

Rodrigo Gutiérrez Peña

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SUMMARY

Mechatronics engineer focused on robotics integration, industrial automation, and rapid prototyping, with hands-on experience at automotive suppliers (Magna, GecVac, Polsa) and training in Germany. Led hardware prototyping for an XPRIZE Wildfire entry, delivering four flying proof-of-concept drones under competition deadlines. MSc in Logistics and Supply Chain Management in progress; available from January 2027.

EDUCATION

B.Sc. Mechatronics Engineering — Tecnológico de Monterrey	Monterrey, MX Expected Dec 2026
M.Sc. Logistics and Supply Chain Management — University of Hull	Hull, UK Expected Dec 2026
Automotive Engineering Program — Steinbeis Transfer Center, Hochschule Esslingen	Esslingen, DE Feb 2025

EXPERIENCE

Green Tech Innovation (GTI) — Design Lead, Speed Prototyping

Saltillo, MX | Jun 2024 – Aug 2025

- Founded and led the Speed Prototyping team for GTI's XPRIZE Wildfire entry, owning mechanical CAD, workflows, and build strategy from the ground up.
- Delivered four flying proof-of-concept prototypes under tight competition deadlines, using an iterative design-build-test cycle that cut development time and improved reliability.
- Coordinated with design, process engineering, and supply chain teams to align hardware development with business goals; mentored junior engineers and interns.
- Progressed from summer intern to full-time Design Lead; awarded for technical excellence at ExpoIngenierías Tec de Monterrey.

Magna CIMS — Engineering Intern, Quality & Process Improvement

Ramos Arizpe, MX | Apr – Jun 2025

- Developed and validated a proof-of-concept solution to improve an in-plant quality process during a 10-week collaboration with a Tier 1 automotive supplier.
- Applied photogrammetry / 3D scanning to assess spatial constraints and optimize component integration; iterated prototypes via additive manufacturing with feedback from Magna engineers.

CINVESTAV — Research Assistant, Robotic Perception

Ramos Arizpe, MX | Feb – Mar 2025

- Preprocessed RGB-D datasets and contributed point-cloud mapping, segmentation, and feature-extraction algorithms for 3D scene reconstruction and robotic navigation.

GecVac — Engineering Intern, Industrial Robotics

Saltillo, MX | Sep – Dec 2024

- Designed and prototyped an automated gripper for a KUKA industrial arm: CAD design, KUKA.Sim motion and collision simulation, and early actuation integration with the KRC5 controller.
- Supported robot calibration to align digital and physical models, validating precision and repeatability.

Polisa — Engineering Intern, Automation

Saltillo, MX | Aug 2024

- Designed and built an automated material-handling cart (SolidWorks structural design, PTR steel fabrication, Raspberry Pi Pico motion control), reducing manual handling in the facility.

ROBOTICS & COMPETITION

- VEX U Robotics — Programmer & Electrician, Tec de Monterrey team (World Championship).
- FIRST Robotics Competition (FRC) — Programming & Electrical Mentor, Team Blue Ignition (World Championship).
- Borregos Racing — Gravity race car pilot and mechanic.

SKILLS & LANGUAGES

CAD & Simulation: SolidWorks, Autodesk Fusion 360, Ansys, KUKA.Sim

Automation & Controls: KUKA KRC5, Siemens TIA Portal (Step 7), embedded control (Raspberry Pi), control systems integration

Manufacturing: Additive manufacturing, rapid prototyping, iterative design, photogrammetry / 3D scanning

Programming & Vision: Python, C++, MATLAB, Java; RGB-D vision, point-cloud processing

Languages: Spanish (native), English (fluent), German (B2), French (B1, certified)