

SANTIAGO TOMÁS ROJAS JIMÉNEZ

Software Engineer | Full Stack · DevOps · AI

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PROFESSIONAL PROFILE

Computer Engineer **graduated first in his class**. Experience in developing and deploying real-world **AI-powered applications**, integrating LLMs (**Gemini AI**), computer vision (**Roboflow**), and an **algorithmic trading bot** operating in production. **AWS Cloud Practitioner** certified with hands-on experience in **Cloud and DevOps** (GCP, Docker, Vercel, CI/CD). Applies **Clean Architecture** and **SOLID** principles to build scalable, maintainable, production-ready systems.

WORK EXPERIENCE

SOFTWARE ARCHITECT / CO-FOUNDER - SITIAFLOW

01/01/2026 - Present | Santiago, Chile

- **Co-founded a startup** focused on digitalization and **ERP solutions** for the hospitality sector (bars), **leading the development** of the SitiaFlow ERP project.
- Gathered and defined **business requirements**, and designed the **system architecture** at a global level.
- Developed an **MVP** applying **Clean Architecture** using **Docker, Next.js, Supabase and Vercel**.
- Incorporated the **Model Context Protocol (MCP)** and **AI Agents** to enhance system capabilities and automation.
- Responsible for **full-stack development**, **relational database** design, and **cloud deployment**.

WEB DEVELOPER - INDEPENDENT / FREELANCE

07/01/2025 - 12/31/2025 | Santiago, Chile

- Built a **responsive web solution** for a hospitality business (loftmontana.com) using **Next.js, Vercel** and integration with the **WhatsApp API**.
- Managed **end-to-end development**, **production deployment**, and direct client communication.

MOBILE APPLICATIONS DEVELOPER - ACR CONSULTING

01/01/2024 - 06/30/2025 | Santiago, Chile

- Developed a comprehensive mobile application to support students and teachers with **Autism Spectrum Disorder (ASD)**, evolving from a functional **Flutter** prototype to a fully optimized **native Android Kotlin** application.
- Collaborated on a multidisciplinary team to design **UI/UX** and **architect the system**, focusing on **performance optimization**, usability, and seamless integration.
- Successfully trained, optimized, and integrated a **computer vision** model for **real-time emotion recognition** using **Roboflow**.
- Integrated the **Gemini AI API** to power advanced functionalities, including accurate **transcription and translation** features.
- Achieved **institutional impact**: the final project was officially **recognized by the Rector of INACAP** at the **Future Congress 2025**.

FEATURED PROJECTS

MixologyHub – B2B Bar Inventory & Point-of-Sale System

01/01/2026 – Present Developed a **full-stack B2B inventory and point-of-sale platform** featuring an "AI Bartender" and a real-time mathematical viability (*makeability*) engine.

- **Tech Stack**: TypeScript, Angular 18, NestJS, PostgreSQL, Redis, BullMQ, Docker.
- **Architecture & Concurrency**: Designed a high-concurrency inventory engine using **Redis and BullMQ** (concurrency: 1) to ensure **ACID** transactions free of race conditions.
- **Agentic AI**: Integrated a provider-agnostic "AI Bartender" using tool calling via the **Model Context Protocol (MCP)**, reducing LLM token consumption by **>90%**.
- **Best Practices**: Ensured enterprise-grade reliability through **TDD (190+ tests** via Jest/Playwright) and extensively documented technical *trade-offs* using **Architecture Decision Records (ADRs)**.

Trading Terminal - Python Algorithmic Bot

06/01/2024 – 12/31/2025 Developed a multi-threaded high-frequency trading (HFT) bot and terminal user interface (TUI) focused on directional (DCA) strategies and multi-level risk management.

- **Tech Stack**: Python, Pandas, Bybit API, Multithreading, Clean Architecture.
- **System Design**: Architected a deterministic, **thread-safe Finite State Machine (FSM)** using **Clean Architecture** and the **Adapter** pattern for exchange-agnostic order execution.
- **Risk & Analytics**: Implemented a **risk matrix with isolated capital** (sub-accounts) and a custom real-time technical analysis engine (Weighted Momentum) using **Pandas DataFrames**.
- **Performance**: Optimized execution speed by building an **asynchronous I/O log queue** and enabled **"hot-reloading"** with zero downtime for live strategy adjustments.

INTERNATIONAL EXPERIENCE

Moving the Cities | National Representative – Innovation

FH Münster University of Applied Sciences | Münster, Germany | 2023

- Nationally selected to represent Chile in an **international innovation** program.
- Participated in multidisciplinary teams from **Europe, the USA, and Latin America**, aligned with the **UN 2030 Agenda**.
- Presented the final project to executives from international companies, including **SAP**.

EDUCATION

Computer Engineering | INACAP Professional Institute

2021 – 2024

- **Ranked N°1 in the graduating class** during the Second Semester of 2024. Final Grade: **6.4 / 7.0**.
- **Thesis Project:** Development of "Nomos Chile", a web platform for lawyers with AI integration for legal queries, document generation, and automatic summaries (Gemini, GCP, React, Node.js).
- **Academic Assistant** in the *Database Fundamentals* course.

TECHNICAL SKILLS

- **Frontend:** Angular, React, Next.js, TypeScript, TailwindCSS, Bootstrap.
- **Mobile:** Kotlin (Native Android), Flutter.
- **Backend & Databases:** Node.js, NestJS, Python, PostgreSQL (TypeORM), MongoDB, Redis, BullMQ.
- **Cloud & DevOps:** AWS (EC2, CloudFront, S3, RDS), Google Cloud Platform (GCP), Docker, Vercel, CI/CD, GitHub Actions.
- **AI & Data Science:** Model Context Protocol (MCP), Gemini AI API, Roboflow, Pandas, NumPy.
- **Software Engineering:** Clean Architecture, SOLID Principles, TDD (Jest, Vitest, Playwright), Agile, ADRs.

LANGUAGES AND CERTIFICATIONS

- **Languages:** Advanced English C1 (Certified) | Spanish (Native).
- **Certification:** IELTS Academic – Overall Band Score: **7.5 - C1** (IDP IELTS, 2026).
- **Certification:** AWS Certified Cloud Practitioner (Amazon Web Services, 2023).