

EMIRHAN KALKAN

FULL-STACK DEVELOPER

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ABOUT ME

Computer Engineering graduate (2026) developing full-stack web applications with Spring Boot and ASP.NET Web API on the backend, Angular and React on the frontend. Skilled in RESTful API development, relational databases, and delivering features across all layers of a production system. Seeking a Junior Full-Stack Developer role where I can contribute to real products while continuously growing as a software engineer.

EXPERIENCE

Software Development Intern

05/2026 – 07/2026

MergenTech

- Developing production features for a Laboratory Information System (LIS) used in hospital environments, building RESTful APIs with Spring Boot backed by Oracle Database and implementing corresponding frontend features with Angular and TypeScript.
- Designed and implemented backend services across a layered Spring Boot architecture (Controller, Service, DAO, DTO), delivering business logic, JPA/Hibernate-based data access, and JWT-secured REST endpoints to support scalable and maintainable production features.
- Developed reference data management modules end-to-end, from database access and REST API implementation to Angular/PrimeNG interfaces with searchable data tables and dialog-based forms.

Software Development Intern

06/2025 – 07/2025

Bozankaya Technology

- Developed and maintained features for a web-based Vehicle Tracking System using ASP.NET MVC and RESTful APIs.
- Processed real-time telemetry data received via CAN Bus protocols to visualize fleet status on a dynamic monitoring dashboard.
- Implemented PostgreSQL queries and data models to store and serve vehicle telemetry, supporting the data flow between vehicle hardware and cloud-based systems.

EDUCATION

B.Sc. in Computer Engineering

2021 – 2026

Eskisehir Osmangazi University

SOFTWARE SKILLS

Programming Languages

Java, C#, TypeScript, JavaScript, SQL

Web & Frameworks

Spring Boot, ASP.NET Core, Angular, React

Databases

Oracle Database, PostgreSQL, MySQL

Tools & DevOps

Docker, Git, Maven, Swagger/OpenAPI, Postman

LANGUAGE SKILLS

TURKISH

Native

ENGLISH

B2 (Professional Working Proficiency)

PROJECTS

Microshop Microservices – Backend Microservices Architecture

- Designed a microservices architecture with API Gateway, Order, Payment, and Notification services using Spring Boot, implementing clear service boundaries and database-per-service isolation.
- Implemented synchronous REST communication between Order and Payment services, and asynchronous event-style communication between Payment and Notification services.
- Added Correlation ID tracking across all services for end-to-end request tracing, and managed database schema versioning with Flyway migrations.
- **Tech Stack:** Java 17 · Spring Boot · Spring Cloud Gateway · PostgreSQL · Docker · Swagger/OpenAPI

SmartSpend – AI-Powered Expense Management System

- Developed a full-stack expense management platform with AI-powered receipt scanning using the Google Gemini Vision API to extract structured expense data from uploaded images.
- Implemented JWT-based authentication, role-based authorization, hierarchical approval workflows, and analytics dashboards.
- Integrated MinIO for object storage and designed RESTful APIs documented with Swagger/OpenAPI.
- **Tech Stack:** Spring Boot · Java 17 · React 19 · TypeScript · PostgreSQL · TailwindCSS · Google Gemini AI · Docker

Hospital Information System

- Built a full-stack Hospital Information System managing patients, doctors, departments, appointments, and medical records, with a Spring Boot backend and an Angular/TypeScript frontend.
- Secured the backend with JWT authentication, role-based access control (RBAC), and ownership-based authorization ensuring users can only access their own patient and doctor resources.
- Designed a normalized PostgreSQL schema covering user roles, patient profiles, doctor-department assignments, appointment scheduling, and medical records, with REST APIs documented via Swagger/OpenAPI.
- **Tech Stack:** Spring Boot · Java · Angular · TypeScript · PostgreSQL · Docker · Maven

DentVision – Periapical Lesion Detection System · B.Sc. Graduation Thesis Project

- Trained and compared four deep learning models (ResNet18, ResNet50, EfficientNetB2, DenseNet121) on dental radiographs using patient-based data splitting to prevent data leakage, achieving 98.7% F1-score with ResNet50.
- Implemented Grad-CAM heatmap visualization to interpret model decisions and verify anatomical focus regions.
- Built a full-stack clinical decision support application with doctor authentication, patient management, and analysis history, integrating the trained model for real-time inference and Grad-CAM generation on uploaded radiographs.
- **Tech Stack:** Python · PyTorch · FastAPI · React · PostgreSQL · JWT