Daniel Franco Fajardo

Principal Systems Architect — Technical Authority for Critical & Intelligent Infrastructure

Mexico — Open to national and international opportunities
Remote / Hybrid / Selected On-site Collaboration

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Professional Summary

Principal-level Systems Architect and Product Design Authority-linked professional with 9+ years of experience across transportation, tolling, automation, and critical operational environments. Proven progression into architecture-led responsibilities spanning requirements and gap analysis, technical governance, trade-off framing, PLC/edge/backend integration, validation, bid support, and operational reliability across long-lived systems. Strong background in FAT, SAT, IVVQ, technical documentation, supplier coordination, and implementation under real-world constraints. Also develops public proof-of-work that translates critical-systems experience into defensible architecture, local-first analytics, and applied AI as a governed enabling capability.

Core Strengths

- **Systems Architecture & Technical Governance:** architecture definition, requirements interpretation, trade-off framing, bounded technical decision-making, and operationally defensible direction.
- **Critical Infrastructure & Safety-Critical Contexts:** transportation, tolling, industrial automation, continuity-aware engineering, and long-lived operational maintainability.
- **Integration, Validation & Operational Reliability:** PLC/edge/backend integration, FAT, SAT, IVVQ, validation labs, recoverability, and supplier-aligned implementation support.
- **Applied AI / Data / Automation as Enabling Capability:** bounded analytical workflows, local-first prototyping, and AI used as a governed subsystem.

Professional Experience

Independent Systems Architect / Applied AI / R&D *2025–Present — Mexico*

- Build bounded architecture and AI references that translate industrial systems experience into public, defensible portfolio artifacts.
- Design local-first and resilient prototype surfaces that emphasize traceability, interpretation boundaries, and operational realism.
- Use selected public repositories and controlled demonstrations to show architectural thinking, evidence discipline, and governed use of AI in operational contexts.

Hitachi Rail GTS México / RCS México *historical continuity — Mexico*

- Served in Product Design Authority-linked responsibilities for transportation and tolling systems, validating architectural decisions, technical solutions, and supplier alignment across international teams.
- Defined and reviewed software and hardware architecture directions for the integration of new technologies into operational products.
- Supported requirements analysis, fit-gap assessment, technical documentation, annex interpretation, compliance matrices, and bid-aligned solution framing.
- Researched technologies and suppliers to improve product maturity, cost, and competitiveness in transportation and tolling contexts.

Thales / RCS engineering continuity *historical continuity — Mexico*

- Developed and improved software and control logic for critical subsystems where timing, validation, and fault behavior directly affected operations.

- Worked across C++/Python-enabled platforms, PLCs, field devices, interfaces, and validation-oriented tolling / transportation environments.
- Improved operational outcomes through signal-handling redesign, logic refinement, and more disciplined confirmation and recovery flows.

Selected Achievements

- Product Design Authority-linked scope in mission-critical transportation and tolling systems
- International technical coordination across France, Italy, and Mexico
- Approx. 25% vehicle-classification effectiveness improvement through logic, process, and signal refinement
- Standardization of validation environments and improved engineering/test readiness
- FAT, SAT, IVVQ, and field validation support in operationally constrained systems
- Bid support through technical documentation, compliance matrices, annex interpretation, and structured risk framing

Education

M.Sc. in Artificial Intelligence — officially graduated; final administrative degree process in progress
Mechatronics Engineering