# João Vieira

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in Linkedin   ⌂ Github   🔗 Website

## RESUME

Master's student in Computer Engineering, Software Developer with frontend focus. I've built and deployed complete platforms — from planning to deployment — including a student dropout prevention system currently in use at IPCA. I work primarily with React.js and TypeScript on the frontend, with backend experience in Node.js and PostgreSQL. I'm good at communicating and integrating into teams, always looking to build useful and solid software while being open to different perspectives.

## PROFESSIONAL EXPERIENCE

**Full-Stack Developer (Freelancer)**                                    07/2025 – Present | Remote
IPCA (Instituto Politécnico do Cávado e do Ave)
- Developed a full-stack platform to monitor student dropout, **serving 300+ faculty members and tracking 5,000+ students** at IPCA, focused on identification of at-risk students, enabling faculty and support services to track and assist students at risk of dropping out.
- Implemented a robust identity and permissions management system (hybrid **RBAC + ABAC**), ensuring access control to sensitive data across different academic profiles.
- Designed a relational database in PostgreSQL (via Prisma ORM), ensuring data integrity and consistency.
- Tech Stack: TypeScript, Next.js 15 (App Router), React.js, PostgreSQL, Prisma ORM, Auth.js, Tailwind CSS, Docker.

**Front-End Developer (Freelancer)**                                    02/2025 – 06/2025 | Remote
Tecsol Energia 🔗
- Developed responsive front-end website using **TypeScript**, Next.js, **React.js**, and Tailwind CSS.
- Integrated **Storyblok** headless CMS, allowing the client to independently publish and manage website content.
- Implemented blog section with dynamic meta tags and optimized URLs to improve **SEO**.

**Full-Stack Developer - AI Researcher**                                09/2024 – 06/2025 | Barcelos, PT
2Ai - Applied Artificial Intelligence Laboratory 🔗
- Developed an industrial predictive maintenance dashboard using TypeScript, Next.js API Routes and React.js.
- Implemented Machine Learning models (XGBoost, Random Forest, SVM) in Python for failure prediction.
- Presented as Bachelor's Final Project with a grade of **18/20**.
- The project resulted in a **scientific paper** presented at the SASYR 2025 conference.
- Tech Stack: TypeScript, Node.js, Next.js, React.js, Python, PostgreSQL.

**IT Technician**                                                       06/2021 – 11/2022 | Porto
Universidade Católica Portuguesa
- Managed and maintained information systems in Higher Education context, ensuring high availability of technology services for faculty and administrative departments.
- Administered access and identities via Active Directory and maintained institutional IT infrastructure.
- Data backup and computer setup for faculty, staff, and classrooms.
- Used ticketing systems (ITSM/GSTI)

## EDUCATION

**Master's in Computer Engineering**
Instituto Politécnico do Cávado e do Ave (IPCA)

2025 – 2027 | Barcelos, Braga

**Bachelor's in Electronics and Computer Engineering**
Instituto Politécnico do Cávado e do Ave (IPCA)

2022 – 2025 | Barcelos, Braga

## TECHNICAL SKILLS

**Frontend**
React.js, Next.js, Tailwind CSS, HTML/CSS

**Programming Languages**
TypeScript, JavaScript, Python, SQL, C, C++

**Methodologies**
Agile (Scrum, Kanban), CI/CD

**Backend & Databases**
Node.js (NestJS, Express), PostgreSQL, MongoDB, ORMs (Prisma, Drizzle), REST APIs

**DevOps & Cloud**
Git, Docker, AWS/Vercel

**Languages**
Portuguese (Native), Inglês (B2)

**Currently Learning**
- C# .NET & Entity Framework Core
- AWS Solutions Architect (certification in progress)

## ACADEMIC PROJECTS

**Microservices Document Management Backend** 🔗
- Multi-tenant document management backend with **microservices architecture**, event-driven communication (RabbitMQ), and Kubernetes deployment on DigitalOcean.
- Tech Stack: NestJS, Node.js, PostgreSQL, RabbitMQ, Docker, Kubernetes, Terraform.

**Cloud-Native Authentication Microservice** 🔗
- Authentication microservice with auto-scaling (HPA), monitoring (Prometheus/Grafana), and automated deployment via GitHub Actions.
- Tech Stack: Node.js, Express, JWT, Docker, Kubernetes, Terraform, GitHub Actions.

## VOLUNTEER WORK

**Oficina do Brinquedo (Toy Repair Workshop)** 🔗
Volunteer

2022 – 2025 | IPCA/APAC

- Adapted 70+ electronic toys for children with reduced mobility through technical modifications, promoting accessibility and social inclusion.
- Initiative by IPCA in partnership with Electronics and Robotics Club, supporting APAC families.

**Clube de Eletrónica e Robótica (Electronics and Robotics Club)** 🔗
Volunteer

2023 – 2025 | IPCA

- Promoted technical workshops and developed the club's website to support student skill development and academic preparation.