

Gonçalo Pereira

Embedded Systems · Network Programming · Backend Development

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EXPERIENCE

Embedded Software Engineer

Dec 2025 – Present · Sintra, Portugal

Streambow

- Develop embedded C software for telecom network gateway devices running embedded Linux
- Implement and integrate containerised components using Docker within network diagnostics pipelines
- Debug networking behaviour through low-level system and packet analysis

Student Supervisor

Jul 2024 – Oct 2024 · Lisbon, Portugal

42 Lisboa

- Reviewed and evaluated C and systems programming projects ensuring specification compliance
- Delivered technical presentations to audiences of 100+ students
- Coordinated staff workflows supporting student progress initiatives

PROJECTS

ft_ping & ft_traceroute

2025

C · Raw Sockets · ICMP · Network Internals

- Reimplemented ping and traceroute using raw sockets and handcrafted ICMP packets
- Implemented TTL control, checksum computation, and round-trip timing without libc abstractions

ft_transcendence

2025

Django · WebSockets · PostgreSQL · Docker

- Developed real-time multiplayer platform using WebSockets and Django backend
- Implemented OAuth2 authentication, JWT, and containerised deployment

EDUCATION

42 Lisboa

Oct 2023 – May 2025 · Lisbon, Portugal

Software Development · Systems & Network Programming Specialisation

- Project-based curriculum covering C/C++, operating systems, networking, algorithms, and full-stack development
- Advanced focus on Linux internals and network protocol implementation

SKILLS

Languages:	C, C++, Python, JavaScript, Bash, SQL	Systems:	Linux, Embedded Linux, Raw Sockets, ioctl, Signals, Process Management
Backend:	Django, FastAPI, PostgreSQL, REST APIs, WebSockets	Tooling:	Git, Docker, GDB, Valgrind, VS Code

Portuguese (Native) · English (Fluent)