

Daniel Franco Fajardo

Principal Systems Architect — Governed Architecture & Resilient Operations

Mexico — Open to 100% Remote (Hybrid by arrangement)

LinkedIn: [linkedin.com/in/daniel-franco-b27572a8](https://www.linkedin.com/in/daniel-franco-b27572a8)

Portfolio: github.com/RelativoDrako/governed-ai-architecture

Executive Summary

Principal Systems Architect with 9+ years of experience designing and governing safety-critical transportation and industrial systems. Former Product Design Authority (PDA) responsible for architectural decisions, technical governance, and risk mitigation across large-scale international deployments.

Specialized in architectures that remain operational under degradation, uncertainty, and failure through explicit governance of authority, confidence evaluation mechanisms, and human override paths. Current focus includes governed AI, risk engineering, and resilient operational systems.

Core Expertise

Systems Architecture • Technical Governance • Safety-Critical Systems • Risk Engineering • Governed AI • Edge Intelligence • Architectural Leadership

Professional Experience

Product Design Authority / Systems Architect — Hitachi Rail

Sep 2022 – Jul 2025

- Served as Product Design Authority, owning system-level architecture decisions and validating technical solutions with international teams and suppliers.
- Led architectural governance for mission-critical transportation systems ensuring safety, performance, and long-term maintainability.
- Improved non-intrusive vehicle classification effectiveness by ~25% through PLC logic optimization and process standardization.
- Designed and deployed subsystems integrating PLCs, Modbus, edge devices, sensors, and back-end software platforms.
- Standardized physical and virtual validation laboratories, reducing validation cycles and operational risk.

C++ Software Engineer — Critical Systems & Integration — Thales RCS

Sep 2019 – Sep 2022

- Delivered full-lifecycle engineering for mission-critical systems combining software, hardware, and operations.
- Executed IVVQ, FAT, and SAT under industrial quality standards.
- Provided operational incident recovery and technical support in live environments.
- Implemented solutions in C++, Python, and PLC (Ladder).

Independent Systems Architecture & Governed AI (Principal-track)

Aug 2025 – Present

- Advanced specialization in governed AI, technical governance, and risk-driven architecture for safety-critical and industrial environments.
- Ongoing research in resilient AI, trust engineering, and degradation-aware architectures.

Education

Master's Degree in Artificial Intelligence — UNIR México

Dec 2024 – Feb 2027 (in progress)

Focus: Machine Learning, Automated Reasoning, Intelligent Systems Modeling, Data Analysis with Python-based AI toolchains.

Expected academic completion: April 2026.

Bachelor's Degree in Mechatronics Engineering — Automation & Control

Instituto Tecnológico de Tláhuac

2010 – 2015

Architecture Portfolio

Governed AI & Risk Engineering reference case:

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