João Sousa

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Software engineer with a year of production incident response on enterprise data center infrastructure at Cisco and full-stack apps in production. MSc student in Distributed Systems & Cybersecurity (IST).

Experience

Technical Consulting Engineer (Data Center AI Compute) Sep. 2025 – Present
Cisco (promoted from TAC Intern) *Lisbon, Portugal*

- Resolve critical production incidents for enterprise customers on UCS hardware, fabric interconnects, and data center switching, root-causing bottlenecks across compute, ESXi clusters, and the network using logs, captures, and telemetry.
- Built an event-driven defect compliance audit service (Python, LLM, Webex REST API and Adaptive Cards): on defect creation it scores the defect against quality guidelines, sends key findings to the submitter, and serves a detailed report.
- Built two browser-based tools for defect search and RMA case lookup (HTML/JavaScript, Python backends) that aggregate internal REST APIs with MongoDB caching and parallel requests, and use an LLM to produce per-item summaries and interactive reports.

Digital Business Engineer Sep. 2024 – Feb. 2025
t_insight *Lisbon, Portugal*

- Engineered high-traffic, responsive web platforms using TypeScript and ASP.NET MVC architectures.

QA Automation Engineer Jul. 2024 – Aug. 2024
Sky Portugal *Lisbon, Portugal*

- Automated high-volume Jira bug triage by engineering RAG (Retrieval-Augmented Generation) workflows via Azure OpenAI.

Projects

raft-kv | *Go, gRPC, Raft, Docker*

- Building a replicated key-value store in Go on the Raft consensus algorithm, with a gRPC API and a write-ahead log.
- Testing leader election and replication on a simulated network with a fake clock; adding crash recovery, snapshots, and fault injection on a 5-node Docker cluster.

ChessLab | *Next.js, TypeScript, PostgreSQL, Tailwind CSS*

- Built and run **chesslab.pt**, a live production chess training application, including relational schema design, user authentication, and operational health monitoring.

Playkit | *React, TypeScript, Progressive Web Apps (PWA)*

- Built a real-time Progressive Web App with dynamic admin controls for critical event operations, deployed in production during large-scale live promotional campaigns.

ctf-writeups | *Offensive Security, Penetration Testing*

- CTF writeups and custom reconnaissance and payload automation scripts for offensive testing.

Education

Instituto Superior Técnico Lisbon, Portugal
MSc in Computer Science (Distributed Systems & Cybersecurity) *Sep. 2026 – Present*
BSc in Computer Science and Engineering *2021 – 2025*

- **Core Focus**: Computer Networks, Distributed Algorithms, Operating Systems, Systems Security.

Certifications

Cisco Certifications: CCNP Data Center (DCCOR + DCAI), CCNA (Enterprise Networking & Automation)

Technical Skills

Languages: Go, Python, C, TypeScript, SQL, Bash
Backend & Tools: gRPC, PostgreSQL, Docker, Git, Linux Internals, Next.js, React
Networking: Cisco Enterprise & Data Center Switching/Routing, BGP, OSPF, EVPN, VXLAN, TCP/IP
Compute & Virtualization: Cisco UCS, Server Virtualization Stacks, Hypervisors (ESXi)
Security: Web Exploitation, Penetration Testing, CTF

Interests

Competitive chess (near 2000 Elo on Chess.com), football (15+ years competitive play), reading