Pedro Castro

Porto, Portugal | me@peucastro.com | linkedin.com/in/peucastro | github.com/peucastro | peucastro.com

Profile

Software Engineering Masters's student focused on backend engineering and infrastructure. Experienced with Java/Kotlin, Spring Boot and Docker. Passionate about building reliable software, exploring new technologies, and working on challenging problems. Open-source supporter.

Education

Faculty of Engineering of the University of Porto — Porto, Portugal
Master in Software Engineering — *Sep 2026–Present*
- Relevant Coursework: Software Architecture, Requirements Engineering, Software Testing, AI in Software Engineering, Secure Software Engineering

Bachelor in Informatics and Computing Engineering — *Sep 2022–Jul 2026*
- Relevant Coursework: Algorithms and Data Structures, Databases, Web Development, Operating Systems, Software Engineering, Distributed Systems, Computer Security, Compilers, Discrete Mathematics, Artificial Intelligence.

Experience

Blip.pt — Porto, Portugal
Backend Engineer Intern — *Oct 2026–Present*
- Joining the BETa graduate internship program.

NIFEUP — Porto, Portugal
Co-Head of Projects — *May 2026–Present*
- Coordinate and support multiple software projects across the student organization.
- Work with project managers on planning, communication, and delivery across all teams.
- Co-Head of Informatics for *Semana de Informática*, the organization's flagship annual tech event.

Project Manager — *Aug 2025–May 2026*
- Led development of the association's website, coordinating a team of 15+ people across backend and frontend.
- Maintained/extended the association's backend (Kotlin, Spring Boot, PostgreSQL) and frontend (Svelte, Tailwind CSS).

Member — *Oct 2024–Present*
- Contributor to uni, a Flutter app helping students organize academic life and schedules.
- Contributed to infrastructure for the organization's Kubernetes cluster (niployments).
- Member of *SINF*'s Competitions team, designing CTF challenges and programming contest problems.

Faculty of Engineering of the University of Porto — Porto, Portugal
Teaching Assistant — *Feb 2026–Jun 2026*
- Teaching assistant for the Computer Laboratory course (C device driver implementation in MINIX), supporting 40+ students with system programming and debugging.

Kevel — Porto, Portugal
Engineering Intern — *Jul 2025*
- Designed and built Scala tooling for CI pipelines to detect and report non-deterministic tests in large backend codebases, improving reliability and preventing flaky builds from reaching production.

Projects

NixOS Configuration | *Nix, Linux, Infrastructure as Code* — *Present*
- Built a declarative infrastructure-as-code system for managing multiple NixOS machines with a modular configuration.
- Deployed a home server running 15+ self-hosted services including media streaming, photo management, and file storage.
- Configured reverse proxy with automated SSL certificate management via Cloudflare DNS for remote access.

Personal Website/Portfolio | *Astro, Tailwind CSS* — *Present*
- Personal portfolio built with Astro and Tailwind CSS to showcase projects and host my resume.

DistributedChat | *Java, TLS, PostgreSQL, Distributed Systems* — *May 2026*
- Developed a TLS-secured distributed chat system with Java virtual threads, PostgreSQL persistence, and session tokens.
- Designed for fault tolerance with automatic retry, state preservation across disconnects, and integrated a local LLM (Ollama) for AI-powered responses in chat rooms.

OpenQuest | *Laravel, PostgreSQL, REST APIs, OpenAPI* — *Dec 2025*
- Created a collaborative Q&A platform with a REST API documented in OpenAPI and role-based access control.
- Designed a PostgreSQL schema for questions, answers, voting, notifications, badges, and content moderation.

Technical Skills

Languages: C, C++, Java, Kotlin, Scala, Python, JavaScript, SQL, Dart, PHP, Nix
Backend: Spring Boot, NestJS, Laravel, REST APIs, OpenAPI
Databases: PostgreSQL, MongoDB, SQLite, MySQL, Database Design, Relational Algebra
DevOps & Tools: Git, Docker, CI/CD, Linux, Nix, Caddy
Frontend: Svelte, Astro, Tailwind CSS
Software Engineering: OOP, Design Patterns, Software Architecture, Unit Testing, Refactoring, Debugging

Languages

Portuguese: Native | **English**: Highly Proficient