

Göktuğ Karaca

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Third-year Computer Engineering student building production-ready backend systems, full-stack web apps, and applied AI/cybersecurity solutions. Delivered 11+ public end-to-end projects—Dockerized multi-service deployments, REST APIs with health checks, integration tests, and CI-friendly pipelines—and developed ML-based IDS pipelines achieving up to ~99% accuracy.

Skilled in Java, C/C++, Python, Node.js, React, PostgreSQL, Docker, and Git; focused on reliability, observability, and scalable system design. Seeking internships or junior backend/full-stack roles to contribute to production-grade systems.

LINKS

[Website](#), [GitHub](#), [LinkedIn](#)

EDUCATION

Fenerbahçe University, İstanbul

BSc, Computer Engineering (CENG), Sept 2023 to Jun 2027

EXPERIENCE

Volunteer Internship (Mobile Development), DenizBank, İstanbul

Jun 2025 to Aug 2025

- Developed a smartwatch-first budget-tracking mobile app prototype enabling fast, one-tap expense logging and reduced user friction.
- Designed categorized analytics and proactive budget alerts to increase financial awareness and help users manage spending.
- Implemented reliable synchronization between mobile and smartwatch flows to ensure consistent data and a seamless user experience across devices.
- Prepared a demo-ready prototype and documented UX flows for stakeholder review.

PROJECTS

RATEFLIX - Full-Stack Movie/Series Tracker

React + Vite frontend; Node.js/Express + PostgreSQL backend. Implemented authentication and user profiles, watchlist/watched/favorites, search & filters, ratings, and comments. Integrated TMDB API for live content import and delivered a polished, portfolio-ready UI. Deployed end-to-end with a health-check endpoint.

Live: rateflix-lime.vercel.app — Repo: github.com/krcgoktug/RATEFLIX

Student Information System (SIS) - Dockerized C++ Ecosystem

- Tech: C++17, libpqxx, PostgreSQL 15. Docker Compose dual-service architecture (sis-app + sis-db) with .env configuration, health checks, and persisted volumes.
- Implemented RAII-based, exception-safe DB access, regex-driven validation, and full CRUD lifecycle with integration tests.
- Repo: github.com/krcgoktug/System-Programming-Term-Project · Docker Hub: hub.docker.com/r/goktugkaraca/sis-project-app

Data Mining for Cybersecurity - IDS on CIC-IDS2017

Python, scikit-learn, pandas, NumPy, Matplotlib | Repo: github.com/krcgoktug/Data-Mining-for-Cybersecurity-Project

- End-to-end IDS pipeline: preprocessing, EDA, feature selection (Information Gain → 9 features)
- Random Forest experiments achieving up to ~99% accuracy detecting volumetric attacks (DoS/PortScan)

Autonomous AI Parking Simulation - A* vs Q-Learning

15×15 dynamic-grid parking simulation comparing A* planning vs Q-Learning. Includes real-time stats and training-curve plots; trained Q-Learning agent for 8,000 episodes (5D Q-table, epsilon-greedy). Persistent obstacles increase difficulty over time. Repo: github.com/krcgoktug/Autonomous-AI-Parking-Simulation

AutoRent - Web Car Rental Demo

- Tech: PHP, SQLite, JavaScript
- Full-stack demo: fleet listing, price comparison, and reservation flow with lightweight SQLite persistence.
- Live: web-autorent-wk34.onrender.com · Repo: github.com/krcgoktug/web-autorent

Budgee - Budget Tracker (Smartwatch-Oriented)

Kotlin (repo), React Native / Flutter, Firebase / Supabase, Wear OS / WatchOS | Repo: github.com/krcgoktug/budgee-1

Income/expense tracking with budget warnings, category analysis, and reminders; smartwatch-based quick entry concept for reduced friction. LuminaLib - Advanced Java OOP Libra

LuminaLib - Advanced Java OOP Library System

Java 17 · Repo: github.com/krcgoktug/luminalib

- Role-based access (Admin/Member), automated fine policy, multi-layer search, and thread-safe catalog implemented with ReentrantReadWriteLock.

Digital System Design - CPU Chip (Course Project)

Verilog HDL educational CPU project: 8-bit ALU, control unit, 8×8 register file, instruction decode/control signals, and ALU testbench. Repo: github.com/krcgoktug/digital-system-design-cpu-chip

NexGen ERP (Course Project)

Modular ERP/CRM concept focused on normalized relational schema design and SQL query optimization; designed schemas and optimized queries for inventory, client workflows, and reporting.

LANGUAGES

Turkish (Native), English (B2)

Areas of Expertise

- C
- C++
- Java
- Kotlin
- Python
- JavaScript
- PHP
- SQL
- HTML5
- CSS3
- REST APIs
- Responsive UI
- Fronted Frameworks
- PostgreSQL
- SQLite
- Docker
- Git & Github
- Linux
- Verilog
- MS Office

