

MIGUEL BAPTISTA

Computer Engineering Student | Cybersecurity & Systems | NEDI - Lusófona University
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SUMMARY

Second-year Computer Engineering student with a foundational interest in Cybersecurity and secure software development. Hands-on experience building security-oriented tools — including a packet sniffer, port scanner, and hash cracker — alongside open-source contributions and multi-language projects. Active member of NEDI, the student tech association at Lusófona, bridging students and industry through workshops and events. Comfortable with version control workflows, automated testing, and agile practices. Seeking to apply my technical foundation and community involvement in a real-world IT and consulting environment.

EXPERIENCE

Student Tech Community Member

Sep 2025 - Present

NEDI - Lusofona University

Lisbon, PT

- Serve as a bridge between the Computer Science student community and the tech industry — promoting events, coordinating workshops, and connecting peers with professional opportunities.
- Organise and support industry talks and networking sessions at Lusófona University, facilitating direct contact between students and companies.

Open Source Contributor

2025 - Present

Software Maintenance Lab

Lisbon, PT

- Contribute to open-source repositories using a professional Git workflow: branching, issue tracking, pull requests, and peer code review.
- Apply systematic debugging techniques and write unit/integration tests to validate correctness of changes before merging.
- Navigate unfamiliar, multi-language codebases (Java, Kotlin, Spring Boot, Maven, Django) with minimal guidance.

EDUCATION

Computer Engineering

2024 - Present

Lusofona University

Lisbon, PT

- Systems-focused modules: Operating Systems, Computer Architecture, Digital Systems, Computer Networks, Algorithms & Data Structures.
- Additional coursework: Databases, Web Development, Software Engineering, Discrete Mathematics, Probability & Statistics.

ACHIEVEMENTS

Cybersecurity Projects

Built 3 security tools from scratch — packet sniffer, port scanner, and hash cracker — demonstrating hands-on initiative beyond coursework.

Open Source Contribution

Maintained real-world codebases: debugging, PRs, code reviews, and automated testing in a professional agile workflow.

Leadership Skills

Proven ability to lead and perform under pressure — decision-making in high-stress situations and supporting team performance.

SKILLS

Languages: Java · Kotlin · Python · C · JavaScript · TypeScript · SQL — *used in academic, personal and open source projects*

Frameworks & Libraries: React · Next.js · Spring Boot · Django · Tailwind CSS · Vite — *applied in frontend and backend development*

Tools: Git · GitHub · Apache Maven · Docker (introductory) · MySQL · Socket Programming — *used in professional workflows and networking tools*

CS Concepts: OOP · MVC · Algorithms & Data Structures · Computer Networks · OS Internals · TCP/IP · UML — *applied throughout coursework and personal projects*

PROJECTS

[Python Packet Sniffer](#) — Python · Raw Sockets · Network Analysis

Network packet sniffer using raw sockets to capture and inspect live traffic at the IP/TCP layer. Parses headers for source/destination IPs and protocol type. Includes a malicious traffic simulator for anomaly detection testing.

[Python Port Scanner](#) — Python · TCP Sockets · Networking

TCP port scanner that probes ports 1-1024 via socket connections, resolves hostnames to IPs, and measures execution time — replicates the core logic of tools like nmap.

[Password Hash Cracker](#) — Python · SHA1 · Cryptography

Dictionary attack tool that cracks SHA1 hashes using a wordlist — demonstrates why unsalted hashes are insecure and highlights the need for salting and stronger algorithms like bcrypt.

[React & Next.js — Frontend Labs & E-Commerce Platform](#) — React · Next.js · TypeScript

Multi-feature frontend app with dynamic routing, persistent shopping cart, favorites system, and a countries explorer — built with component-driven architecture and TypeScript.

More projects available on github.com/miguel-baptista07