Defne Buse Çelik

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Education

2021/09 – 2025/06
Ankara, Türkiye

Bachelor Degree
Gazi University, Computer Engineering
I graduated as the top student of the department with a GPA of 3.83/4.00.

2017/09 – 2021/06
Izmir, Türkiye

High School
Izmir Atatürk High School

Professional Experience

2024/11 – 2025/06
Istanbul, Türkiye

Data Science Intern
Bluearf
I developed and operated BigQuery and Firebase database systems. I built the Enerjisa Sustainability Report Analyzer project using OpenAI models. My work included implementing embedding models, performing vector search and text similarity operations and creating OpenAI assistants. I also developed AI agents with Web UI, created admin reports using the Websearch API and conducted data visualization using D3 and Plotly. Additionally, I carried out data cleaning tasks and worked with Docker containers, Selenium and API development.

2024/08 – 2025/02
Ankara, Türkiye

AI & Innovation Technologies Intern
HAVELSAN
I worked with LLM models in the MAIN project carried out by the institution. I researched and developed HybridRAG models by integrating VectorRAG and GraphRAG. I performed operations on Pinecone and Neo4j databases, developed a pipeline combining NER, HybridRAG, and dynamic weighting model development. I authored patents to TürkPatent for pipeline development and hierarchical softmax architecture, conducted RAG benchmark tests and prepared a RegNLP Workshop paper for COLING 2025.

2024/09 – 2025/02
Istanbul, Türkiye

GenAI Prompt Engineer
AIVA Tech
I created use case workflows and designed AI prompts integrated into these workflows. I developed RPA automations tailored to the specific applications used by customers, ensuring seamless integration and improved process efficiency.

2024/07 – 2024/08
Ankara, Türkiye

Data Science Intern
Jotform
I masked fields containing sensitive data from GPT LLM responses using Guardrails AI, performed prompt injection, applied RegexMatch to sensitive data in incoming responses and utilized competitor check, random check, toxic language control, and PII detection for prompt responses.

2024/02 – 2024/10
Remote, Türkiye

Software Developer Intern
Boolstudio
I carried out full stack development of a web panel for the https://yerkap.com/ application, created a bot using Google Gemini, and implemented usability testing for the application.

2024/01
Ankara, Türkiye

Researcher Intern
TUBITAK
I have been accepted as an intern researcher to the project titled "Development of Biomarker And Advanced Technological Warning Systems for the Diagnosis, Monitoring And Treatment of Neuron Damage Related Diseases" within the scope of TUBITAK 2247-C STAR Program.

2023/08 – 2023/09
Izmir, Türkiye

Software Developer Intern
Izmir Governorship
During my internship, I have dealt with different jobs, from computer formatting, hardware malfunctions, to governor/municipal systems and authorization. I used Microsoft SQL Server. I did operations with Excel. I coded it in C#. I've seen CISCO transactions for phone systems and computer networks.

2023/08
Remote

Python Developer & Tutor
Kodland
Kodland company is an e-learning company that teaches various programming languages to children aged 8-17. I teach children algorithm logic and the Python programming language. Apart from that, I develop various programming activities on Python.

Skills

Data Science & Data Analysis

Large Language Models

RAG Systems

Prompt Engineering

Natural Language Processing

C, C++, Java, Python

Microsoft Power BI

Prompt Engineering

Machine Learning & Deep Learning & Feature Engineering

Object Oriented Programming

Data Visualization (Seaborn, Matplotlib, Plotly, D3)

Computer Vision

Project Management

SQL, Microsoft SQL Server, MySQL, PostgreSQL, Firebase, BigQuery

AI Agents & AI Assistants

Languages

English
Intermediate

Turkish
Native

German
Beginner

Certificates

- Akbank Data Analysis Bootcamp
- Monovi Technology Agile/Scrum
- Huawei ICT Academy Webinar on Python Programming
- Patika.dev Web3.0
- Global AI Hub Deep Learning Bootcamp
- Türkiye İş Bankası ProSchool Data & AI Class
- Miuul Machine Learning Summer Camp
- Istanbul Data Science Academy Google Cloud Data Analyst Boostcamp
- DataCamp Machine Learning
- Microsoft Women AI Hackathon

Organizations

2024/08 — Türkiye
Global AI Hub
Mentor

2022/09 – 2023/03 — Ankara, Türkiye
Gazi University Blockchain Community
General Manager

2022/09 — Ankara, Türkiye
Gazi University Artificial Intelligence Community
Member

2023/07
Women Techmakers
WTM Member

2023/07
Google Developers Groups
GDG Member

Projects

Detection of Multiple Myeloma Plasma Cells with Artificial Intelligence-Based Software
Our project involved utilizing a range of technologies, including Flask, JavaScript, MySQL, TensorFlow, Python, and YOLOv8, with the primary objective of detecting multiple myeloma plasma cells in medical images.

Development of Biomarker And Advanced Technological Warning Systems for The Diagnosis, Monitoring and Treatment of Neuron Damage Related Diseases
Patient videos were added to the database before and after MRI scans. Pain detection was performed using the FACS method, taking into account the AU values of facial expressions. These values were calculated using computer vision techniques implemented with MediaPipe. Additionally, data visualization was carried out using OpenCV. AU values were classified using formulas in the literature and pain status was determined.

Analysis of Waveform Types According to Noise-Added Data with Classification Model
This study examines the effects of noise on waveform data in electronic circuits and telecommunication systems, aiming to classify waveform types and develop a noise-resistant machine learning model. Using a dataset of 5,000 samples with 21 features from the UCI Machine Learning Repository, five machine learning algorithms were tested. The SVM algorithm achieved the highest accuracy of 0.9157, while DecisionTreeClassifier had the lowest. Results show the model's effectiveness in detecting noisy waveforms, offering valuable insights for reducing noise-related issues.

Regulatory Natural Language Processing (RegNLP) Workshop in conjunction with COLING 2025 Conference
Completing the retrieval part with the team and creating a paper in accordance with the data set given in the competition.

Teknofest Project
Robotaxy Competition

Miuul Bootcamp Projects
Lead Calculation with Rule-Based Classification, Diabetes Feature Engineering, Salary Prediction with Machine Learning, House Price Prediction with Machine Learning, Telco Churn Machine Learning

OpenCV Projects
Hand Tracking, Finger Counting, Dino Game Hacker, Push Up Counter, Virtual Drag and Drop

References

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