

Sérgio Rodrigues

Candidate — **AI Lead, FANUC Europe**

Currently FANUC Iberia, After Sales

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ABOUT

I bridge industrial automation and applied AI. I have spent 8+ years at FANUC Iberia as a CNC Field Service Engineer and After Sales Representative — I know how the Service Department works from A to X. On my own initiative, I designed and built real AI systems end-to-end: an autonomous LLM event agent with human-in-the-loop approval, an on-device computer-vision unit (YOLOv8 on edge NPU hardware) for mountain-road safety, and an internal quoting tool at FANUC built hands-on with AI programming tools. Nobody assigned me any of it. My MSc in Automation & Systems (2020) and hands-on CNC diagnostics background shape how I approach AI: grounded in real operational constraints, a bias toward measurable outcomes, and deep respect for human oversight, safety and cost.

PROFESSIONAL EXPERIENCE

Sales Representative (After Sales) — FANUC Iberia

Portugal · Apr 2021 – Present

- Develop business strategy for after-sales service and spares; own customer relationships, service contract negotiation and parts sales — blending technical depth with commercial acumen.
- Bridge customers with FANUC technical, engineering and service teams; drive service quality, training delivery and contract optimisation to maximise customer lifetime value.
- Built a service-plan quoting tool for the team using AI programming tools — standardising pricing and cutting manual effort; positioned to lead broader AI initiatives within FANUC Iberia's operations.

Field Service Engineer (CNC Systems) — FANUC Iberia

Portugal & Spain · Feb 2017 – Mar 2021

- Diagnosed and resolved CNC machine issues across Portugal and Spain via phone, email and on-site visits; developed expertise in FANUC robot systems, servo drives and control architecture.
- Managed quotations for repairs, spare parts and service contracts; served as technical bridge between customers and FANUC engineering/service departments.
- Deep familiarity with customer pain points in manufacturing, maintenance workflows and the data flow of industrial CNC operations — direct input to later AI projects.

Automation Engineer — Neosepec Lda

Portugal · Oct 2015 – Jan 2017

- Designed and programmed PLC-based automation for assembly lines (Proface, Omron, Siemens) and created HMI interfaces for production-floor operators.
- Managed equipment installation, commissioning and training; built internal tooling to reduce manual assembly setup time.

Medical Equipment Field Service Engineer — Acail Angola

Luanda, Angola · May 2014 – May 2015

- Installed, trained on and maintained critical hospital equipment: hematology analyzers, biochemistry systems, ultrasound, patient monitors and anesthesia ventilators.
- Delivered preventive maintenance and rapid failure response in a low-infrastructure setting — troubleshooting under real constraints.

Maintenance Technician — Bosch Security Systems

Ovar, Portugal · Nov 2011 – Mar 2014

- Preventive and corrective maintenance of production equipment; CMMS (ManWinWin) management and maintenance documentation.
- ESD coordinator and data security partner; TPM audits across maintenance, engineering and facilities.

EDUCATION

MSc Electrical & Computer Engineering — Automation & Systems Relevant to AI leadership

Instituto Superior de Engenharia do Porto (ISEP) · 2020 · completed while working full-time at FANUC

BSc Electrical Engineering — Telecommunications

Instituto Superior de Engenharia de Coimbra (ISEC) · 2007 – 2011

LANGUAGES

Portuguese — Native

English — B2, independent user

Spanish — B2, independent user

BEYOND WORK

Muay Thai — practises and coaches youth: respect, focus, responsibility

Sailing — Local Patron licence holder, sailing now

History — regular reader · **Nutrition** — disciplined health

CORE SKILLS

FANUC CNC & robotics · PLC programming (Siemens, Omron, Proface) · servo drives & motion control · HMI design · commissioning · field diagnostics · LLM agents (Anthropic Claude, tool-use) · computer vision & object detection (YOLOv8) · edge / on-device inference (Hailo NPU, Raspberry Pi) · human-in-the-loop systems · AI-assisted development · service contracts & technical sales · customer training · quotation & pricing · systems integration · TPM / preventive maintenance

Since you kept reading — here is the part that isn't boring, on paper:

Selected AI Work

Three real systems, designed and built end-to-end by me. None of them was assigned to me.

Gildelnn Autonomous Event Agent

SIDE PROJECT · FUNCTIONAL & DEPLOYED

An LLM-powered agent that organises community events end-to-end: it reads an event and its dependencies, contacts suppliers, gathers and compares quotations, and proposes which to accept — turning hours of manual supplier-chasing into a review-and-approve flow. I built the full agent loop: the tool set, human-in-the-loop approval gating, safety caps (tool-call / idle / token limits), action logging, and per-session cost tracking. Production AI engineering: reliability, auditability and cost-awareness — not research.

Anthropic Claude API · tool-use loop · Node.js 20 · Fastify · Prisma · PostgreSQL · human-in-the-loop

MountainAlert — Edge-AI Road Safety

SIDE PROJECT · WORKING PROOF OF CONCEPT, FIELD DEPLOYMENT NEXT

Narrow mountain roads have blind corners where riders can't see oncoming traffic. MountainAlert places a self-powered smart sensor at each road entrance that detects and classifies passing vehicles on-device and signals live road status to approaching riders — no smartphone required. I built the roadside edge unit end-to-end: the detection pipeline (camera → on-device inference → multi-object tracking → direction classification), the backend integration, the LED status state machine, and the off-grid hardware/power/connectivity spec.

YOLOv8 · computer vision · Raspberry Pi 5 + Hailo-8L NPU (13 TOPS) · Python · WebSocket · solar + LiFePO4 · 4G/Lora

Service Quoting Tool — FANUC Iberia

INTERNAL TOOL · BUILT WITH AI

A quoting tool for FANUC Iberia's service and maintenance plans that I designed and built myself using AI programming tools — easy plan selection, less repetitive manual work for the after-sales team, shipped without a development budget. The point is the method: domain experts who master AI-assisted development can ship the internal tools their teams need.

AI-assisted development · AI coding assistants · quotation tooling · after-sales domain

The interactive version — built the same way I would do the job: sergio.gildesys.com