Rodolfo Nunes Lopes

Technical Consultant for DevOps & Cybersecurity

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Professional Overview

Former university professor (Ancient Greek Philosophy), now working as Tech Consultant for DevOps & Cybersecurity with 3+ years across technical education, software development, DevOps and cybersecurity consulting. Designs and operates a self-hosted Kubernetes platform managed end to end through GitOps, serving three publicly exposed applications. At NOS SGPS, delivered two API-first, event-driven proofs of concept adopted for production development, one of them launched as a commercial breach-monitoring product.

Technical Skills

- Operating Systems & Networking: Linux, networking fundamentals, network security, troubleshooting
- Container Orchestration & Virtualization: Kubernetes (k3s), Docker, Kata Containers, KVM, Helm
- Cloud & Infrastructure: AWS, Azure, Terraform, Cloudflare Tunnel, Cloudflare Pages, Vercel, Traefik, NodeJS, RabbitMQ
- GitOps & CI/CD: FluxCD, GitHub Actions, Renovate, GHCR, Git workflows
- Observability: Prometheus, Grafana
- DevSecOps: SOPS secrets encryption, container hardening (non-root workloads, dedicated filesystems), image scanning
- SAST/DAST: OWASP Zap, Trivy
- Offensive Security: Penetration testing, exploit validation, OSINT, subdomain enumeration, CMS and technology fingerprinting
- Vulnerability Management: triage, risk classification and remediation guidance
- Governance & Compliance: ISO 27001:2022, NIS 2, OWASP SAMM v2
- Programming & Scripting: Java, JavaScript/TypeScript, Python, Bash, PowerShell, Go

Projects

Kubernetes Homelab

It is a self-hosted Kubernetes cluster (k3s) that serves 3 publicly exposed apps. It is fully managed through GitOps, and the code is publicly available in a GitHub repository. The main decisions are documented in a dedicated blog tag.

Webapp `fogos`
It is a simple SPA, publicly exposed through the homelab, that represents the full path from commit to production. The app code is publicly available and the whole pipeline is explained in a dedicated blog post.

Webapp `blog`
It's a blog that works as documentation base for the projects. The code is in a public repository and implementation details are available in the about page. It is also worth noting the pipeline to write and publish posts.

Work Experience

Technical Consultant for DevOps & Cybersecurity

Bridge351 (client: Cyberinspect, NOS SGPS group) | full-remote | February 2025 - Present

- Built an API-first, event-driven domain reconnaissance pipeline fanning work out through RabbitMQ to 5 containerized workers, producing structured reports on subdomain exposure, technology fingerprinting and known vulnerabilities. It was adopted by NOS for continued development.
- Delivered a breach-monitoring PoC against the Have I Been Pwned API with subscriber notification delivery. It was productized by NOS and launched commercially as "ID Watch".
- Designed a three-layer malware detonation environment (bare metal > KVM > Kata nested virtualization) to measure recursive zip-bomb impact on CPU, memory and storage under isolation. It was used as internal tool to test vendor technologies.
- Replaced a manual XLSX-based OWASP SAMM v2 assessment process with a full pipeline (web survey > automated document generation), eliminating ~8 hours of manual write-up per assessment across 80 customers.
- Validated and documented dozens of vulnerabilities found by the NOS Offensive Security team against Cyberinspect's main application, discovering 6 additional issues during reproduction. Supervised the mitigation strategy implemented by the developers.
- Evaluated AI-driven offensive tooling (Cybersecurity AI, Strix) and briefed the team on applicability and limitations.
- Produced cybersecurity compliance assessments for the Portuguese QNRCS certification framework (both NIS 1 and NIS 2). It is currently under implementation.

Teaching Assistant (Cybersecurity)

Code for All | September 2023 – February 2025

- Designed and deployed intentionally vulnerable AWS environments for the bootcamp's offensive exercises that were adopted into the permanent cybersecurity operations curriculum
- Authored lecture content, slide decks and hands-on infrastructure/scripting exercises that were adopted into the permanent cybersecurity operations curriculum
- Delivered lectures on Linux, networking and security operations to 3 cohorts of 14 students
- Provided support for troubleshooting to 3 cohorts of 14 students

Teaching Assistant (Full-Stack Development)

Code for All | January 2023 – September 2023

- Delivered lectures on object-oriented programming and Java software development to 2 cohorts of 25 students
- Provided support for debugging and troubleshooting to 2 cohorts of 25 students

Professor of Philosophy

Universidade de Brasília | 2015 – 2022

- Taught Ancient Philosophy to 14 cohorts of 60 students
- Taught Ancient Greek to 14 cohorts of 60 students
- Supervised 3 master and 2 doctoral research projects
- Published 6 books and 14 scientific articles
- Edited a scientific journal
- Managed a post-graduate programme in Metaphysics
- Full scientific CV available at the Lattes platform

Doctoral Researcher

Fundação para a Ciência e a Tecnologia | 2009 – 2014

- Developed and implemented a research project on Plato's philosophy
- Presented current research in conferences

Junior Researcher

Fundação para a Ciência e a Tecnologia | 2006 – 2009

- Assisted senior researchers
- Implemented a fully digital scientific publisher
- Implemented an e-learning master programme on Classics

Education & Certifications

- **NIS 2 Roadmap (Roteiro NIS 2)** | Centro Nacional de Cibersegurança / Instituto Politécnico da Guarda | 2026
- **Diploma in ISO 27001:2022 Information Security Management Systems (ISMS)** | Alison | 2025

- **Cyberdefence and Legislative Principles (Ciberdefesa e Princípios Legislativos)** | Centro Nacional de Cibersegurança / Instituto Politécnico de Viseu | 2025
- **Open-source Intelligence** | Basel Institute on Governance | 2025
- **OSINT Workshop** | The Cyber Institute | 2025
- **Cybersecurity Operations Bootcamp** | Code for All | 2024
- **Full-Stack Development Bootcamp** | Code for All | 2022
- **PCEP – Certified Entry-Level Python Programmer** | Python Institute | 2021
- **Google IT Support Professional Certificate** | Google | 2019
- **System Administration and IT Infrastructure Services** | Google | 2019
- **PhD in Poetics and Hermeneutics** | Universidade de Coimbra, Portugal | 2014
- **Master of Arts (MA) in Classics** | Universidade de Coimbra, Portugal | 2009
- **Licenciatura (Bachelor's degree) in Portuguese and Classics** | Universidade de Coimbra, Portugal | 2006

Additional Information

Languages: Portuguese (native), English (fluent), Spanish (professional working), Italian (intermediate), French (basic)
Work authorization: EU citizen
Work model: remote