raulgarlem@gmail.com | : +52 55 5154 0916 | : www.linkedin.com/in/raulg-lemus | CDMX

RAÚL GARCÍA LEMUS

Systems Engineer

Requirements Engineering | Java | SQL | MBSE | Linux | Embedded & Automotive Systems | Systems Integration | Software FMEA | Software Architecture | Software Testing | Requirements Management Tools

Systems Engineer with 8 years of experience supporting and optimizing enterprise-grade applications in production environments. Strong hands-on expertise in Core Java, multithreading, exception handling, and performance tuning. L3 Production Support experience performing deep root-cause analysis, log tracing, thread/heap analysis, and advanced SQL queries (joins, indexing, execution plans). Skilled in implementing code fixes, optimizing database performance, and reducing recurring incidents through automation and proactive monitoring. Strong collaborator within Agile teams, capable of handling high-severity production incidents and delivering sustainable technical solutions.

Skills

Programming Languages:

Java (Eclipse/Android), C#, Python, .NET, C, LabView, Visual Basic, VHDL.

Systems:

Linux Environment, MySQL, SQL Server, MongoDB and DynamoDB Databases, GIT, SysML MagicDraw Modeling, UML Modeling, Enterprise Architect.

Automation & Scripting:

V&V (System and software level), Requirement-based testing & Traceability, Test Strategy Definition & Execution.

AI & Advanced Techniques:

Generative AI / LLM- assisted testing (test case generation, coverage improvement), Data-Driven diagnostics & failure Analysis, RAG, LangChain, HuggingFace, n8n, LoRA/QLoRA, Cursor, AutoGen, MCP.

Tools & Platforms:

Polarion, Jama, Jira, YAML, MATLAB + Simulink, MIRO.

Electronics:

TI Embedded Systems, Raspberri Pi, Altera FPGAs, RTOS; AVR, TI and PIC Microcontrollers.

Professional Experience

Ford Motor Company | 2021 – 2025

Platform System Engineer – Enclosures

Responsible for leading the system definition, integration, verification, and validation activities across multiple automotive platforms, ensuring compliance with functional, safety, and performance requirements for Enclosures Platform System.

- Spearheaded the interface management strategy across all vehicle platforms, improving systems interoperability and design alignment.
- Defined and validated system and software requirements (>90%) for Enclosures systems ECUs, aligned with ASIL and automotive standards.
- Performed early-stage verification through simulation, validating over 50% of embedded software functionality prior to hardware availability.

• Analyzed remote vehicle data to identify critical battery failures, enhancing predictive diagnostics and maintenance.
• Led Software FMEA activities to proactively identify risks and improve test coverage.
• Led requirement cascade from vehicle-level specifications to ECU, hardware and component-level requirements, ensuring traceability and technical alignment across Tier 1 and downstream suppliers
• Collaborated with global cross-functional teams (software, hardware, testing, program management) to align test activities with project timelines.

TASIC S.A. de C.V. | 2018 – 2021

Service and Development Engineer

Full-cycle development and integration of a Digital UV coating machine for industrial applications.

• Designed software using UML modeling and implemented control logic in C#, significantly reducing system faults, WPF and Windows Forms Frontend development
• Designed and developed Android applications (Java/Kotlin) to digitize field service reports, replacing manual documentation processes and enabling real-time data submission to the company's central database for machine placed in Colombia.
• Optimized SQL queries and backend data interactions to improve report retrieval time and dashboard visibility for management.
• Designed and deployed a Linux-based remote monitoring server to track machine temperature and operational usage in real time, enabling visibility of operator shifts and equipment utilization.
• Integrated MongoDB for file handling, achieving 100% compatibility and boosting overall performance.
• Collaborated directly with operations and business stakeholders to analyze incident impact, define corrective actions, and implement sustainable long-term solutions.

Education and Courses

Master Electrics Engineering – Digital Signal Processing | UNAM – Posgrado de Ingeniería | 2025 - 2027

B.S. Mechatronics Engineering | UNAM – Facultad de Ingeniería | 2014 – 2019

LLM Engineering: Master AI, Large Language Models & Agents | UDEMY | 2025

Clean Code | Clean Coders | 2025

Software FMEA | Mission Ready Software | 2023

PD and Systems Engineering | UDEMY | 2022

SW Architecture and Design of Modern Largescale Systems | UDEMY | 2022

Certified SAFe 5 PO/PM | Scaled Agile Inc. | 2022

Object Oriented Design | Coursera – University of Alberta | 2022

Design Patterns | Coursera – University of Alberta | 2023

Lean Six Sigma (Yellow Belt) | UNAM | 2017

"Técnico en Sistemas y Web Master" | CETEC Morelos | 2013

Languages | Spanish Native | English Advanced | French Intermediate