# CAN OGAN KARAGÜN

Software Engineer • Backend Developer • Game Developer

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#### Skills

**Programming Languages:** Python, JavaScript, C, C++, C#, Go, Rust

**Backend Development:** Node.js, Gin, Flask, REST APIs, SQL, PostgreSQL, MongoDB, Redis, WebSockets, WebRTC, Jest, GraphQL

Game Development: Unity Engine

**Tools & Workflow:** Git, Docker, Github Actions, AWS, Postman, VS Code

Postman, vs Coae

**CS Foundations:** Algorithms & Data Structures, OOP, Pathfinding & Graph Algorithms, System Design, Machine Learning, Reinforcement Learning

**Spoken Languages:** Turkish (Native), English (Fluent)

#### **Experience**

Software Engineer Intern (2025)

KordSA - Kocaeli/Turkey

 Developed Python tools that processed and visualized data, reducing manual review time

Volunteer Software Developer (2024)

## Kocaeli University Audio Book Accessibility Project

 Used Python and Google TTS to automate narration generation from text and export as audio file.

Software Engineer Intern (2023)

Kocaeli University IT Department - Kocaeli/Turkey

• Implemented Redis caching for internal services

### Freelance Software Developer (2020-Present)

 Developed and published games, full-stack projects using Python, Unity, Node.js, React, and Swift. Built custom backends with REST APIs, authentication, and real-time features.

### **Published Games**

**XBOX** | <u>Danger Close</u> (2021), <u>Fight Freaks</u> (2021) 35K+ downloads

**iOS** | <u>Encounter</u> (2022), <u>Zigzag Chicken</u> (2022) 20K+ downloads

## **Education**

Kocaeli University - Kocaeli/Turkey

B.Sc. in Electronics & Telecom. Engineering

Graduated: May 2025

### cankaragun@gmail.com

#### **Projects**

#### Puzzle Game with Real-Time Hand Tracking

• Built a real-time hand interaction game using Unity, Python (*Graduation Project*)

### • SLAM Style Mapping Simulation

• Built a 2D Python robot that explores and maps unknown environments in real time using laser scans and Kalman filters based position estimation.

### • Maze Generator & Pathfinding Visualizer

• Built a Python tool to generate mazes and solve them using BFS, DFS, Dijkstra and A\*, with real-time visualization.

#### Real-Time 3D Point Cloud Mapping

• Built a Python simulation that visualizes real-time 3D point clouds generated from 2D LIDAR scans.

## • Go Microservices Project

• Built distributed microservices using Go, Docker Swarm, RabbitMQ, and gRPC.

### Video Chat Application

• Built a peer-to-peer video chat app using WebRTC and Socket.IO with custom backend signaling server.

#### Full-Stack iOS App SetupVerse

• Built RESTful backend (MERN stack) for sharing gaming setups with real-time updates

\*More projects at <a href="mailto:youtube.com/@coganka">youtube.com/@coganka</a>

### Courses & Certifications

### • 3D Graphics Programming From Scratch

• Created a software rasterizer with custom projection, triangle rasterization, depth buffering, and transformations. (pikuma.com, 2022)

## • 2D Physics Engine Programming From Scratch

• Built a physics engine with rigidbody dynamics, collision detection, and impulse resolution. (pikuma.com, 2022)

### Designing Scalable Systems

• Covered load balancing, caching, queues, database sharding, availability, and fault-tolerant architecture. (Educative.io, 2025)

#### AWS Cloud Practitioner Course

• Learned core AWS services including EC2, S3, RDS, and IAM. Covered load balancing, networking, cloud security (skillbuilder.aws, 2025)

#### CI/CD Foundations

• Learned CI/CD workflows including automated testing and deployments (udacity.com, 2023)