



Miguel Magalhães

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ABOUT ME

Computer Engineering graduate currently pursuing a master's degree in Cybersecurity and Computer Systems Auditing, with specialised training in Computer Networks and Systems and practical experience in IT support, systems, networking and software development.

Hands-on experience with Windows, Linux, Active Directory, Microsoft 365, computer networks, SQL databases, Python, PHP, JavaScript, TypeScript, React, REST APIs, Git, Supabase and Vercel.

Interested in IT operations, systems administration, infrastructure and cybersecurity. Recognised for problem-solving, adaptability, clear communication, teamwork and continuous learning.

WORK EXPERIENCE

🏢 **Clínica Dr. Luís Couto** – Paredes, Portugal

Link <https://marcacoes.clinicadrluiscouto.pt>

Freelance Web Developer

[05/2026 – 07/2026]

- Developed and deployed a full-stack medical appointment booking platform.
- Built the user interface using React, TypeScript, Vite and Tailwind CSS.
- Implemented dynamic appointment availability, booking validation and a multi-step booking flow.
- Integrated REST APIs, authentication and database operations using Supabase.
- Implemented form validation, responsive design and accessibility improvements.

🏢 **NewCoffee – Indústria Torrefatora de Cafés, S.A.** – Paredes, Portugal

Website: <https://www.newcoffee.pt/pt/> | Name of unit or department: Information Systems Department - Business or sector: Information and communication

IT Technician

[28/11/2025 – 02/07/2026]

- Provided first-line technical support to users across different departments and company locations;
- Diagnosed and resolved incidents involving hardware, software, user accounts, access permissions, printing, connectivity and business applications;
- Prepared, configured and maintained Windows desktops, laptops, printers, mobile devices and peripherals;
- Created and managed user accounts, groups, permissions and access rights through Active Directory and internal systems;
- Supported ERP systems, internal applications, VPN services, telephony and business tools used across the organisation;
- Logged, monitored and resolved technical support requests and incidents;
- Managed and updated information relating to IT equipment, users and technology assets;
- Supported network infrastructure, including troubleshooting DHCP, connectivity and remote access issues;
- Developed and maintained internal web platforms and applications using React, PHP, JavaScript, Python and Microsoft SQL Server;
- Implemented new features, fixed application issues and contributed to internal process improvements;
- Collaborated with external IT providers in resolving incidents and maintaining systems and infrastructure.

 **Staples Portugal, S.A.** – Ermesinde, Portugal

Name of unit or department: EasyTech - Business or sector: Information and communication

IT Support Technician — Part-time

[03/02/2025 – 03/08/2025]

- Diagnosed and resolved hardware, software and peripheral issues reported by customers and employees;
- Provided technical support for POS terminals and SRDS software;
- Logged and monitored incidents through the internal support platform;
- Communicated technical solutions clearly to non-technical users;
- Identified customers' technical needs and recommended suitable technology solutions;
- Collaborated with sales, customer service and logistics teams to maintain high service standards.

 **Aquário Eletrónica** – Porto, Portugal

Systems and Development Intern

[01/02/2024 – 31/07/2024]

- Developed Python scripts for web scraping, data collection and task automation;
- Supported Microsoft SQL Server administration and integration with the Primavera ERP system;
- Assisted with tasks involving local network infrastructure and IT systems;
- Organised technical documentation, planned tasks and prepared weekly progress reports;
- Collaborated with the technical team in analysing and resolving problems.

EDUCATION AND TRAINING

Master's Degree in Cybersecurity and Computer Systems Auditing

Instituto Superior Politécnico Gaya - ISPGAYA [2026 – Current]

City: Vila Nova de Gaia | Country: Portugal | Level in EQF: EQF level 7

Currently enrolled. Evening programme with a duration of four semesters (120 ECTS), accredited by A3ES.

Bachelor's Degree in Computer Engineering

Instituto Superior Politécnico Gaya - ISPGAYA [2023 – 2026]

City: Vila Nova de Gaia | Country: Portugal | Final grade: 15 | Level in EQF: EQF level 6 | Thesis: Integrated Information Technology Services Management Platform

- Software development and web applications;
- Computer networks and information security;
- Operating systems and distributed systems;
- Databases and Microsoft SQL Server;
- Artificial intelligence and machine learning;
- Programming in Python, Java, JavaScript, PHP and SQL;
- Software engineering, systems analysis and project management.

Higher Professional Technical Course in Computer Networks and Systems

Instituto Superior Politécnico Gaya - ISPGAYA [2021 – 2024]

City: Vila Nova de Gaia | Country: Portugal | Final grade: 16 | Level in EQF: EQF level 5

Practice-oriented programme covering systems administration, computer networks, information security, databases, programming, hardware maintenance and technical support.

PROJECTS

[05/2026 – 07/2026]

Medical Appointment Booking Platform — Clínica Dr. Luís Couto Developed and deployed a full-stack medical appointment booking platform for a real healthcare client.

Key contributions:

- Developed the user interface using React, TypeScript, Vite and Tailwind CSS;
- Implemented appointment type, date and time selection;
- Integrated dynamic availability and booking validation;
- Developed API routes for communication with external clinical systems;
- Integrated authentication and database operations using Supabase;
- Configured deployment and environment variables through Vercel;
- Implemented form validation, responsive design and accessibility improvements.

Technologies: React, TypeScript, Vite, Tailwind CSS, Supabase, REST APIs, Vercel and Git.

Link: <https://marcacoes.clinicadrluiscouto.pt/>

[01/2026 – 06/2026]

ITSM and Technical Support Management Platform — NewCoffee Developed an internal platform for managing support tickets, IT assets, users, departments and operational indicators within the Information Systems Department.

Key contributions:

• Developed the frontend using React, Vite, Bootstrap and Chart.js; • Built REST API endpoints using PHP; • Integrated the application with Microsoft SQL Server; • Implemented dashboards for tickets, IT assets and support activity; • Supported deployment in a Windows Server and IIS environment.

Technologies: React, JavaScript, PHP, REST APIs, Microsoft SQL Server, Bootstrap, Chart.js, IIS and Git.

Link: https://miguellmagalhaes.github.io/ISPGAYA_PEICE_NewCoffee/

[10/2025 – 12/2025]

AI-Based Network Intrusion Detection System — International COIL Project International collaborative project developed between ISPGAYA in Portugal and FATEC Ipiranga in Brazil under the Collaborative Online International Learning framework.

- Configured isolated virtual environments for controlled testing;
- Generated and analysed network traffic;
- Captured and analysed packets using Wireshark;
- Participated in controlled simulations of malicious network activity;
- Validated intrusion detection alerts using Snort;
- Applied Python and machine learning techniques to network traffic analysis.

Technologies: Virtualisation, Wireshark, Snort, Python, computer networks and machine learning.

[06/2025 – 12/2025]

Clash of Eco — Educational Energy Management Game | Erasmus+ BIP 2025 Developed an educational strategy game focused on sustainable and energy-independent communities as part of an international and multidisciplinary Erasmus+ Blended Intensive Programme.

- Developed game features and user interface components;
- Contributed to scenarios involving energy production, consumption and storage;
- Collaborated with students from international partner institutions;
- Applied teamwork, gamification and project management methodologies.

Technologies: React, TypeScript, Vite, Express, PostgreSQL and Git.

SKILLS

Systems

First-line technical support / Linux / Active Directory / Windows / Microsoft 365 / hardware and software support / incident diagnosis and resolution / computer and peripheral configuration / user and permissions management

Networks and Infrastructure

VPN / LAN networks / Snort / Wireshark / DHCP / Cisco Packet Tracer / TCP/IP / network segmentation / DNS / connectivity troubleshooting / network administration

Programming and Development

Python / JavaScript / HTML / PHP / Java / React / Vite / Git / GitHub / GraphQL APIs / Bootstrap / Tailwind / CSS

Databases

SQL / Microsoft SQL Server / database modelling and basic database administration / MySQL / PostgreSQL

Cloud and Tools

Supabase / Vercel / IIS / Chart.js / Docker / Primavera ERP / ERP systems

Cybersecurity

traffic analysis / Network security / intrusion detection / vulnerability assessment in laboratory environments / access management / data protection / basic system hardening / log management and analysis

Interpersonal Skills

Communication / teamwork / problem-solving / adaptability / continuous learning

CERTIFICATIONS

[Cisco Networking Academy, 03/2026]

Python Essentials 1

Link: https://www.credly.com/badges/6eeaa5c4-c5d9-4886-a3c5-229717506e74/public_url

[Cisco Networking Academy, 04/2026]

Python Essentials 2

Link: https://www.credly.com/badges/23370cec-20c2-4fec-a2cb-c60739ff1039/public_url

[Cisco Networking Academy, 02/2026]

Linux Unhatched

Link: <https://www.credly.com/badges/df830f3d-da45-470a-925f-585365be8cc7>

[Cisco Networking Academy & IBM SkillsBuild, 06/2025]

AI Fundamentals

Link: https://www.credly.com/badges/b35a68d0-256e-4702-a60a-bb4d5b24d8aa/public_url

[Cisco Networking Academy, 06/2025]

Computer Hardware Fundamentals

Link: <https://www.credly.com/badges/d8e9b3ae-9796-4e5d-a871-5f5cbd5c5af9>

Presenter Certificate — Environmental Footprint Assessment and Mitigation in Generative Artificial Intelligence

PUBLICATIONS

[2025]

Environmental Footprint Assessment and Mitigation in Generative Artificial Intelligence Scientific paper assessing and mitigating the environmental footprint of large language models across three key dimensions: energy consumption, carbon emissions and water usage. The study covers both commercial and open-source models and examines impact-reduction strategies such as quantisation, sparsity and the geographical distribution of computing workloads. It also discusses the importance of standardised environmental metrics, transparency and auditing in the context of sustainable artificial intelligence. Scientific communication presented at ISPGAYA Congress 2025, during the Artificial Intelligence session.

Status: Presented at ISPGAYA Congress 2025; manuscript prepared for publication in the conference proceedings.

Authors: Miguel Magalhães; Joana Becker Paulo; Catarina Oliveira Lucas; Eric Zanghi | **Journal Name:** ISPGAYA Congress 2025

Magalhães, M., Becker Paulo, J., Oliveira Lucas, C., & Zanghi, E. (2025). Environmental Footprint Assessment and Mitigation in Generative Artificial Intelligence. Communication presented at ISPGAYA Congress 2025, Vila Nova de Gaia, Portugal.

[2025]

Comparative Evaluation of Angular and React in the Context of Web Development and Front-end Security: A Systematic Review Systematic literature review comparing Angular and React in terms of performance, scalability, architecture, developer experience, market adoption and frontend application security. The study followed a structured systematic review methodology, including inclusion and exclusion criteria, searches across databases available through EBSCOhost, bibliographic management using Zotero and application of the PRISMA 2020 framework. It also examines security mechanisms, vulnerabilities and recommended practices for modern applications developed using Angular and React.

Status: Presented at ISPGAYA Congress 2025; manuscript under preparation/review for publication.

Authors: Carlos Sousa; Miguel Magalhães; Gabriel Rocha; José Monteiro | **Journal Name:** ISPGAYA Congress 2025

Sousa, C., Magalhães, M., Rocha, G., & Monteiro, J. (2025). Comparative Evaluation of Angular and React in Web Development and Front-end Security. ISPGAYA Congress 2025, Vila Nova de Gaia, Portugal.

LANGUAGE SKILLS

Mother tongue(s): Portuguese

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DRIVING LICENCE

Driving Licence: B

HOBBIES AND INTERESTS

Interests

- Cybersecurity;
- Systems Administration;
- Computer Networks;
- Software Development;
- Artificial Intelligence;
- Continuous Learning.

INTERNATIONAL EXPERIENCE AND ACADEMIC COLLABORATION

[09/2025 – 12/2025]

Erasmus+ BIP 2025 — Building Energy-Independent Solutions for Sustainable Communities

Participated in an Erasmus+ Blended Intensive Programme focused on developing solutions for sustainable and energy-independent communities, combining virtual collaboration with an intensive in-person week at ISPGAYA.

- Collaborated in an international and multidisciplinary team to develop the Clash of Eco educational digital game;
- Contributed to the creation of features, scenarios and game mechanics involving energy production, consumption, storage and management;
- Applied concepts related to programming, gamification, sustainability and project management;
- Participated in teamwork sessions, user testing and the final project presentation;
- Developed intercultural communication, collaboration and problem-solving skills.

Technologies: React, TypeScript, Vite, Express, PostgreSQL and Git.

Academic recognition: 3 ECTS.

Link: https://github.com/MiguellMagalhaes/Clash_Of_Eco

[10/2025 – 12/2025]

COIL Portugal-Brazil — Predictive Network Intrusion Detection System

International project developed between ISPGAYA in Portugal and FATEC Ipiranga – Centro Paula Souza in Brazil under the Collaborative Online International Learning framework.

- Collaborated in a mixed Portugal-Brazil team combining computer networks, cybersecurity, data analysis and machine learning;
- Configured an isolated virtual laboratory using Kali Linux, Ubuntu Server and VirtualBox;
- Generated normal baseline traffic and captured network packets using Wireshark and tcpdump;
- Participated in controlled simulations involving reconnaissance, brute-force attempts and web application attacks;
- Configured and used Snort for intrusion detection, alert generation and structured log production;
- Organised and provided network datasets for preprocessing, exploratory analysis and predictive model training;
- Collaborated in the evaluation of models such as KNN, SVM, decision trees and Random Forest;
- Prepared and presented the final results to students and lecturers from both institutions.

Tools: Wireshark, tcpdump, Nmap, Snort, Kali Linux, Ubuntu Server, VirtualBox, Python, pandas, NumPy, Matplotlib, Scikit-learn, Google Colab and Microsoft Teams.

[09/2024 – 10/2024]

Erasmus+ Games for Goals — Educational Board Game Design

Participated in an in-person Erasmus+ mobility programme in Nordhausen, Germany, focused on creating an educational board game for children aged 8 to 10.

- Collaborated in an international, multicultural and multidisciplinary team;
- Designed a print-and-play game connected to Children's Rights and the United Nations Sustainable Development Goals;
- Developed educational scenarios, task and action cards, game rules and supporting learning materials;
- Contributed to a collaborative gameplay structure encouraging players to solve challenges and make decisions as a team;
- Addressed topics including inclusion, equality, education, well-being, privacy and protection from violence;
- Developed creativity, intercultural communication, teamwork and problem-solving skills.