

Sebastián Taboada

Full Stack Developer & Biomedical Engineer

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PROFESSIONAL SUMMARY

Biomedical Engineer and Full Stack Developer with over 4 years of software experience (2+ years daily with TypeScript and Node.js in production). Specialized in 3-tier clean architectures, OpenAPI/Zod contract validation, 100% test coverage with Jest and Supertest, and hands-on AI agent integration via Model Context Protocol (MCP). Direct background in hospital systems, medical imaging (DICOM), and agile cross-border collaboration.

TECHNICAL SKILLS

Frontend & UI: TypeScript, JavaScript (ES6+), React 19, Next.js 15 (App Router), TanStack Query, Radix UI, Tailwind CSS, WebSockets

Backend & Architecture: Node.js, Express.js, Clean Architecture (3 Layers), OpenAPI / Swagger, Zod Validation, Jest & Supertest (100% Coverage), JWT / OAuth2, RBAC

Databases: MySQL (Relational schema design, transactions, query optimization), MongoDB, Sequelize ORM, Mongoose

DevOps & AI: Model Context Protocol (MCP), Autonomous Agents (Hermes), Local RAG, Docker Compose, Ubuntu Server (24.04 LTS), Tailscale Mesh VPN, GitHub Actions & Webhooks CI/CD

HealthTech: DICOM Standard, Clinical interoperability (PACS/RIS), Hospital medical technology lifecycle

WORK EXPERIENCE & KEY PROJECTS

Full Stack Developer & Lead Architect 2024 - Present

MeDevice - HealthTech Management System | Next.js 15, React 19, TypeScript, Node.js, Express, MySQL, Sequelize, OpenAPI, Zod, Jest, Supertest, MCP, Docker

- Architected modular 3-tier system for hospital equipment lifecycle tracking and preventive maintenance workflows.
- Implemented Spec-Driven Development using OpenAPI specifications and runtime Zod validation for web and mobile clients.
- Built reactive, accessible frontend with Next.js 15 and TanStack Query, eliminating server-client state drift.
- Achieved 100% unit and integration test coverage across 65+ endpoints using Jest and Supertest.
- Engineered Model Context Protocol (MCP) server enabling autonomous AI agents to audit equipment status in natural language.

Frontend & Healthcare Data Engineer (Open Source Contributor) 2026 - Present

GREY-BOX / Project Codex | React 19, Vite, TypeScript, i18next, Clinical Data APIs, Docker

- Built interactive user interfaces with React and TypeScript with multi-language support (i18next) for medical terminology exploration.
- Integrated data ingestion, normalization, and consumption services for international clinical catalogs.
- Collaborated in a distributed international team with Scrum meetings in English and Git code review workflows.

DevOps & AI Automation Engineer 2024 - Present

Self-Hosted Infrastructure & AI Automation | Ubuntu Server 24.04 LTS, Docker Compose, Tailscale, Node.js (ESM), Webhooks, LLMs

- Developed native Node.js bot with HMAC SHA-256 security to automatically audit GitHub PRs in real time with LLMs.
- Deployed containerized private infrastructure using Docker Compose and Zero-Trust access via Tailscale SSH.

Clinical Engineer & Internal Tools Developer

2021 - 2024

Hospital Padilla / SiProSa | Internal Web Dashboards, DICOM Networks, PACS/RIS, Medical Technology Management

- Developed internal web dashboards for maintenance tracking, inventory digitization, and work-order management.
- Supervised and verified clinical interoperability across imaging networks (DICOM and PACS/RIS).
- Reduced critical equipment downtime through technical protocolization and digitized workflows.

EDUCATION & LANGUAGES

Full Stack Web Developer - Coderhouse (2022)

Clinical Engineering Specialization (Hospital Residency) - Ministry of Public Health / SiProSa (2017 - 2020)

Biomedical Engineer (Bioengineering) - Universidad Nacional de Tucumán (UNT) (2016)

Languages: Spanish: Native • English: B1 Functional Working Proficiency (fluent technical reading/documentation and active participation in international Scrum meetings)