

RICARDO GARCIA RAMIREZ

Senior Software Engineer | Full-Stack Engineering, Data Science & GenAI-Assisted Delivery

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PROFESSIONAL SUMMARY

Senior Software Engineer with 7+ years of experience building enterprise backend, full-stack, and cloud-based systems across financial data platforms, Azure/serverless applications, telemetry, automated validation, dashboards, and production support. Completed M.Sc. in Data Science with applied work in machine learning, Bayesian inference, scientific computing, and data pipelines. Strong at translating stakeholder needs into maintainable APIs, automation, dashboards, and validation workflows.

CORE SKILLS

Languages	C#, Java, Python, TypeScript, SQL, Bash, PowerShell
Backend / Cloud	APIs, serverless applications, Azure Functions, Azure DevOps, application monitoring, telemetry tooling
Full-Stack / UI	React/TypeScript (1 year), HTML, WPF/XAML, MVVM, dashboards
Data / ML	Python APIs, ETL pipelines, CLI tools, automation, MCP/tool workflows, ML pipelines, data analysis, scientific computing, Bayesian inference, scikit-learn, TensorFlow, PyTorch, JAX, Power BI
GenAI-Assisted SDLC	Claude Code, Cursor, Codex, GitHub Copilot
Delivery	Stakeholder requirements, full SDLC, technical design, technical debt reduction, automated validation, production support, peer debugging, code reviews

PROFESSIONAL EXPERIENCE

Aggregation Services Senior Developer | MSCI | Sep 2023 - Present

Monterrey, Mexico

- Build and maintain high aggregation risk analytics tools, backend services, APIs, dashboards, and scripts supporting enterprise data workflows.
- Use GenAI-assisted SDLC tools in approved engineering workflows to support PR preparation, code planning, refactoring, debugging, test generation, documentation, and feature delivery.
- Contribute to technical debt reduction and modernization, including Java refactoring and upgrade-readiness work while preserving behavior, testability, and release stability.
- Design automated validation workflows and operational dashboards using Splunk, Azure DevOps data, database-backed reporting, and Power BI to improve visibility into job health, errors, delays, throughput, and system behavior.
- Develop agent-assisted workflows for Splunk data acquisition, documentation, internal reporting, and operational analytics.
- Supported delivery of high-value enterprise features, including one initiative with approximately USD 1M in business impact, contributing across requirements analysis, implementation, reviews, validation, and rollout support.
- Partner with stakeholders through the full SDLC: requirements clarification, technical design, implementation, code review, debugging, release support, and 3rd-tier production support.

Software Developer II | Rackspace Technology | Aug 2022 - Sep 2023

- Developed internal and customer-facing APIs, enterprise services, and serverless applications using C#, .NET, Azure Functions, and Azure-based application patterns.
- Translated functional requirements into conceptual and detailed technical designs, estimates, proof-of-concepts, prototypes, and production-grade software.
- Implemented unit and acceptance tests, Jenkins-based CI/CD workflows, deployment automation support, monitoring, telemetry tooling, and production troubleshooting.

.NET Middle Software Engineer | Parallel Staff / Softeq | Jan 2022 - Aug 2022

- Built backend services and desktop automation tooling using C#, .NET Core, .NET Framework, and enterprise testing practices.
- Performed requirements analysis, authored positive/negative/boundary scenarios, wrote test scripts, supported existing automated tests, documented workflows, and contributed to code reviews and knowledge sharing.

Hardware and Software Development Specialist | Delee Corp | Feb 2020 - Dec 2021

- Built C#.NET backend services and WPF/XAML MVVM front-end tools for laboratory automation, device control, data acquisition, and automated biological testing workflows.
- Worked with cross-functional stakeholders to capture requirements, deliver reusable software, manage Git-based project workflows, and support Scrum/Agile delivery.

SELECTED PROJECTS

[RepoSage](#) - AI evaluation and repository analysis project

- Built early-stage tooling for AI-assisted repository evaluation, report generation, and structured analysis of code/project quality.

[MarketLab](#) - AI-assisted market analytics and trading automation prototype

- Built a Python application integrating Alpaca paper trading, Telegram alerts, SQLite persistence, Dockerized execution, logging, and report outputs with CSV metrics and plots.

[Purkinje Network Reconstruction](#) / **M.Sc. Thesis** - computational modeling + Bayesian inference

- Developed a scientific computing pipeline to infer Purkinje network structures from electrocardiogram signals using simulation, Bayesian inference, and optimization workflows.
- Implemented reproducible Python/JAX-based experiments, data processing utilities, automated execution support, and thesis-grade technical documentation.

[JAX-BO](#) - Bayesian optimization experimentation framework

- Implemented Bayesian optimization workflows for ML architecture and hyperparameter search, including complexity-aware objective functions and reproducible evaluation loops.

[LinkedInWebScraper](#) - Python data extraction and automation package

- Developed reusable Python scraping, parsing, CLI, and automation components for structured data extraction workflows and portfolio-grade packaging.

EDUCATION

M.Sc. in Data Science | Pontificia Universidad Católica de Chile

Graduated with Distinction for outstanding academic performance and thesis excellence.

Thesis: Probabilistic reconstruction of the Purkinje network from electrocardiogram signals using computational modeling and Bayesian inference.

B.Sc. in Biomedical Engineering | Tec de Monterrey (ITESM)

Minor in Biomedical Microtechnology. Academic Excellence Award, top 5% GPA.

PUBLICATIONS & ACADEMIC BACKGROUND

Co-author of 5 scientific publications and book chapters in biosensing, BioMEMS, microfluidics, and engineering research. Additional experience includes Adjunct Assistant Professor roles at Tec de Monterrey, physics laboratory instructor, and research work at KAUST, University of Victoria, and ITESM. Full publication list available via Google Scholar.