

İLKER YASIN ÇAKIR

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EXPERIENCE

Software Engineer

Jan 2025 - Present

Mobiliz Bilgi ve İletişim Teknolojileri A.Ş., Ankara, Turkey

- **ContextIQ Project:** Migrated vector database from FAISS to Qdrant, improving scalability and query performance. Integrated Ollama local LLM (Gemma 3 27B model) for cost-effective inference. Architected and deployed complete multi-container Docker system with FastAPI backend, React frontend, MongoDB, and vector store. Implemented logging and health monitoring systems.
- **DAS Project:** Developed historical footprint heatmap visualization using Leaflet for patrol car tracking. Implemented response handling abort mechanism for efficient request cancellation. Created Switch/Grid combination UI component for dynamic grid system transitions. Configured multi-environment Docker deployment (development, prod-dwh, prod-jad).
- Maintained and enhanced Flask/FastAPI backends and Next.js/React frontends across multiple projects.
- Managed end-to-end Docker containerization, deployment, and DevOps workflows for production systems.

Software Engineer Intern

Sep 2024 - Dec 2024

Mobiliz Bilgi ve İletişim Teknolojileri A.Ş., Ankara, Turkey

- Developed multi-threaded and asynchronous processes to support concurrent report generation.
- Designed and implemented a load balancing mechanism to distribute workload efficiently across multiple data sources.
- Optimized back-end data streaming and file processing, reducing memory usage and improving performance.
- Enhanced front-end usability by restructuring UI components, improving API interactions, and implementing debounce mechanisms.
- Integrated dynamic data routing to handle multiple sources seamlessly using Aspect-Oriented Programming (AOP).
- Improved error handling and logging mechanisms, ensuring better system observability and debugging efficiency.
- Worked with Agile methodologies, actively participating in sprint planning, code reviews, and feature discussions.

Part-Time Software Engineer

Mar 2023 - Dec 2023

Siemens Grid Software Business Unit, Ankara, Turkey

- Designed and developed internal application software for power system analysis and reporting.
- Built full-stack web-based applications using C#, .NET Core, JavaScript/TypeScript, and Angular.

PROJECTS

Recipe Recommendation System - Vector-Based Semantic Search. Developed intelligent recipe recommendation engine using Qdrant vector database for semantic similarity search across 1M+ recipe dataset. Built Python backend (Flask/FastAPI) with embedding generation and vector indexing pipeline. Implemented personalized recommendation algorithm considering user preferences, dietary restrictions, and ingredient inventory. *Tech: Python (Flask/FastAPI), Qdrant, Vector Embeddings, ML Recommendation Algorithms.*

EDUCATION

TOBB University of Economics and Technology

Bachelor's Degree in Computer Engineering

GPA: 3.05

ASO Technical College

Industrial Automation Technologies - Mechatronics Technician

May 2021 - May 2025

2015 - 2019

SKILLS

Languages	Java, Python, JavaScript/TypeScript, C, Go (Basic)
Backend	Spring Boot, Flask, FastAPI, .NET Core
Frontend	React, Next.js, Angular
Databases	MongoDB, ClickHouse, PostgreSQL, Vector DBs (Qdrant, FAISS)
AI/ML	LLM Integration (Ollama, OpenAI), RAG Systems, Langchain, Vector Search
DevOps	Docker, Docker Compose, CI/CD, Git, GitHub Actions, Multi-env Deployment
Tools	Leaflet, WebSocket, JWT, Spring Data JPA, Hibernate, Jira

LEADERSHIP & VOLUNTEERING

Google Developer Student Clubs TOBB ETU - Lead	Sep 2022 - Jun 2023
<ul style="list-style-type: none">Led technical events and mentored students in software engineering, coordinating team initiatives and community growth.	
Google Developer Groups Ankara - Volunteer	Sep 2020 - Present
<ul style="list-style-type: none">Contributing to event planning, speaker arrangements, and community-building activities.	

LANGUAGES

English: B2 (Upper Intermediate)
Spanish: A1 (Beginner)