BURAKCAN AKSOY

COMPUTER ENGINEER

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PROGRAMMING LANGUAGES

- C#
- Java
- Python

DATABASES

- PostgreSQL
- SQLite
- Microsoft SQL Server
- MongoDB

SKILLS

- Spring Boot
- Django
- Git / Github
- Postman
- Apache Kafka
- Elasticsearch
- Docker

MY PROJECTS

- Spring Boot Rent A Car Project

A car rental backend system built with Java Spring Boot using layered architecture (Controller, Service, Repository). Features RESTful APIs, input validation, business logic, and custom exception handling. Designed for scalability and clean, maintainable code.
GitHub Repository

- Spring Boot JSON Web Security

A backend project using Spring Security and JWT for user authentication and authorization. Key components like AuthenticationManager, AuthenticationProvider, filters, and the security chain are properly configured within the Spring Security framework.
GitHub Repository

PROFILE SUMMARY

I began my journey in software development with Python and Django, focusing on backend technologies. Over time, I worked with relational databases such as PostgreSQL and MSSQL to build more scalable and efficient systems. To strengthen my understanding of modular and maintainable software design, I am currently developing projects using Java and Spring Boot with a layered architecture approach. I also have a growing interest in AI agents, aiming to stay up to date with modern technologies. In team settings, I often take initiative and demonstrate strong leadership and communication skills.

WORK EXPERIENCE

Meşe Bilişim Yazılım Mekatronik Eğitim İthalat İhracat Sanayi ve Ticaret Limited Şirketi

26/09/2024 - 14/12/2024

Intern Engineer

Technologies: Python, Django, SQLite, REST API, JWT, ThingsBoard, WebSocket, pandas, matplotlib, reportlab, openpyxl

- Developed Python scripts for longitudinal data analysis in poultry farming, performing daily tracking of livestock count and cumulative weights over a 30-day period. Final statistics included total and average weight metrics.
- Designed and implemented basic-level web applications using Django, integrating SQLite for data persistence and ensuring seamless interaction between frontend and backend components.
- Integrated with the ThingsBoard IoT platform via RESTful APIs to automate device management tasks, including telemetry transmission, attribute configuration, and token-based (JWT) authentication.
- Utilized WebSocket protocols to visualize real-time sensor data in interactive dashboards and enabled export functionalities to PDF and Excel formats for reporting purposes.

GitHub Repository - Meşe Bilişim

Acunmedya Akademi

15/02/2025 - 14/06/2025

Intern Engineer

- During my internship, I developed a multi-layered C# project following real-world software architecture practices. I worked on various programming fundamentals such as conditional statements, loops, arrays, methods, and database interactions.
- In the advanced phase, I implemented a CRUD-based Windows Forms application using Entity Framework and a layered architecture (Entity, Data Access, Business, Presentation). The project included data modeling, database migrations, and basic UI design.
- This experience strengthened my understanding of object-oriented programming, database operations, and clean architectural separation in .NET environments.

- AI-Powered-Advanced-Medical-Analysis-System

For this project, I developed a learning assistant application powered by the Gradio interface, featuring multiple AI agents (question-answer, quiz creation, and visual generation). I designed a modern and flexible system that allows users to ask detailed questions using PDF or text input, and automatically generate quizzes and educational visuals.
GitHub Repository

- AI-Student-Assistant

The AI-powered medical analysis system I developed allows users to upload medical reports, text, or image files. Using OpenAI models and advanced image processing techniques, it generates detailed and action-oriented preliminary assessment reports in Turkish. It stores user history to identify similar analyses and offers ease of use through the Gradio interface.
GitHub Repository

Btk Akademi Kocaeli Yapay Zeka İle Veri Analizinden LLM'lere Atölyesi 17/07/2025 29/07/2025

Over the course of this two-week intensive AI workshop, I gained hands-on experience starting from basic Python skills to advanced deep learning and large language models (LLMs). Below is a summary of my weekly progress:

Week 1: Introduction to Python, Data Analysis, and Deep Learning

- Python Programming: Developed small applications using basic Python syntax in Colab and Jupyter environments. Focused on data types, conditional statements, loops, and user input.
- NumPy & Pandas: Worked with numerical data, created data frames with Pandas, and performed filtering, grouping, and handling of missing values.
- Data Visualization: Created bar charts, line graphs, and histograms to analyze and visualize data.
- Machine Learning: Built basic supervised and unsupervised learning models. Practiced data preprocessing, model training, and evaluation using metrics like accuracy, F1 score, and confusion matrix.
- Deep Learning Fundamentals: Learned the structure of artificial neural networks. Built simple models using ReLU and Sigmoid activation functions and interpreted loss/accuracy graphs.
- CNN & Image Processing: Worked with image data using convolutional neural networks (CNN). Applied convolution, pooling layers, and data augmentation techniques for classification tasks.

Week 2: NLP, LLMs, and Generative Models

- Natural Language Processing (NLP): Applied text preprocessing techniques such as cleaning, tokenization, and embedding. Converted text to numerical format using Bag-of-Words and TF-IDF methods.
- Transformer Models: Used pre-trained models like BERT and DistilBERT via HuggingFace for sentiment analysis and text classification. Explored the attention mechanism and interpreted model outputs.
- Fine-Tuning & LLMs: Fine-tuned pre-trained models on custom datasets using HuggingFace Trainer. Practiced prompt engineering to guide and refine LLM outputs.
- Visual & Language-Based Generative Models: Generated images from text using models like Stable Diffusion. Experimented with parameters to produce creative outputs.
- End-to-End AI Project Development: Built a complete AI project covering data preparation, model training, and interface development. Created an interactive web interface using Gradio and deployed the app on HuggingFace Spaces.
- Model Deployment: Integrated model files, prediction scripts, and the web interface into a working demo. Gained experience in version control, access permissions, and deployment workflows.

EDUCATION

- **Manisa Celal Bayar University** 2021 - 2026
  Computer Engineering

- **Darıca Anadolu Lisesi** 2016 - 2020
  High School Diploma