

Luis Ulloa Zambrana

Software Engineer | Validation & Manufacturing Software

Phone: +506 8759 6694 | +506 8808 3317 | Email: zambranaulloa@gmail.com

Professional Summary

Software Engineer with hands-on experience in validation and manufacturing environments, specializing in the development of software tools for embedded systems and high-volume production. Proven background at Intel working on GNR (Granite Rapids) CPU validation, firmware verification on physical hardware, and automation solutions supporting manufacturing quality and reliability. Strong expertise in C#, .NET, and Python, with experience integrating CI/CD pipelines, performing advanced log analysis, and debugging complex hardware–firmware–software interactions. Collaborative engineer accustomed to SCRUM-based workflows, cross-functional laboratory work, and delivering reliable, production-ready solutions in fast-paced engineering environments.

Professional Experience

Product Development Engineer – Intel Corporation (San José, Costa Rica)

Sep 2023 – Nov 2024

- Developed and enhanced validation and automation tools using C#, .NET Framework, and Python to support GNR CPU quality and reliability across manufacturing lines.
- Designed, released, and continuously improved test programs for embedded systems used during GNR manufacturing validation.
- Executed firmware validation on physical GNR hardware, coordinating controlled rollout and conversion of new firmware versions across the engineering fleet.
- Expanded automated test coverage by maintaining and modifying test scripts supporting unit testing, integration testing, and CI/CD quality gates.
- Performed in-depth log analysis and advanced debugging to identify root causes of complex hardware–firmware–software interaction issues.
- Conducted integration testing of validation content to ensure reliability, correctness, and compliance with internal quality standards.
- Collaborated closely with hardware, firmware, and validation engineers in laboratory environments to diagnose high-impact issues and improve system stability.
- Actively participated in SCRUM-based development, managing source code with GitHub and tracking work items in Jira.
- Collaborated closely with key stakeholders within the GNR project to identify needs, assess risks, and define effective solutions, applying structured communication strategies to align technical and business requirements throughout the product release process.
- Served as Validation Owner for PRQ Test Program, leading and coordinating validation activities required to authorize the release of the product to customers, ensuring compliance with acceptance criteria, quality standards, and proper documentation.

.NET & Blazor Developer – ICE Projects

Costa Rican Electricity Institute (ICE) – San José, Costa Rica | Jul 2025 – Nov 2025

- Developed web modules using ASP.NET Core and Blazor for internal monitoring and information query systems.
- Implemented interactive user interfaces with forms, filters, and reusable components focused on usability.
- Consumed REST APIs and integrated relational databases to display real-time indicators and reports.
- Collaborated with analysts and end users to refine navigation structure and improve usability.
- Supported functional testing, issue resolution, and release preparation.

Junior Software Developer – GBSYS S.A.

San José, Costa Rica | Jan 2023 – Sep 2023

- Developed and integrated enterprise modules using PL/SQL (Oracle) for financial sector clients.
- Maintained and optimized Java applications using Maven, deployed on Payara Server.
- Implemented full-stack functionalities using C#, .NET Framework, Python, and SQL Server.
- Provided technical support in production and UAT environments, ensuring system stability and SLA compliance.

Education

National University of Costa Rica (UNA)

Bachelor's Degree in Software Engineering (2017 – 2022)

Diploma in Computer Application Programming (2017 – 2021)

Technical Skills

Programming Languages: C#, Python, Java, JavaScript, PL/SQL, TypeScript, C++

Web Development & Frameworks: ASP.NET / .NET, Blazor, Entity Framework, ReactJS, HTML, CSS, JavaScript

Databases: SQL Server, Oracle, MySQL, MongoDB

Tools & Platforms: Visual Studio, SSMS, SQL Developer, Git, GitHub, Jira

Additional Information

Languages: Spanish (Native), English (Professional).

Additional: Valid passport. Driver's licenses A2 and B1.