Diego Gerardo Sánchez Moreno

Robotics & Embedded Systems

Contact
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Languages
Spanish: Native
English: B2

Core Skills
ROS 2, micro-ROS, PID/PI
OpenCV, YOLOv8
ESP32, Jetson Nano
MATLAB, VHDL, C++
Supabase, PostgreSQL
Astro, Tailwind, Wix+Velo

Diego Gerardo Sánchez Moreno

Robotics & Embedded Systems Engineer (in training)

Focus on soft robotics control, embedded systems, and perception for mobile robots. Seeking graduate studies in Autonomous Systems.

Education

B.S. in Robotics and Digital Systems Engineering
Tecnológico de Monterrey, Campus Querétaro
2022 – Jun 2026 (expected)

Research & Engineering Experience

Hybrid Soft Robotics Lab (Tec de Monterrey, Qro.)
Soft Robotics Control Platform — 2024 – Present

- Built a bi-stable pneumatic driver with closed-loop pressure/vacuum control, safety interlocks, and real-time telemetry.
- Implemented micro-ROS on ESP32 (UART) with pressure sensing over I2C (ADS1115).
- Delivered a Python SDK + GUI and MATLAB-based analysis for reproducible experiments.

Patio Cinco (Querétaro) — Production Platform
Product/Systems Engineer — 2025 – 2026

- Delivered a production system for memberships, billing, and customer operations with persistent fiscal data.
- Built modular flows on Wix + Velo backed by relational data and operational logging.

Barbacoa de Miranda (Querétaro) — POS System
Product/Systems Engineer — 2025 – 2026

- Built an offline-first POS for Raspberry Pi with local queueing (SQLite) and auto-sync to backend.
- Implemented full-screen UI for fast cashier workflows and daily reporting.

Selected Projects

PuzzleBot Autonomous Mobile Robot (ROS 2)

- Integrated micro-ROS, encoder-based odometry, and YOLOv8 perception on Jetson Nano for autonomous driving.

Line-Maze Solver (Pololu 3pi+)

- Implemented PID line following with route recording and simplification to optimize traversal.

Awards & Certifications

- Best Poster Award — Exploring Soft Robotics (Dec 2025)
- NVIDIA DLI: Fundamentals of Deep Learning (Jun 2025)