

Ivo Afonso Bispo

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SKILLS

- **Programming Languages:** Python, Go, Java, C#
- **Technologies:** Scikit-learn, Keras, TensorFlow, Spring Boot, .NET
- **Tools:** Linux, Git, Docker

WORK

Full Stack Engineer, Valtech Sep. 2024 – Present

- Backend & ML Engineer on the innovation team, delivering scalable microservices and AI solutions.
- Built an AI-powered recommendation engine for B2B e-commerce, providing personalized product suggestions.
- Integrated NLP-based Retrieval-Augmented Generation (RAG) to increase the accuracy and reliability of generative AI models.

Researcher, CIIC – Computer Science and Communication Research Centre Feb. 2023 – Jun. 2024

- Built a data collection pipeline from network traffic to generate high quality datasets.
- Performed data processing and cleaning for model training, testing, and validation.
- Developed DNN and ML models for intrusion detection in IoT environments.
- Implemented explainable AI methods to improve model transparency, accuracy, and reliability.
- Open-sourced all work and published two papers and two datasets.

Full Stack Developer, WayAcross Feb. 2020 – Jul. 2020

- Improved automated workflows for creating website templates, reducing wait times in production.
- Built an e-commerce application and product-focused CMS for online retail operations.

SELECTED PROJECT

Careline  careline

- Two technology stack: GoLang for secure health data storage and Spring Boot 3 (Java) for user management, statistical analysis, and drone delivery simulation.
- Automated Triage & Diagnostics: Algorithms to improve patient assessment and treatment decisions.
- Drone Delivery Simulation: Emulates drone-based medication delivery for improved patient care.
- Real-Time Communication: WebSockets enable interactive user experiences and efficient service coordination.

SCIENTIFIC PUBLICATIONS

Papers

- IoMT-TrafficData: Dataset and Tools for Benchmarking Intrusion Detection in Internet of Medical Things
- Farm-flow dataset: Intrusion detection in smart agriculture based on network flows

Datasets

- IoMT-TrafficData: A Dataset for Benchmarking Intrusion Detection in IoMT
- Farm-Flow - AG-IoT Security: Intrusion Detection in Smart Agriculture Dataset

EDUCATION

Masters in Computer Engineering - Mobile Computing – Polytechnic of Leiria Sep. 2023 – Jul. 2025

- Grade: 18/20 - Awarded Merit Student

Bachelors in Computer Engineering – Polytechnic of Leiria Sep. 2020 – Jul. 2023

- Grade: 16/20