Fernando **Román Hidalgo**

ROBOTICS AND AUTOMATION ENGINEER

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Summary

Engineer with a **multidisciplinary profile and systemic vision**, featuring professional experience in developing technological solutions and currently completing postgraduate studies. I possess a **high capacity for abstraction in solving complex problems** and **accelerated self-taught learning**, enabling me to provide significant value in technically demanding projects. My objective is to consolidate an ambitious career plan, with a focus on automation and embedded software, within dynamic and innovative environments where continuous improvement is the standard.

Experience

Airtificial Aerospace & Defense

Seville, Spain

SOFTWARE ENGINEER

April 2025 – Present

- **Management and Client Relations:**
  - Project management for the development of a process automation application for a major aerospace company.
  - Direct customer interaction for requirements definition and specification.
  - Technical leadership and coordination in the development of custom solutions.
- **Technical Development and Automation:**
  - Fullstack development, applying coding best practices, efficiency, and organization.
  - Design and implementation of a digital twin for a composite material production plant, oriented towards simulation and optimization of industrial processes.
  - Software integration and deployment using Docker containers.
  - Automation and orchestration of workflows with Apache Airflow.
  - Development of AI models for early failure detection and scheduling algorithms based on CP-SAT.
  - Acquisition and interpretation of data from industrial sensors.

Projects

To see all my projects in detail, check out my **Interactive Portfolio**.

Achievements

2024　　**Winner,** National Competitive Robotics League (LNRC) - Minisumo Category　　*Spain*

Education

University of Seville

Seville, Spain

MASTER'S DEGREE IN ELECTRONIC ENGINEERING, ROBOTICS AND AUTOMATION

2025 – 2026

University of Seville

Seville, Spain

BACHELOR'S DEGREE IN ELECTRONIC ENGINEERING, ROBOTICS AND MECHATRONICS (GPA: 7.5/10)

2021 – 2025

IES Heliche

Seville, Spain

TECHNOLOGICAL BACCALAUREATE (GRADUATED WITH HONORS DISTINCTION)

2019 – 2021

Certifications

Idexa
ADVANCED PYTHON COURSE

Cambridge Assessment English
CERTIFICATE IN ADVANCED ENGLISH (C1 ADVANCED)
September 2024

Skills

Programming	C, C++, Python (OpenCV), MATLAB, Simulink, ROS/ROS2, JavaScript, React, VBA, HTML, CSS, SQL
Electronics	Digital/Analog electronics, microcontrollers (MSP430, ESP32, Arduino...), RTOS, FPGA, automation and control
Simulation	System modeling and simulation (Gazebo, Webots), PID control design, embedded systems integration
DevOps	Docker, Linux, Git, CI/CD, Apache Airflow
Protocols	TCP/IP, MQTT, Zigbee, CAN bus, UART, I2C, SPI
3D Design	Fusion 360, FreeCAD

Soft Skills

Technical leadership, multidisciplinary teamwork, effective communication, problem solving, adaptability, and a **high learning curve**.

Languages

Spanish	Native
English	Professional competence
French	Basic competence