



ESAD BORAN

COMPUTER ENGINEER

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SUMMARY

Computer Engineering graduate from Hacettepe University with a strong foundation in backend development, specifically using Java Spring and C# .NET frameworks. Experienced in building robust applications and backend services, with additional expertise in artificial intelligence and algorithms, having conducted research and developed projects in machine learning and deep learning using Python. Motivated to pursue a career in full stack development, combining backend proficiency with an expanding knowledge of frontend technologies to deliver end-to-end solutions. Skilled in analytical thinking, problem-solving, and committed to continuous learning in the tech field.

EDUCATION

Bachelor of Science | *Computer Engineering*
Hacettepe University

September 2018 – June 2024
GPA: 3.22/4

EXPERIENCE

Junior Software Engineer

July 2023 – June 2024

Türkiye Petrolleri A.O (TPAO)

Ankara

- Developed a modern, user-friendly and high-performance 3D Data Visualization Engine capable of visualizing seismic, well and surface data used in the petroleum sector.
- Created a new module for the TPAO Applications Platform to manage, receive and track requests made from within the company to the RD center.
- Developed modules for the Digital TPAO project that enable users to upload and visualize the Surface data.

Intern

June 2023 – July 2023

GELİR İDARESİ BAŞKANLIĞI TEKNOLOJİ

Ankara

- Developed a module with Spring that allows users to view their bills, make payments and calculate taxes.
- Gained the opportunity to learn and apply technologies such as Spring and MySQL.

Intern

June 2022 – July 2022

SİSBİM

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- Gained hands-on experience in web development by working on Django-based projects, starting with learning the framework and gradually integrating into the system.
- Contributed to the development of dynamic, user-friendly web applications, focusing on both front-end design using HTML, CSS, and JavaScript, and back-end integration with Django for efficient data management.

PROJECTS AND RESEARCH

Graduation Project – Active Object Tracking on a Drone with Airsim

2024

Hacettepe University

Ankara

- Developed an active object detection and tracking system for drones using the Airsim simulator, integrating AI models for multi-object tracking and physical tracking algorithms.
- Designed and implemented a dynamic environment with multiple vehicles and obstacles, optimizing the drone's ability to track and follow selected objects.
- Tested and fine-tuned tracking algorithms, ensuring seamless object switching and successful navigation through complex routes with various obstacles such as road slopes, reflections, and vision-blocking traffic signs.
- Website: esadboran.github.io/BitirmeProjesi

3D Data Visualization Engine

October 2023 – March 2024

Türkiye Petrolleri A.O (TPAO)

Ankara

- Developed a high-performance 3D Data Visualization Engine for the petroleum sector, capable of visualizing seismic, well, and surface data using Three.js.
- Implemented specialized algorithms to efficiently handle and process large-scale datasets, ensuring smooth performance even with complex geological data.
- Designed an interactive 3D coordinate system to represent data dynamically, allowing users to explore geological information in an intuitive and engaging manner.

ICES4HU - Course Evaluation System

February 2023 – June 2023

Hacettepe University

Ankara

- Developed a comprehensive web application for course evaluations at Hacettepe University, providing role-based access for students, instructors, and administrators.
- Implemented features allowing students to rate and add courses, as well as participate in course surveys and evaluations for continuous improvement.
- Designed a user-friendly interface that enables efficient interaction, making it easy for users to navigate, submit ratings, and provide feedback on courses.

AI Projects and Data Science

2021 – 2024

Hacettepe University

Ankara

- Developed a deep learning-based damage assessment system for disaster areas using satellite imagery from the xBD dataset. Focused on building damage detection and classification by comparing pre- and post-disaster images.
- Created panoramic images by stitching multiple individual images together for enhanced visual representation and analysis. This project aimed to provide a comprehensive view of large-scale areas through image stitching techniques.
- Developed a car lane tracking detection system using computer vision techniques to detect and track vehicle lanes in real-time video feeds.
- Implemented object detection systems with deep neural networks and AI to identify and track various objects in dynamic environments.
- Built machine learning models from scratch, without using specialized libraries, focusing on fundamental algorithms for classification and regression tasks.

SKILLS

Languages: Turkish (Native), English (B2)

Programming Languages: Python, Java, C++, C, C#

Backend Technologies: .NET, Spring

Web Development: React, JavaScript, HTML, CSS

Artificial Intelligence: Machine Learning, Deep Learning, TensorFlow, PyTorch, Computer Vision, OpenCV

Data Analysis: Pandas, NumPy, Data Structures, Algorithms

Tools: Git, Microsoft Office Suite, Azure, Jira

General Skills: Data Structures, OOP, Algorithm Analysis, Database Systems, Computer Vision, Blockchain

Data Environments: SQL, MySQL, PostgreSQL, MSSQL, MongoDB

Operating Systems: Windows, Linux (Ubuntu), macOS

CERTIFICATES

TensorFlow Developer Certificate by Google,

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization by Coursera,

TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning by Coursera,

Türk Telekom & TRAI Data Science Analytics Practicum (40+ hours) by Türk Telekom ,

Python — Advanced Programming from Zero by Udemy,

Online Programming Contest by Inzva,

Biz Bize Kariyer Aday Mühendisi by TPAO

REFERENCES

Muhsin Gürel

Software Engineer Manager, TPAO

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