

# Tugay Kapucu

📍 Istanbul, Türkiye  
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## Summary

Software Engineer with experience building Linux-based embedded software and full-stack web applications. Strong in C/C++, Python, and JavaScript/TypeScript; comfortable owning features end-to-end from API design to UI. Focused on reliability, performance, and clean, maintainable systems.

## Skills

**Languages:** C, C++, Python, JavaScript/TypeScript, SQL

**Backend:** FastAPI, REST APIs, NodeJS, JWT Auth, SQLAlchemy, Data modeling

**Frontend:** React, Next.js, HTML/CSS, Bootstrap/Tailwind

**Databases:** PostgreSQL, SQLite

**Systems:** Linux (Debian/Ubuntu), Bash, Debugging, Performance analysis

**Tools:** Git, TFS/Azure DevOps, Docker, Postman, Jira, CI/CD

## Experience

**Siemens**, Software Developer

Istanbul, Türkiye  
Jan 2023 – present  
3 years 5 months

- Owned integration acceptance for incoming IndOS/OS component deliveries; approved or rejected releases based on performance regressions, missing features, and functional/quality defects, providing evidence (repro steps, logs, traces) to drive fixes.
- Built an automation tool to streamline integration between Industrial OS and firmware, reducing manual effort and preventing integration mistakes during delivery/validation cycles.
- Enhanced the team's test framework with resource control and automated performance validation (CPU, memory, boot time, and screen-change latency), using systemctl-driven orchestration and repeatable test runs.
- Implemented a results database and visualization workflow using SQLite and Apache Superset to store historical test runs and enable trend analysis, regression detection, and faster release decisions.
- Led and supported firmware teams through the migration from Debian 11 to Debian 12, coordinating with IndOS to surface compatibility risks early and prevent release-blocking issues.
- Delivered kernel configuration changes and firmware-side improvements that reduced boot time by ~25% (measured via systemd-analyze) and decreased CPU usage by ~10% (most visible under test workloads, also improved at idle) on target systems.

**Procter & Gamble**, Marketing Technology & Info-Sec Intern (IT)

Istanbul, Türkiye  
Jan 2022 – Oct 2022  
10 months

- Designed and operated the data collection and live transfer workflow for the Head & Shoulders Number One Music Awards campaign.
- Built a lightweight registration/data-capture webpage, stored participant data in a Google Cloud database, and automated email reporting to share campaign results with stakeholders.
- Developed a personalized ad campaign targeting non-Fairy detergent users across the Banabak mobile app and social media channels.
- Collaborated with the IT security team to scan employee computers across Turkey for risky applications and coordinated remediation communications to ensure removal.

<b>Eti</b> , Production Planning Intern (Online)	Remote
<ul style="list-style-type: none"> <li>Observed production planning stages of industrial machinery manufacturing and operational workflows.</li> </ul>	Aug 2020 – Sept 2020 2 months
<b>Arçelik Global A.Ş.</b> , Marketing Intern	Istanbul, Türkiye
<ul style="list-style-type: none"> <li>Contributed to marketing strategy project work for a consumer product line.</li> </ul>	Aug 2021 – Sept 2021 2 months

## Projects

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<b>Ginny The Bartender</b>	June 2025
<ul style="list-style-type: none"> <li>Built a responsive React frontend with protected routes, dynamic browsing, and a polished UI using Tailwind CSS.</li> <li>Developed a full-stack cocktail discovery platform with JWT authentication and personalized favorites.</li> <li>Designed RESTful APIs with FastAPI for cocktail search, authentication, and favorites management.</li> <li>Implemented database architecture using SQLAlchemy ORM, PostgreSQL, and Alembic migrations.</li> <li>Containerized the application with Docker Compose for consistent local development and deployment across environments.</li> </ul>	
<b>Akçal Zeytinyağı Fabrikası</b>	2025
<ul style="list-style-type: none"> <li>Designed and built a 10-section single-page React app covering brand story, production process, product range, and quality standards.</li> <li>Implemented scroll reveal animations, parallax effects, animated counters, and a continuous marquee for a polished user experience.</li> <li>Created a custom design system with a warm organic palette (olive, terra, cream) and Fraunces serif typography.</li> <li>Used Python and Pillow for product image background removal for seamless visual integration.</li> <li>Delivered a fully responsive Turkish-language site.</li> <li>Built with: React, Vite, CSS, Python, Pillow</li> </ul>	
<b>Personal Portfolio Website</b>	Jan 2026
<ul style="list-style-type: none"> <li>Designed and built a professional portfolio website showcasing projects and experience.</li> </ul>	

## Education

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<b>Istanbul Technical University</b> , Management Engineering (B.Sc.)	Sept 2018 – June 2022
<ul style="list-style-type: none"> <li>GPA: 3.89/4.00</li> <li>Graduate: First Ranked</li> </ul>	
<b>Istanbul Technical University</b> , Computer Engineering (Double Major, B.Sc.)	Sept 2019 – June 2023
<ul style="list-style-type: none"> <li>GPA: 3.65/4.00</li> </ul>	
<b>American Robert College of Istanbul</b> , High School Diploma	Sept 2012 – June 2017
<ul style="list-style-type: none"> <li>GPA: 98.58/100</li> <li>Captain of Football Team</li> <li>Captain of Running Team</li> <li>Vice President of Permaculture Club</li> </ul>	

## Languages

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**English:** C1  
**German:** A2