

Roque Sobrino

AI Engineer · Vigo, Spain

roquesobrino.pages.dev · roquesobrino@gmail.com · github.com/roquesobrino · linkedin.com/in/roque-sobrino-lago

AI engineer building the AI department of FERRI, a marine machinery manufacturer, from scratch: RAG over the sales archive, BI on a legacy ERP and CAD→ERP automation — all of it in production, on-premise and verified. First Class graduate in Artificial Intelligence.

EXPERIENCE

AI Engineer (IT department)

Sep 2025 — present

FERRI (Industrias Ferri S.A.) · Vigo

- RAG assistant over decades of sales proposals (LangGraph + Neo4j, on-premise), in pilot production with a deterministic evaluation of 53/53.
- BI dashboard on a legacy ERP of ~1,460 tables: full reverse engineering, delivered 4 days ahead of the deadline.
- Trilingual corporate website (ferri-sa.es) rebuilt in-house with Astro, launched without a second of downtime.
- Bills of materials from CAD to the ERP: 95.7% of lines exact across 210 machines validated against the real ERP.
- Parametric generation of DIN fasteners in SolidWorks: 7 families and ~44 parts verified.

Warehouse and hospitality jobs

Oct 2021 — Nov 2023

Leicester (UK) · Vigo

- I paid for my university years by working while studying the degree full time.

EDUCATION

BSc (Hons) Artificial Intelligence — First Class

Sep 2022 — Jul 2025

De Montfort University · Leicester (UK)

- Overall average of 74; final project (Development Project) with 86 — 100/100 in the project component.
- Dissertation: fish freshness from images with transfer learning (98.19% test accuracy, EfficientNetB0).
- Modules: Big Data & Machine Learning, Agent-Based Modelling & Parallel Computing, Applied AI, Intelligent Robotics, Fuzzy Logic.

International Year 0 — English and Computer Science

Sep 2020 — Jun 2021

De Montfort University · Leicester (UK)

Spanish Bachillerato, science and technology track

Sep 2017 — Jun 2020

Compañía de María · Vigo

Certifications: Generative AI (MIT Professional Education), Santander Open Academy (2024) · Crash Course on Python (Google), Coursera (2025).

ACADEMIC AI PROJECTS

- **Fish freshness classification with CNNs (dissertation)** — transfer learning and a custom hybrid model; 98.19% test accuracy
- **Classification of 5 rice varieties with CNNs** — 98% with ResNet50, comparing four pretrained networks with transfer learning
- **Robot localisation with an Extended Kalman Filter** — real-time sensor fusion
- **Horseshoe wear prediction with deep learning** — proactive maintenance from usage data

STACK

AI and data	PyTorch / TensorFlow · LangGraph · Vertex AI (Gemini) · RAG · Vision (CNN, OpenCV) · Neo4j · SQL Server / PostgreSQL
Backend	Python · FastAPI · TypeScript · REST · Zod
Web	Astro · React · Tailwind CSS · Three.js · GSAP
Operations	Docker · nginx / Traefik · Coolify · Git/GitHub · n8n

Languages: Spanish (native) · English (fluent — 4 years living and studying in the UK).

