

# ADRIÁN SILVA PALAFOX

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## WEBSITES, PORTFOLIOS, PROFILES

<https://github.com/La-guajolota> | <https://www.linkedin.com/in/adrian-silva-palafox/>

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## RESUME

Electronics and Telecommunications Engineer specializing in embedded software development for 8-bit and 32-bit microcontrollers, FPGAs, and embedded Linux systems. Extensive experience in firmware architecture, programming on RTOS, and resource optimization in memory- and processing-constrained environments. Proficient in embedded machine learning and computer vision, with strong expertise in industrial communication protocols and IoT technologies such as Modbus, CAN, MQTT, and LoRa. Committed to delivering robust solutions for real-time applications while fostering team success through effective coaching, strategic planning, and motivational techniques that drive performance improvements.

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## SKILLS

- Embedded systems (Firmware and hardware)
  - Intermediate VHDL and Verilog skills
  - Node-RED and LabVIEW application skills
  - Intermediate FreeRTOS experience
  - LoRa, MQTT and Modbus technologies experience
  - Basic Yocto and Buildroot knowledge
  - Practical electromechanical skills
  - Friendly, positive attitude
  - Advanced C/C++ and Python development
  - MATLAB and Octave experience
  - Skilled in implementing advanced UART, SPI, I2C, and CAN systems
  - Familiarity with ROS-microROS applications
  - Experience with GNU/Linux system/server management
  - PLC programming
  - Problem-solving
  - Teamwork and collaboration
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## EXPERIENCE

**ULSB Technical Coach** | 01/2024 – 09/2026 **Universidad De La Salle Bajío** – León, Guanajuato, Mexico

- Spearheaded comprehensive development of line-following and sumo robots utilizing RF technology, implementing PID control algorithms with fuzzy logic.
- Supported development of ROS/Micro-ROS ecosystem and RF communications using GNU Radio to enhance project functionality.
- Self-motivated, with a strong sense of personal responsibility.

**Embedded Systems Intern** | 01/2025 – 09/2025 **INIBODROID** – León, Guanajuato, Mexico

- Achieved enhanced reflow profiles through the design of robust firmware for reflow oven control, incorporating a PID controller with Kalman filter to compensate for thermocouple thermal inertia.
- Delivered a state machine and embedded web interface for effective monitoring and control.
- Played a key role in the PCB design for the entire system.

**Research Intern** | 08/2023 – 12/2023 **CIO** – León, Guanajuato, Mexico

- Assisted in research project on design and fabrication of microbubbles under guidance of Dr. Natiely Hernández Sebastián.
- Gained experience in microfabrication processes within cleanroom environments.
- Supported electromagnetic simulation using COMSOL Multiphysics and contributed to technical documentation for applied research.

**Automation Intern** | 09/2023 – 09/2023 **SMC** – León, Guanajuato, Mexico

- Engaged in Bushido challenge to advance expertise in PLC programming and design of electromechanical systems.

**English Tutor** | **Math Tutor** | 03/2020 – 09/2022 **Kumon** – León, Guanajuato, Mexico

- Provided targeted tutoring in English and Mathematics to support academic development across elementary, junior high, and high school levels.
- Collaborated with parents to address student needs and establish educational goals.

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**EDUCATION**

**Electronics And Telecoms Engineering: Electrical Engineering**, 01/2026 **UNIVERSIDAD LA SALLE BAJÍO** – León, Guanajuato, Mexico

**CERTIFICATIONS, TRAINING, HONORS & AWARDS**

- **Member of Robotics Club** | 2024 – 2026
- **Precision Agriculture: Instrumentation Hardware Design for Water Quality** | Research Project
- **Machine Shop Tools & Operations Workshop** | IECA León, GTO | Feb 2022 – Mar 2022
- **Neural Networks Training** | IECA Online | Sep 2021 – Dec 2021
- **Academic Excellence Scholarship** | 2021 – 2026

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**LANGUAGES**

- **Spanish:** Native
- **English:** Upper intermediate (B2+)

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**HOBBIES**

- Reading (fiction and technical blogs)
- Daily walking
- Horticulture and hydroponics
- Personal projects in embedded systems, electronics, and applied mathematics