Santiago Nicolás Carrattini

Team Leader & Senior Full Stack Developer — Backend & Applied AI

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PROFESSIONAL SUMMARY

Team Leader & Senior Full Stack Developer with 3+ years in the public and private sectors, specialized in backend (Node.js, TypeScript) and applied Generative AI. I design multi-agent orchestration architectures and multimodal pipelines (vision, OCR, RAG) for automated document analysis, and lead a team of 3 developers while staying hands-on. A cached-indexing and selective context-loading strategy I designed cut ~USD 34,500/year in LLM costs.

PROFESSIONAL EXPERIENCE

PHINX Lab — Remote · Dec 2025 – Present

Team Leader & Senior Full Stack Developer (Backend & Applied AI)

AI platform built on an orchestrator + skills architecture for automated analysis of technical documentation.

- Lead a team of 3 developers: technical planning, code reviews and architecture decisions, while staying hands-on in backend and applied AI.
- Designed a two-tier orchestration architecture: a central orchestrator dispatching to 7 structured-extraction skills, each running its own sub-orchestrator.
- Built a 5-stage multimodal pipeline —vision, OCR, vector-document parsing as text, compliance verification and response synthesis— in Node.js and TypeScript.
- Cut ~USD 34,500/year in LLM usage costs and document-retrieval latency through cached indexing, selective context loading, N+1 query removal and context reuse.
- Developed the compliance verification system end to end —legal corpus modeling, indexing, search, rule evaluation and result reporting— and took part in its later migration to a Redis-backed RAG.
- Exposed the platform's internal services via the Model Context Protocol (MCP) —RAG, technical report generation and document validation— as tools consumable by LLMs.

Stack: Node.js, TypeScript, Fastify, Express, PostgreSQL, TypeORM, Redis, Docker, REST APIs, LLMs, agents, MCP.

Council of Education of Entre Ríos — Paraná, Argentina · Jul 2023 – Dec 2025

Full Stack Developer

Governing body of the public education system of the province of Entre Ríos.

- Led the agency's internal Procedures & Records Platform, digitizing paper workflows across 10+ areas (~60 people) with hierarchical permissions and shortening resolution times.
- Shipped the Family Allowance Certificate Validation system, reaching every school employee in the province: 20,000–30,000 submissions per annual campaign, 2 files and 2 validation stages each (≈50,000 files), fully audited in SQL Server; cut average resolution time from 4 months to 5 weeks.
- Wrote the file-upload security layer from scratch in native PHP —type validation, sanitization and access control— with no external libraries, per the agency's technical restriction.
- Modeled the records state machine (hold, closure, re-entry with new report), mapped with the Payroll area.

Stack: PHP 7, SQL Server, JavaScript, jQuery, AJAX, Bootstrap.

TECHNICAL SKILLS

Languages & Frontend: TypeScript, JavaScript, PHP, SQL, HTML5, CSS3, React, Redux, Tailwind CSS, Bootstrap

Backend & APIs: Node.js, Express, NestJS, REST API design, Passport

Databases & ORM: PostgreSQL, SQL Server, Redis, TypeORM, Prisma

Generative AI: LLM applications, AI agents & subagents, multi-agent orchestration, RAG, multimodal pipelines (vision, OCR), Model Context Protocol (MCP), prompt engineering, Amazon Bedrock

DevOps & Cloud: Docker, Nginx, Git, AWS (Amazon Bedrock, serverless fundamentals)

Practices & testing: SOLID, Clean Code, OOP, modular architecture, performance optimization, Jest, Scrum/Agile

CERTIFICATIONS

Anthropic (2026) — Claude 101 · Claude Platform 101 · Claude Code 101 · Claude Cowork · Intro to MCP · MCP: Advanced Topics · Subagents · AI Fluency: Framework & Foundations · Claude with Amazon Bedrock

AWS — Getting into the Serverless Mindset (2026) · **HackerRank** — SQL (Advanced) · Problem Solving

EDUCATION & LANGUAGES

Higher Technical Degree in Programming — UTN Paraná (final year, paused) · **Full Stack Web Developer** — Henry Bootcamp (700 h), 2023

Spanish: Native · English: C2 Proficient (EF SET 71/100) · Italian: Advanced