Ivo Afonso **Bispo**

ivoafobispo@gmail.com github.com/ivoafonsobispo
(+351) 91 418 48 00 linkedin.com/in/ivoafonsobispo/

EDUCATION

Masters Computer Engineering - Mobile Computing at *Polytechnic of Leiria* Sep 2023 - Jul 2025

Bachelors Computer Engineering at *Polytechnic of Leiria* Sep 2020 - Jul 2023
· Relevant coursework: Enterprise Application Architecture, Artificial Intelligence, and Algorithms and Data Structures.

Short Cycle (TeSP), Web Development and Multimedia at *Polytechnic of Leiria* Sep 2018 - Jul 2020
· Relevant coursework: Web Server Programming, Web Programming, and Client-Server Web Programming.

EXPERIENCE

Researcher at *Polytechnic of Leiria - CIIC* Leiria, Portugal · Feb 2023 - Present
· Created and constructed a comprehensive Intrusion Detection Dataset.
· Conducted thorough data preprocessing to ensure dataset quality and reliability.
· Designed and executed a Deep Neural Network Model for detecting cyber attacks on IoT Devices.
· Employed a range of Traditional Machine Learning Models to compare and enhance detection accuracy.
· Produced in-depth scientific papers that documented research insights.
Skills: Python · TensorFlow | Github: Link

Junior Full Stack Developer at *WayAcross · Internship* Leiria, Portugal · Feb 2020 - Jul 2020
· Successfully executed a full-stack web development project for a sales and advertising firm.
· Contributed for the development of an intuitive tool aimed at simplifying the process of constructing polished business websites. This involved optimising form completion workflows and implementing automated template generation mechanisms.
Skills: PHP · JavaScript · SQL

Assistant Professor and Tutor at *University of Portsmouth* Portsmouth, United Kingdom · Jun 2017
· Invited to mentor students in developing an Android GPS tracking application.
· Assisted first-year university students in learning web development as a tutor.

SKILLS

Proficient with: Java, and C#.
Familiar with: Python, Rust, SQL, PHP, and JavaScript.
Tools/Frameworks known: Linux, Git, Java EE, Android Studio, Tensorflow, Laravel, and Unity.

SELECTED PROJECTS

Machine Learning-Based Intrusion Detection in Internet of Medical Things
· Designed and Implemented a simulated Healthcare Center using Raspberry Pi, Arduino ESP32, IoT and IoMT devices, establishing communication through MQTT and CoAP protocols.
· Collected and processed data packets, ensuring data cleanliness, and generating organized flows.
· Conducted pre-processing on datasets.
· Trained models using a combination of Traditional Machine Learning Algorithms and a custom-built Deep Neural Network.
· Published a comprehensive paper with over 200 pages, providing in-depth insights into the project.
Skills: Python · TensorFlow · Shell Scripting · Arduino | Github: Link | Zenodo: Link

Insured Asset Management System (IAMS)
· Developed the back-end and database of an enterprise application in Java EE to optimize the incident management process for insured goods.
· Integrated the application with insurers' APIs to fetch customer insurance contracts/policies.
· Streamlined the management of occurrences in insured assets, potentially saving time and resources for insurers, experts, repair services, and customers.
Skills: Software Architecture · Java · SQL · Jakarta EE · Docker | Github: Link

Fastuga Driver
· Developed an Android app for drivers similar to "Uber Eats".
· Created back-end system with Restful API using Laravel framework.
· Developed and implemented Restful API with Retrofit and Node.JS WebSocket server to communicate with Laravel database.
· Incorporated Google Maps API to display delivery paths, and calculate distance and time of delivery.
Skills: Java · SQL · Docker · Laravel · Android Studio · Node.js · JavaScript | Github: Link