

Emre Çapar

Embedded Systems Engineer | Wi-Fi & IoT Systems | Fullstack Developer

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PROFESSIONAL SUMMARY

Computer Engineering graduate (B.Sc., İzmir Institute of Technology, 2026) specializing in embedded systems, IoT connectivity, Wi-Fi and wireless networking, and fullstack development, with hands-on ESP32, Arduino, Python, Flask, Firebase, Flutter, and CUDA experience. Completed a Test & Measurement internship at AirTies Wireless Networks building test-automation tools. Seeking a Test Engineer, Embedded Software Engineer, or Wi-Fi/IoT Engineer role.

TECHNICAL SKILLS

Wireless & Networking: Wi-Fi, Wireless Networking, ESP-01 Wi-Fi Module, Real-Time Systems, REST APIs, Network Device Testing

Embedded & IoT: ESP32, Arduino, 8051 Microcontroller, Assembly, IoT Connectivity

Languages: Python, C/C++, C#, Java, SQL, JavaScript, Dart

Frameworks & Platforms: Flask, Flutter, Unity, Netcode, Pygame, Kivy, Firebase, IndexedDB, Web Workers, CUDA

Test & Automation: Test Automation, Python Test Code Generation, Test Specification, Type-Checked Web Applications

Tools & Practices: Git, GitHub, Oracle APEX, Software Systems Design, Project Management

PROFESSIONAL EXPERIENCE

Test & Measurement Products Intern | AirTies Wireless Networks, İzmir, Turkey | 2026

- Gained hands-on experience with network devices and test systems in a wireless products environment.
- Built a type-checked, interactive web application that converted a static test-specification document into a structured, validated digital workflow.
- Developed a companion Python application with an interactive UI that consumed the web app's output to auto-generate device-specific Python test code.

Founder | Kakumei Interactive (Non-Profit), İzmir, Turkey | 2022 – Present

- Founded and maintain a developer identity (kakumei-interactive.tech) to share projects with a global audience.
- Designed and released games, full-stack applications, and open-source codebases for public access.

PROJECTS

- **Byte AI** (2026) – Built a browser-based AI coding workspace that indexes project files locally and sends relevant code context to Groq, with Web Worker indexing, IndexedDB storage, configurable models, token budgets, and secret redaction. *Stack: JavaScript, Web Workers, IndexedDB, Groq API.*
- **IZT-92** (2025) – Developed a four-player online co-op game in which players coordinate missions aboard a spaceship under alien attack, with real-time multiplayer networking. *Stack: Unity, C#, Netcode, Firebase.*
- **Gel Project Manager** (2025) – Created a local-first desktop project management app with goals, deadlines, notes, and version history; used SHA-256 for immutable version snapshots. *Stack: Flutter, Dart, SHA-256.*
- **PromoBot** (2024) – Built a browser-controlled rover connecting a Flask web interface to physical movement controls over Wi-Fi via an ESP-01 module. *Stack: Arduino, ESP-01, Flask, Python.*
- **Tactica Eternum** (2023) – Developed a turn-based strategy game featuring unit battles, cards, and resource management. *Stack: Python, Pygame.*
- **FocusTimer** (2023) – Created a study timer for tracking focused sessions, course notes, and weekly progress. *Stack: Python, Kivy.*
- **Space Bandits** (2022) – Built a 2D space shooter with alien waves, boss fights, ship upgrades, and high-score tracking. *Stack: Python, Pygame.*
- **Additional Projects** – Sentinel Smart Home (ESP32, Firebase, Flutter IoT control over Wi-Fi); Adaptive Spread Autotuning for Triangle Counting on GPUs (CUDA); 8051 Microcontroller Projects (assembly).

EDUCATION

B.Sc. in Computer Engineering | İzmir Institute of Technology, Turkey | Sep 2021 – Jun 2026

Computer Science (Erasmus+ Exchange) | University of Primorska, Koper, Slovenia | Feb 2025 – Jun 2025

HONORS, AWARDS AND LANGUAGES

Honors: Dean's High Honor List (2024–2025) | Dean's Honor List (2022–2023) | Rector's Honor List | YKS University Entrance Exam, Top 7,000 (2020–2021)

Languages: Turkish (Native) | English (C1, Advanced)