## Eduardo Faria

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#### Education

## Bachelor's Degree in Computer Science and Engineering

Sep. 2022 — Jun. 2025

University of Minho

Braga, Portugal

• Cumulative GPA: 16/20 (Top 8%)

## **Professional Experience**

## Cybersecurity/Management Summer Intern

Jul. 2024 — Aug. 2024

Eurotux S.A.

Braga, Portugal

- Helped the SOC team in using <u>OpenCTI</u> to handle an average of 28 security alerts per day, including a peak of 171 incidents, which provided firsthand experience in cybersecurity principles and high-pressure situations
- Conducted comprehensive penetration testing using Kali Linux on Metasploitable 2, identifying, understanding, and exploiting 15 critical vulnerabilities to enhance system security awareness
- Prepared and revised over 110 Standard Operating Procedures (SOP) for 13 sub-teams, accounting for 31% of the company's SOP library. The newly created SOPs were used in up to 30% of teams' tasks, significantly boosting efficiency and enhancing English technical writing skills

## **Projects**

#### **Proof-of-Work Blockchain** | GO, Git

- Designed and implemented a blockchain from scratch in GO, featuring SHA-256 hashing, proof-of-work consensus, and UTXO-based transaction handling, with BadgerDB-backed persistent storage and Merkle trees for secure validation and significant performance optimization
- Developed a secure wallet system with ECDSA digital signatures and Base58 address encoding, featuring a command-line interface for blockchain interaction and a distributed network layer with block propagation, chain validation, and automatic database recovery for multi-node consensus

## Network Monitoring System | GO, Git | Computer Networking class

Grade 17/20

- Designed a network monitor in GO to analyze network links and devices across a distributed environment. Implemented custom UDP-based and TCP-based application-layer protocols, enabling fast communication between multiple agents and a centralized server, with minimal latency
- Configured a scalable architecture supporting up to 36 multiple agents, using JSON-based task management to define operations and thresholds.
  Validated the system through thorough testing with <u>CORE</u>, monitoring metrics like latency and bandwidth across various simulated devices

## Task Delegation Server | C, Git | Operating Systems class

Grade 19/20

- Created a C-based server as part of a 3-person team to manage, schedule, and execute tasks using named pipes and concurrent algorithms, enabling up to 72 simultaneous users to delegate and monitor their program's execution with minimal overhead and efficient resource allocation
- Developed an SJF-based scheduling algorithm that decreased the existing FIFO algorithm's all-around task execution waiting time by 34%, smoothly enabling the server to handle up to 128 parallel processes while optimizing CPU utilization and reducing bottlenecks

## Route Optimizer | Python, Git | Artificial Intelligence class

Grade 19/20

- Conceived a Python program to optimize graph resource distribution using AI pathfinding techniques. Designed a custom A\*-inspired algorithm and created benchmark tests on graphs with up to 500 nodes, that showed reduced search times by 16% and improved resource efficiency by 4%
- Pioneered a complementary graph representation of the <u>map of Portugal</u>, that accurately plots 307 municipalities, to enhance the project's applicability to real-world scenarios, improving its practical relevance and usability for geographic analysis, and decision-making processes

#### Extracurriculars

# Co-Director of the Marketing and Content Department

CeSIUM (Software Engineering Students' Association of the University of Minho)

Sep. 2024 — Jul. 2025

Braga, Portugal

• Directed a team of 8 collaborators in creating and managing content for CeSIUM's social media channels, leading to 32 new posts

#### **Programming Mentor**

Feb. 2023 — Present Braga, Portugal

CoderDojo Braga

- Mentored children aged 7-17 in programming across 15 sessions, with nearly all students returning for additional lessons
- · Guided trainees through Python/Scratch coding challenges that developed participants' basic engineering skills and project creativity

## Organizer - Image and Communication Department

Dec. 2023 — Feb. 2024

SEI (Software Engineering Week)

Braga, Portugal

- Coordinated logistics and communications for over 800 participants and 32 companies, ensuring smooth event operations and high engagement across 22 workshops, talks, and gatherings
- Executed a social media content strategy during SEI, which resulted in a 15% increase in followers and engagement

## Other qualifications

- Technical Skills: GO, C, C++, C#, Java, Python, Haskell, HTML, CSS, JavaScript, Next.js, Git
- Languages: English (proficient), Portuguese (native)
- Certifications: Cambridge Certificate in Advanced English (CAE): C2 (highest level, 2024)