

Personal

Full Name José António da Silva Pinto Garcia
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Marital Status Married

Education

October 2025 to present <i>Polytechnic Institute of Leiria</i> PHD Digitalization Engineering	<i>March 2025 - April 2025</i> <i>Flag -RUMOS</i> Frontend frameworks – Angular
October 2023 – June 2025 <i>Polytechnic Institute of Leiria</i> Master's Degree in Data Science	<i>April 2025 - June 2025</i> <i>Polytechnic Institute of Leiria</i> Offensive and Defensive Cybersecurity
October 2010 - October 2015 <i>Military Academy</i> Master's Degree in Military Sciences	<i>April 2025 - July 2025</i> <i>Polytechnic Institute of Leiria</i> Mobile Application Development using the FlutterFlow Platform
<i>April 2024 - June 2025</i> <i>Polytechnic Institute of Leiria, Portugal, Technological University of the Shannon: Midlands Midwest, Ireland, and the Polytechnic of Cávado and Ave, Portugal,</i> SAP - Numerical Methods with Python Programming	<i>May 2025 - July 2025</i> <i>National Defence Institute</i> Cybersecurity and Cyber Crisis Management Course
	<i>November 2025 - January 2026</i> <i>Polytechnic Institute of Leiria</i> Desenvolvimento de Jogos em Unity

Summary

I am a passionate and detail-oriented Data Scientist skilled in R, Python, with a strong analytical mindset and a results-driven approach. I specialize in applying machine learning and advanced analytics to extract actionable insights and support data-driven decision-making. Committed to continuous learning and innovation, I develop robust and high-quality AI solutions while following best practices in data science and software development. My goal is to bridge the gap between traditional processes and digital transformation, creating impactful, reliable, and strategic solutions that drive business value through collaboration and innovation.

Technical Skills

- **Programming & Data Analysis:** Python, R, VBA;
- **Data Science & Machine Learning Tools:** Python (scikit-learn, pandas, NumPy), R, Databricks;
- **Process Digitalization & Automation:** UiPath Studio, Microsoft Power Automate;
- **Web Development & Digital Solutions:** Angular, TypeScript, HTML5, CSS3;
- **Database Management:** MySQL Workbench, SQL Server Management Studio, MongoDB Compass
- **Business Intelligence & Visualization:** Power BI;

Employment History

October 2009 to Present – Military Officer (OF2 - Capitan)

Over sixteen years of service, I have held operational and instructional leadership roles in national and international military contexts, developing strong capabilities in leadership, decision-making under pressure, and teamwork in multidisciplinary environments.

In parallel, I actively contribute as an AI consultant to the Army's Application Development and Business Intelligence Center (CDABI), where I support the design and implementation of intelligent systems, including a private military chatbot and AI-based pre-screening solutions for candidate admission to military education programs.

I have also led and developed digital transformation initiatives focused on modernizing traditionally manual processes. These include the creation of a web-based training platform, inspired by Amazon Web Services learning environments, designed to support scalable and structured military training, as well as the development of automated report digitalization pipelines using Python (regex) and Large Language Models for content extraction and summarization.

In parallel, I have been involved in projects at the Army level, collaborating with both national and international organizations within this domain.

- Member of the Headquarters Management System (HMS) C2 team, contributing to the acquisition and implementation of an integrated command and control software system.
- Contributor to the Fires Module software project, focused on the integration of indirect fire systems with command and control (C2) platforms for artillery units.
- Subject Matter Expert (SME) in the digitalization of the M119 Light Gun howitzer, incorporating geo-referencing capabilities and automated targeting solutions.
- SME in the modernization and replacement of M119 towing vehicles, ensuring full integration with battlefield digitization and C2 systems.

September 2020 to Present– Freelancer

Freelance Programmer / Analyst / Project Manager

Key projects

- **Army Chatbot:** Designed and deployed a secure, GPU-based LLM system integrating vector databases and multimodal models, covering the full pipeline from data collection and OCR processing to document chunking and RAG-based semantic indexing, alongside the development of a custom Angular frontend tailored for institutional use to enable controlled access to sensitive military knowledge.
- **INTU-AI (Police Interrogation Digitalization):** Built a multimodal AI system combining speech, facial, and text analysis to digitalize and enhance interrogation workflows, fully developed in Python and packaged as a standalone executable (.exe) for secure and easy deployment across operational environments.
- **Tinturex – Customer & Order Management:** Automated customer and order workflows using VBA, improving operational efficiency and data accuracy.
- **Artillery Regiment No. 4 – Justice Process Automation:** Developed a VBA-based system to digitalize administrative processes, reducing workload and increasing traceability.
- **Moliporex – Continuous Improvement Automation:** Implemented process automation using VBA and UiPath, with Power BI integration for performance monitoring.
- **Campaign Artillery Group – Secure Reporting System:** Designed a secure data transmission and reporting system with API integration and encryption aligned with NIST standards.
- **Academic Evaluation Automation System:** Created a Python-based solution to automate student evaluations and generate analytical reports and presentations.
- **AppEA / App CM – Process Digitalization Platforms:** Developed FlutterFlow applications to digitalize institutional workflows, improving efficiency, transparency, and communication.
- **Vagatech Customer Interaction App:** Developed a client-facing application to streamline communication and enhance customer interaction, improving accessibility and engagement.
- **Vagatech Website Development:** Designed and deployed a corporate website using WordPress to support the company's digital presence.
- **Vagatech Automated Reporting System:** Developed a Python-based solution (regex) to automate report generation and content structuring from unstructured data.
- **PT Army Training Platform:** Built a web-based learning platform (AWS-style) using Angular to support structured and scalable military training programs.
- **MetaCase Learning Platform:** Developed a digital training platform for SIBS / MetaCase using Angular, enabling structured course delivery and knowledge dissemination.

Research, Mentoring & Publications

Doctoral Research: Deepfake Detection Forensics using Diffusion Models Current Ph.D. research focuses on developing an explainable AI framework for deepfakes detection, integrating interoperability methods to enhance transparency and trust in automated media verification systems.

Master's Research: Analysing Emotions During Interrogations: A Case Study, Led the development of INTU-AI, an intelligent assistant designed to support police interrogations through multimodal emotion recognition (facial, speech, and text) and deception detection. The system also automates reporting and transcription processes.

Technologies: Python (Scikit-learn, PyTorch, TensorFlow, NLTK, SpaCy, Tkinter, Optuna)

Mentoring & Academic Roles

- Co-supervised a Military Cadet research project on Command and Control Systems and Fire Direction.
- Supervised an IPEiria TeSP student developing secure military information management software.
- Member, Scientific-Pedagogical Committee (Data Science, IPEiria) - Contributed to curriculum development and quality assurance (Oct 2023–Jun 2025).
- Member, Student Council of RUN-EU (IPEiria) - Represented students in academic governance and international collaboration initiatives (Oct 2024–to present).

Publications

Author of a scientific article presenting INTU-AI, (INTU-AI: Digitalization of Police Interrogation Supported by Artificial Intelligence) a Windows-based application integrating multimodal AI-driven emotion recognition to enhance police interrogation analysis and reporting.

Language

Portuguese Mother tongue

English Upper Intermediate - Cambridge Certificate - D3408043

Interests

Technology / Math / Music / Learning / Traveling