

Efe Sahin

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I build AI systems through professional roles, independent projects, and research collaborations, with a growing focus on generative modeling and explainability. My long-term goal is to evolve into an R&D lead specializing in world models and open-ended-ness to solve difficult tasks in pharmaceutical drug discovery and robotics for fun.

Education

University College London

MSc in Machine Learning (expected)

Bloomsbury, London

Sep 2025 – Sep 2026

The Pennsylvania State University

BS in Computer Science; GPA: 3.40

University Park, PA

Aug 2020 – May 2023

Team project on instrumented mouthguard (Penn State Kraft Lab); awarded 2nd Place, “Best K-12 Materials”.

Professional Experience

Ideogen AG

Junior AI Engineer

Sariyer, IST

Oct 2024 – Apr 2025

Advised on 5 projects and educated in AI concepts for business applications in Switzerland and Türkiye by coordinating with clinical, regulatory, and sales teams (>15 members). Initiated GitHub Organization page and developed a multi-threaded intranet app with authentication, Dockerized, and deployed on AWS EC2. Utilized LangChain, Groq API, and LlamaIndex, delivering development demos to the team. Expanded company outreach within 2 months by engaging 9 digital agencies.

Columbia Data Analytics

Junior Programmer

Manhattan, NY

Aug 2023 – Apr 2024

Delivered weekly patient attrition tables in response to 6–7 client requests using PySpark and Databricks. Reorganized pipeline code to track historical and future outputs, enabling easier parameter entry and faster delivery to sales leads.

Research and Assistantship

Sabanci University

Independent Researcher

Remote

Jan 2025 – Jun 2025

Explored the integration of neuroscience concepts (SSEVP) into computer vision to improve model explainability. Applied Fast Fourier Transform (FFT) to analyze ResNet50 feature maps and guide pruning strategies. Advised by Professors Erchan Aptoula and Gulsen Taskin.

Istanbul Technical University

Independent Researcher

Sariyer, IST

Jul 2024 – Aug 2024

Contributed to an earthquake analysis project under Professor Gulsen Taskin. Fine-tuned LLaVA on a proprietary damaged-buildings dataset combined with a synthetic natural language dataset using ITU's HPC clusters. Shared generative AI insights with a newly formed XAI consortium of >7 professors.

Bogazici University

Technical Assistant (Volunteer)

Remote

Aug 2023 – May 2024

Supported two undergraduate courses (>200 students each) with Professor Onur Baser. Supported two undergraduate courses (>200 students each) with Professor Onur Baser. Automated midterm and final exam preparation in Python, including counter-cheating measures, generated anonymous class performance visualizations, and managed student feedback.

Projects github.com/Efesasa0

Ariel Data Challenge: Deep CNN pipeline on UCL Ariel dataset for exoplanet spectrum prediction.

Diffusion Image Generation: From-scratch DDPM/DDIM implementation for context-based sprite synthesis.

Real-time Translation: Multi-threaded Faster-Whisper app for live translation and speech output.

Smooth Life: Paper implementation of the cellular automata simulation with GUI controls and deployment.

Skills

Deep Learning frameworks, Big Data Analytics, High Performance Computing

Hobbies: Drums, Reading