# EREN ÖZEN

Ankara, Turkey • eren.ozen@ug.bilkent.edu.tr • github.com/erenozen • linkedin.com/in/erenozendev • https://erenozen.dev

### **EDUCATION**

### İhsan Doğramacı Bilkent University

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Bachelor of Science in Computer Engineering

**Relevant Coursework:** Digital Design (CS 223), Computer Organization (CS 224), Programming Languages (CS 315), Object-Oriented Software Engineering (CS 319), Database Systems (CS 353), Operating Systems (CS 342), Software Engineering Project Management (CS 413).

## **Final Mardin High School**

Graduation Diploma, Science Track

#### SELECTED PROJECTS

### CarTrade-Marketplace - Full-Stack Vehicle Marketplace

- CarTrade is an innovative platform for buying and selling second-hand vehicles, connecting buyers, sellers, inspectors, and administrators in one cohesive marketplace. It emphasizes a seamless user experience, robust data integrity, and modular services for scalable deployment.
- Developed a Docker-composed system with Next.js frontend, FastAPI backend, and MySQL database (triggers & views) for auction management.
- Implemented real-time bidding notifications via Google Cloud Pub/Sub, automated image processing via FFmpeg

### CarboMeter - Java Desktop App

- CarboMeter is a Java Swing application that quantifies users' ecological footprints with a custom "Carbopoint" metric and visualizes progress via an intuitive Carbobar chart. It encourages users to make charitable donations equivalent to their calculated impact.
- Created an environmental impact calculator in Java using SQLite and JavaMail.
- Designed a "Carbopoint" scoring algorithm and donation recommendation engine.

#### **Sprout - Android Habit Tracker**

- Sprout is a legacy-Java Android app for summarizing daily activities, built in Android Studio and backed by Cloud Functions. It helps users visualize where their time goes and cultivate healthy habits.
- Built an Android App in Java with Firebase (Auth, Functions, Firestore) for daily habit tracking.
- Delivered a weekly analytics dashboard and push-notification reminders to boost engagement.

#### **BIL-CMS - University Communication Platform**

- This full-stack JavaScript app enhances Bilkent University's CMS with structured discussions, event scheduling, and live chat channels per course. It streamlines campus collaboration through a cohesive web interface.
- Implemented discussion boards, real-time chat, and event modules using JavaScript, HTML, and CSS.
- Leveraged WebSocket for live updates and applied role-based access control.

### **TECHNICAL SKILLS**

**Programming Languages & Paradigms:** Python, C++, Java, MIPS Assembly, SQL, TypeScript, Object-Oriented Design

**Languages:** Turkish (native), English (professional fluency), German (beginner)

Web & Backend: Next.js, Express.js, FFmpeg integration

Cloud & DevOps: Google Cloud (Storage, Pub/Sub, Run), Docker, Firebase Auth/Functions/Firestore

**Tools & Frameworks**: Git/GitHub, RESTful APIs, Linux, Agile workflows **Algorithms & Design**: Data Structures, System Design, Complexity Analysis

#### **INTERESTS & ACTIVITIES**

**Cloud Computing & AI:** Building scalable micro services; exploring TensorFlow and PyTorch **Web/Mobile Development:** Contributing to open-source projects; hackathon participant **Leadership:** Member of Bilkent ACM Chapter, Member of Google Student Developers Club