

Halil İbrahim Öztürk

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EDUCATION

Izmir Institute of Technology — B.Sc. Computer Engineering · GPA 3.73 / 4.00	Expected Jun 2027
Ankara Pursaklar Science High School	Graduated 2023
Deneyap — T3 Foundation	Graduated 2020

EXPERIENCE

Embedded Systems Intern — ASELSAN, Ankara	Aug 2026 – Sep 2026
- Built a trace-driven CPU scheduling simulator in C++20 comparing Round Robin, MLFQ, CFS and aging-priority scheduling; all metrics come from the event trace alone, so every algorithm is measured identically (84 Catch2 tests). - Rendered each simulation run as an animated Gantt-chart explainer in Python with Manim. - Authored an OpenCode skill that generates AGENTS.md context files; in benchmark tasks on small, medium and large codebases, agents used ~20% fewer tokens and finished ~25% faster. - Automated routine documentation entries with Python and Batch scripts that the team adopted.	
Software Engineering Intern — TechNarts, Ankara	Jun 2025 – Sep 2025
Community platform, built solo: Django REST Framework, React (TypeScript), PostgreSQL	github.com/Halil-pgh/Topluluk-all
- Engineered embedding-based recommendations: posts are embedded with Sentence-Transformers into pgvector and ranked by cosine similarity to each user's interest vector, built from their votes, views and joins. - Added real-time notifications over WebSockets (Django Channels + Redis) and JWT authentication. - Implemented communities, threaded comment replies, voting, a daily hot-topics ranking, and moderator roles with bans.	
Electronics Team Member — Cengaver Rover Team, IYTE	Oct 2024 – Jun 2025
Developed a C driver on an STM32F407 for VESC brushless motor controllers over CAN, encoding duty-cycle, current, RPM and brake commands as extended-ID frames and decoding the controllers' status packets.	

PROJECTS

Wolf · Multi-agent LLM game · Python	github.com/Halil-pgh/wolf
- Created a terminal Werewolf game played by Claude agents (9 by default) with hidden roles and personalities, who plan at night, debate and bluff by day, and vote each other out. - Designed a deterministic, seeded engine with pluggable backends (Claude CLI or an instant mock) and JSONL logs that replay any game and rebuild any prompt without model calls (153 pytest tests).	
Kings · Multiplayer strategy game · C++, SFML, ENet	github.com/Halil-pgh/Kings
- Programmed a listen-server that runs on its own thread inside the host's game: ENet over UDP, cereal packet serialization and mutex-guarded shared state. - Wrote the engine layer on SFML: scene manager, layered rendering and UI widgets (server browser, shop, text input).	
Borsa · BIST 100 dashboard · SvelteKit, TypeScript	borsa.halilio.dev
Launched a live market dashboard: market-cap treemap, per-stock cards with a year of price history and a "which is bigger?" quiz, combining Yahoo Finance, KAP, Mynet and İş Yatırım data without API keys (Vitest unit tests).	

SKILLS

Programming: C++ (C++20), C, Python, TypeScript, JavaScript, Java, SQL
Backend & Data: Django REST Framework, Django Channels, PostgreSQL + pgvector, Redis
Frontend: React, SvelteKit
Systems & Embedded: STM32 HAL, CAN, UART, SFML, ENet
Tools & Testing: Git, Docker Compose, CMake, Linux, Catch2, pytest, Vitest
AI Tooling: Claude Code, OpenCode, Sentence-Transformers
Spoken Languages: Turkish (native), English (B2)