Vítor **Sousa**

PRODUCT MANAGER · SOLUTION ARCHITECT · SOFTWARE ENGENEER

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A specialist generalist professional with solid experience in technology. I have worked in several areas, from research and innovation to development and infrastructure, always contributing as an individual collaborator or team leader. Focused on emerging technologies, I have proven experience in the development and management of products and teams, with recognized work in sectors such as healthcare, smart cities, industry 4.0, precision agriculture and smart lighting. Most of my projects and products involved the development of web solutions and IoT technologies, with a strong focus on innovation and cutting-edge technologies. I participated in all stages, from conception to development and management, utilizing .NET, Java, Python, Django, Django REST Framework, Flask, Docker, among others.

Experience

Solution Architect/Software Engineer
Gaia

TRIDONIC
Jul. 2021 - Apr. 2024

- In 2021, I started at Tridonic as a **Solution Architect (Cloud)**. During my nearly three years at Tridonic, I had the opportunity to **lead Azure cloud-based architecture projects**, ensuring scalable and secure solutions, and participated in research and innovation projects. I actively contributed to **requirements analysis, software documentation, and integration with IoT systems.**
- Concurrently, I also served as a **software engineer**, playing a significant role in the **backend development** of the company's flagship product, a lighting equipment control system developed in **Java**. From **designing and developing REST APIs** to creation and implementing data models with **PostgreSQL**, I was also involved in the **implementation, integration, and maintenance** of a monitoring system using **Elasticsearch, Docker, and Kubernetes**.
- This period was characterized by continuous improvement of my skills in **software engineering and solution architecture**, as well as the **development and technical documentation** of innovative web and IoT solutions for the smart lighting market. I integrated into the core product management team, following **SCRUM methodologies** and using tools like **GitLab, Jira, Confluence, Polarium, and Microsoft Apps**.

Product Manager / Product Owner
Aveiro

ZENITHWINGS
Jan. 2019 - Jun. 2021

- During my two and a half years at Zenithwings as a **Product Manager/Owner**, I led R&D products in Precision Agriculture and Industry 4.0, focusing on **requirements' analysis, development, maintenance, and deployment** of innovative products and solutions, with the aim of improving the company's main products.
- My responsibilities included the **invention, creation, formulation, and design of web and IoT software solutions**; the exploration and testing of innovative technologies; the development of **data analysis algorithms; and the integration of blockchain technology** in various projects.
- I **led development teams and supervised several master's thesis**, providing valuable experience in mentoring and talent development. Additionally, I had direct contact with clients and stakeholders for requirements gathering and objective definition. I maintained direct communication with various company departments, from top management to marketing and design, ensuring effective communication and strategic alignment.
- This period was crucial for honing my skills in **product management, team leadership, solution architecture**, and implementing cutting-edge technologies in emerging sectors.

Software Engineer / Product Manager
Aveiro

UBIWHERE
Aug. 2018 - Jun. 2021

- I joined Ubiwhere as a **software engineer**, integrated into a team developing **IoT and Web solutions**, focused on R&D, using technologies such as **Python, Django, Django REST Framework, Docker, Docker Compose, GitLab, among others**. A few months later, I assumed the position of **Product Manager**, leading R&D projects in the areas of Precision Agriculture and Industry 4.0, with responsibilities for requirements analysis, maintenance, and implementation of innovative products and solutions.
- My duties included the **formulation and design** of web software solutions, **exploration and testing** of innovative technologies, **development of data analysis algorithms**, and integration of **blockchain technology** in various innovative projects. I **led development teams and supervised several master's thesis**, providing me with valuable experience in mentoring and talent development. I maintained direct interaction with various company departments, from management to marketing and design departments, ensuring efficient communication and strategic alignment. Additionally, I was in **direct contact with clients and stakeholders** for requirements gathering and objective definition.
- This period was crucial for developing my skills in **product management, team leadership, solution architecture, and the implementation** of advanced technologies in emerging sectors.

Principal Software Development Engineer

Porto

IncreaseTime By INOVA+   *Nov. 2015 - Jul. 2018*

- As **Principal Software Development Engineer** at IncreaseTime, a startup of INOVA+ in the healthcare sector, from 2015 to 2018, I played a crucial role in **requirements analysis, design and development of web applications, planning, testing, and implementation of final solutions**.
- I was responsible for the **development** of the company's main product, an IoT platform for patient monitoring and hospital management. I utilized a wide range of technologies, including **.Net, JavaScript, jQuery, Python, HTML5, Visual Studio IDE, SQL Server, CSS3, RabbitMQ, Hibernate, Git, Redmine, XML, and REST & SOAP Webservices**. During this period, I also began to technically lead the company's research and innovation projects, significantly contributing to the advancement of technological solutions and the efficiency of development processes.
- This experience strengthened my skills in **software engineering, solution architecture, API development, software project management, and technical documentation**.

Research Fellow

Porto

Laboratory for Digital and Intelligent Industry (DIGI2)   *Nov. 2015 - Jul. 2018*

- I started my professional career as a **Researcher** at the Laboratory for Digital and Intelligent Industry (DIGI2) at the Faculty of Engineering, University of Porto, where I worked on **innovative research projects** such as I-RAMP3 and ReBorn.
- In the I-RAMP3 project, I contributed to **developing** advanced solutions for reconfigurable machines, focusing on fast and optimized startup and operation of production lines with heterogeneous devices, using technologies such as **C#, Python, Java, JavaScript, Arduino, and Raspberry Pi**. I developed IoT solutions with sensors for monitoring industrial machines, data collection, analysis, and visualization. In the ReBorn project, I participated in demonstrating strategies and technologies for the reuse of production equipment in old, renewed, and new factories, employing technologies like **Django, PostgreSQL, JavaScript, jQuery, bootstrap, HTML5, and CSS3.** In addition to developing web applications in Django, I was involved in **system integration and data analysis** to enhance efficiency and sustainability in manufacturing.
- This period was pivotal in enhancing my skills in **software engineering, API development, technical documentation,** and adopting emerging technologies, significantly contributing to competitiveness and innovation in the industrial sector.

Graduate Trainee

Porto

Faculty of Engineering of the University of Porto   *Out. 2013 - Sep. 2014*

- As an intern at the Laboratory for Digital and Intelligent Industry (DIGI2) at the Faculty of Engineering of the University of Porto, I developed a service for the industrial sector focused on reconfiguring production systems during critical phases such as setup and control, and assisting in the planning of wireless sensor networks. This service, integrated into the SmartComponent architecture, interacted directly with network services to optimize network coverage and connectivity. Using **Java, Maven, UPnP, and XML**, I created an application capable of real-time data processing, ensuring reliable data collection from all network components.
- This experience enhanced my skills in **software engineering, research and innovation, object-oriented programming,** and contributed to advancing SmartFactory development.

Extra Activities

Assistant Professor

Porto

Faculty of Engineering of University of Porto   *Feb. 2024 - PRESENT*

- In 2024, I decided to accept the position of assistant professor Bachelor in Informatics and Computing Engineering at the Faculty of Engineering of University of Porto, where I taught the subject of Algorithm Design for one semester. I was responsible for conducting theoretical-practical classes, focusing on algorithm development and its practical application. During this period, I developed skills in university teaching, leadership, personal development, and effective communication.

Professor

Porto

Faculty of Sciences at the University of Porto   *Mar. 2023 - PRESENT*

- I am responsible for teaching two programming courses offered by the Faculty of Sciences at the University of Porto: Python Programming and Introduction to Data Processing with Python and Spark. I have managed and taught multiple editions of these courses, ensuring both theoretical and practical classes and providing students with comprehensive knowledge in programming techniques and data processing.

Education

Master in Network Engineering and Computer Systems

Porto

Faculty of Sciences at the University of Porto   *2007 - 2013*

- Communication Networks & Software Engineering & Information Systems

Skills

DevOps	Docker, Kubernetes, Azure, Gitlab
Back-end	Django, Django Rest Framework, Flask, REST API
Front-end	HTML5, CSS, JavaScript, jQuery, Bootstrap
Programming	Python, JAVA, .Net, C++, LaTeX
Other	SQL, PostgreSQL, SQL Server, RabbitMQ, Blockchain, Smart Contracts
Languages	Portuguese, English