go, FastAPI, and robust containerized orchestration using Docker and Caddy.

Technical Skills

Web Technologies: JavaScript (Svelte), Python (Flask, FastAPI), Go ,Playwright,lightpanda

Databases: MongoDB, PostgreSQL, ChromaDB, Redis

Computing & ML: R, NumPy, Pandas,FFmpeg, scikit-learn, TensorFlow, PyTorch, LangChain, Langflow

Tools: Nginx, Caddy, Squid Proxy, Docker / Docker-compose, SQLAlchemy (ORM), Pytest, Jaeger, Jenkins, Swagger, Postman

Monitoring: Beszel, Grafana

Operating Systems: Linux Mint, Ubuntu

Experience

Independent AI Consultant Apr 2026-Present
(Remote, Turkey) *FastAPI, Redis, Docker,DuckDB,PostgreSQL, Caddy,Playwright,ClickHouse*

- Designed and implemented scalable web scraping pipelines using Python, Playwright, and async architectures, extracting large-scale structured datasets from complex, dynamic e-commerce platforms.
- Integrated rotating residential and datacenter proxy networks with custom header spoofing and browser fingerprint management to reliably bypass anti-bot, CAPTCHA, and rate-limiting protections.
- Engineered high-throughput data extraction services containerized with Docker, managing distributed job queues via Redis and persisting clean analytics data into DuckDB and ClickHouse.
- Architected resilient parsing layers using CSS Selectors, XPaths, and Pydantic validation schemas to minimize breakage from target DOM/schema updates.

Lead Developer Oct 2025 – Apr 2026
Shirasoft (Remote, Turkey) *FastAPI, Redis, Docker, Squid Proxy, Caddy, Raspberry Pi*

- As Founding Developer, led the end-to-end architectural design and development of the company's insurance product suites
- Established a secure, scalable infrastructure with FastAPI, Redis and Docker, tuned through Squid and Caddy proxy configurations on both cloud environments and Raspberry Pi hardware
- Built specialized internal services for insurance agents and developers, and integrated AI features such as sentiment analysis and LLM-powered chatbots (LangChain)
- Managed a team of 3 people alongside hands-on development

Full Stack Developer May 2024 – May 2025
Shikenso Analytics (Frankfurt, Germany - Remote) *FastAPI, MongoDB, DeepFace, LangChain, PyTorch,ffmpeg*

- Built and maintained automated data extraction and scraping modules to harvest social, streaming, and visual sponsorship data, feeding core analytics pipelines.
- Developed backend services and REST APIs with FastAPI to serve extracted and parsed metrics to internal data and business analysts.

• Engineered computer vision and NLP workflows in parallel, integrating DeepFace for brand/image detection and LangChain for sentiment analysis and chatbot automation.

• Maintained high service reliability across distributed data collectors and contributed to the open-source project ScrumAgent: github.com/Shikenso-Analytics/ScrumAgent.

• Engineered computer vision and video processing workflows, leveraging FFmpeg and DeepFace for automated brand/advertisement detection and large-scale image analysis.

Full Stack Developer Oct 2022 – Jul 2023
Rubuplus (Remote, Turkey) *Flask, FastAPI, SQLAlchemy, Docker, Nginx, ADB, Asterisk VoIP,ffmpeg*

• Built web services for Android TVs and IoT devices using FastAPI and the Android Debug Bridge

• Developed modules for PV (personal videos) digital signage

• Developed a Python-based VoIP telephony management system for IoT and Android TV environments, with FastAPI backend services and ADB for device integration and remote call control

• Developed and optimized backend modules for digital signage systems, integrating FFmpeg for robust real-time image/video processing and rendering of personal videos (PV).

Python Developer Sep 2021 – Nov 2021
Seccops Cyber Security (Remote, Turkey) *Python, Flask, flask-restful, peewee, Docker*

• Studied Docker, microservices and software architectures

• Completed the internship required by my university program

Frontend Developer Jun 2019 – Nov 2019
Mugsoft(Remote, Turkey) *ELM, Go*

• Developed front-end applications for web-based games in the ELM language

• Studied functional programming during this position: linkedin.com/in/nikosefthias

Intern Developer Dec 2017 – Mar 2018
CityRise Apps(Chengdu, China - Remote) *Apache Cordova, JavaScript, GPS*

• Developed a cross-platform map application with Apache Cordova and worked on an operational research problem: github.com/SirmaXX/risemap

• Worked as a Turkish-English translator for other company projects: linkedin.com/company/cityrise-apps

Intern Developer 2015 – 2016
Mastercodex3d Teknoloji (Eskişehir, Turkey - On-site) *Unity3D, PHP, Apache Cordova, UDP/TCP*

• Developed applications in Unity3D with a partner of the company, and carried out field work with another partner

• Developed interactive applications in Unity3D and actively assisted in the visual and hardware configurations for large-scale cinema screen projection projects during field operations.

Partner – Web Developer Jan 2013 – Mar 2013
Demarp Software(Remote, Turkey) *HTML, CSS*

• Developed front-end templates and portfolios for local customers

Education

Eskisehir Technical University Eskişehir, Turkey
M.Sc. in Statistics *2024 – 2026*

Eskisehir Technical University Eskişehir, Turkey
B.Sc. in Statistics *2017 – 2022*

Projects

Fastapi_Deepface: github.com/SirmaXX/Fastapi_Deepface

ScrumAgent: github.com/Shikenso-Analytics/ScrumAgent

References

Prof. Dr. İlhan Usta – Professor, Eskisehir Technical University – akademik.eskisehir.edu.tr/iusta

Wahed Hemati – Co-Founder & CIO, Shikenso Analytics – linkedin.com/in/wahed-hemati

İlker Manap – Technical Specialist, Scania – linkedin.com/in/ilker-manap

Ahmet Faruk Dereli – DevOps Engineer, Skvare – linkedin.com/in/dereliahmet1

Savaş Yıldırım – Project Manager, ADL Software – linkedin.com/in/savasyildirim