Efe Sahin

efe-sahin.com efesasa@gmail.com linkedin.com/in/efesas github.com/Efesasa0

After graduating from Penn State University's Computer Science department in May 2023, I worked for eight months in health economics in New York. I returned to Turkey in March 2024 and began several research projects. Since April 2024, I have contributed to a chatbot project for MEF University students, volunteered as a software developer on an AI-based building damage analysis project at Istanbul Technical University, and joined a consortium for future HORIZON XAI research calls. I am currently employed as a Junior AI Engineer at Ideogen, a pharmaceutical licensing company based in Switzerland. In the long term, I aim to work on AI applications in the health sector, particularly in neuroscience and neurotechnology.

Technical Skills

LLMs, Diffusion, Time Series Forecasting | pytorch, numpy, pandas, matplotlib, seaborn, solara, streamlit| ollama, langchain, llamaindex, transformers | Hugging Face, Colab, Kaggle Competitions, latex | git, linux, c, docker, Nvidia HPC, fastapi | apache spark, AWS, DataBricks, MATLAB, sql.

Education

Penn State University, University Park, PA — 2020 - 2023

Bachelor of Computer Science, B.S. Engineering in **3 years** with a **3.40 GPA. Dean's List** (Spring 2021 & Spring 2023).

BME 450W Biomedical Senior Design: **(A-)**
MATH 452 Deep Learning Algorithms and Analysis: **(A-)**
MATH 486 Theory of Games: **(A-)**
CMPSC 465 Data Structures and Algorithms: **(B+)**
EE456 Intro to Neural Nets: **(A-)**
CMPSC 497 Deep Learning for Computer Vision: **(A-)**

International Baccalaureate, Istanbul, Turkey — 2016 - 2020

IB Diploma at MEF International and took higher level courses e.g.:: **HL ITGS** and **HL Math.**

Projects

Ariel Data Challenge 08.2024:

Researched UCL Ariel **satellite data** from Kaggle to pre-process **exo-chemistry** data and trained a simple convolution model to **predict the spectrum** of each exo-planet.

EEG Data OSC Reciever 05.2024:

Developed script to **log brainwave data streamed** from MUSE headband via Mind Monitor App and also save to CSV for processing.

RealTime Audio Translation 05.2024:

Developed multi-threaded script to **translate internal audio to English** and display. Added an extra layer to **speak back the translation**. Reduced to 5-second delay.

LLM Performance Testing 04.2024:
Customized and Evaluated 11 different models inference speed and outputs. Performing **finetuning LLaVA** with custom data on ITU University's UHeM HPC.

Hdmr-opt app2scale 03.2024:

Developed a wrapper function and **optimized XGB Regressor hyperparameters** for **forecasting** e-commerce transaction load data. Advised by *Dr. Huseyin Kaya.*

Smooth Life Cellular Automaton 03.2024:
Implemented **Smooth Life paper** and developed **interactive UI** for tuning simulation parameters. Deployed on **Hugging Face** with **Docker**.

Instrumented Mouthguard Design 04.2023:
Researched ways to **receive and transmit kinetic data** inside a mouthguard. The team designed a mouthguard and was given **2nd place in the K12 awards.** Advised by *Dr. Reuben Kraft.*

RealTime Audio Censorship 04.2023: Helped the team design a **multi-threaded module** to "bleep" out banned words in real time and **documented a model card** for the OpenAI whisper model.

Maze solver via auto-encoder 12.2022:
Generated a **custom maze dataset** and developed an **auto-encoder network to solve** it. Outputs drew silhouettes of the paths with about **90% accuracy.**

Certificates

Generative AI with LLMs 02.2024
Agile Project Management 01.2024
Generative AI for Everyone 01.2024
Fundamental Neuroscience for Neuroimaging 01.2024
Purdue University, West Lafayette, IN 07.2017
Harvard University, Cambridge, MA 06.2019-08.2019
Kaplan International School, Manhattan, NY, 10118 08.2018

Work Experience

Ideogen, Junior AI Engineer Istanbul, Turkey — 10.2024 - current

I will be working remotely with a **pharmaceutical licensing** company headquartered in Switzerland, with occasional visits to the R&D department. My role will involve close **collaboration with regulatory experts, healthcare researchers, and clinical specialists** to develop AI based solutions. The company specializes in the **rare and orphan disease** market.

Bogazici University, Technical Assistant, Remote — 08.2023 - 05.2024

In classes of Economy 1 and 2 with *Dr. Onur Baser*, **administered classes of size >200**. Wrote **customizable scripts for automated exams.** Created weekly quizzes in Moodle, **tracked student performance**, and contributed to setting quiz difficulty levels. **Resolved student complaints** regarding grading and course platform errors.

Columbia Data Analytics, Junior Programmer Manhattan, NY, 10013 08.2023 - 04.2024

Developed attrition tables for a **Health Economics** startup as a programmer.
Given customer query requests about **drugs, diagnostics, and procedures**, derived tables of patients from relevant **Medical Plans**. Delivered for **6> different requests per week**. Kept track of **past and future customer requests weekly** and reported recent count improvements to the sales team. Participated in weekly, bi-weekly pipeline, and **project discussion meetings** with project managers and programmers. Acted as the **versatile quick-fix go-to person** in technical and non-technical issues in the **dynamic startup environment.**

Other

Languages

Turkish (Native), English (Fluent), Latin, Spanish, Japanese (Begineer)

Hobbies

Journaling, Tennis, Drums, Cinematography