

Thomas Peter Griffiths

Principal Architect | AI Systems, Cloud Architecture & Technical Leadership

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Location: City of Buenos Aires, Argentina



About Me

Principal architect and technical owner of large-scale, AI-enabled platforms, currently leading the solution architecture of a greenfield GovTech system for the Government of the City of Buenos Aires. I design modular, deterministic workflow architectures that embed bounded AI and multimodal capabilities into auditable, production-grade systems on AWS, and set technical direction across multiple delivery teams. As the primary interface between senior government stakeholders and engineering, I translate complex regulatory and business requirements into technical roadmaps. Backed by years of full-stack, fintech, and enterprise-integration experience, I communicate fluently in English and Spanish.

Job Experience

Phinx Lab — June 2025 – Present

phinxlab.com

Principal Architect (March 2026 – Present)

Client: Urban Development Agency, Government of the City of Buenos Aires (GCBA)

Stack: Node.js (TypeScript), AWS Bedrock, Bedrock AgentCore, Model Context Protocol (MCP), Docker, EC2, managed databases, Route 53

Team & Scope: Technical owner working with two additional architects and multiple delivery teams, each led by a technical lead.

- Own the technical direction and solution architecture of a greenfield AI-enabled platform designed to digitize and automate construction-permit, zoning, blueprint-review, property, and regulatory workflows.
- Serve as the primary interface between senior government stakeholders and engineering teams, translating complex administrative and regulatory requirements into technical roadmaps, features, and delivery priorities.
- Defined a modular workflow architecture that decomposes government procedures into reusable components, determining which stages should remain human-operated, use deterministic software, or incorporate AI.
- Lead the design of bounded, task-specific AI agents embedded within controlled workflows, prioritizing determinism, auditability, maintainability, and clear module responsibilities over autonomous multi-agent orchestration.
- Delivered an early multimodal blueprint-analysis module that uses vision-enabled models to interpret technical plans and cross-check information across blueprints and supporting documents.
- Architect configurable code-based workflows in which modules expose explicit preconditions and produce structured or Markdown artifacts that become part of the accumulated context of each administrative case.
- Set architectural guardrails and make final high-level technical decisions across teams; provide risk-based code oversight, mentor engineers according to seniority, and refactor implementations when they drift from the target architecture.
- Oversee AWS cloud architecture and DevOps implementation while leading MCP-based, human-in-the-loop tools that enable agency analysts to perform operational tasks through AI-assisted interfaces.

Full-Stack Technical Lead (June 2025 – March 2026)

Client: Ministry of Education, Government of the City of Buenos Aires (GCBA)

Stack: React.js, Node.js (TypeScript), PostgreSQL, TypeORM, Material UI

Team & Methodology: Led a 10-person cross-functional team (developers, QA engineers, functional analysts) operating with SCRUM.

- Provided technical leadership for a city-wide academic platform used across all public schools in Buenos Aires; high-traffic, mission-critical environment.
- Owned delivery end-to-end: discovery, planning, implementation, code review, and production rollout with clear acceptance criteria and release checklists.
- Defined solution architecture, coding standards, and shared libraries; ensured consistency across React (frontend) and Node.js/TypeORM (backend) layers.
- Collaborated with Ministry stakeholders to translate policy/operational needs into technical roadmaps, user stories, and milestones.
- Guided database modeling and migrations in PostgreSQL; emphasized data integrity, observability, and performance under heavy workloads.
- Drove sprint planning, backlog prioritization, and delivery predictability; facilitated ceremonies, tracked metrics, and removed team blockers.
- Mentored engineers and QA; championed automated testing, code quality, and continuous improvement.
- Emphasized reliability, maintainability, accessibility, and security suitable for a government platform.

Baufest — September 2019 – June 2025

Senior Back-End AWS Integration Developer *(August 2024 – June 2025)*

Context: Nationwide retail (tire sales) integrations and payment/POS workflows

Stack: AWS Lambda (vanilla JS), Amazon S3, DynamoDB, EventBridge, CloudFormation, Datadog

Location/Mode: City of Buenos Aires, Argentina · Remote

- Designed and developed serverless payment-processing and POS workflows on AWS Lambda, provisioned via CloudFormation.
- Architected event-driven integrations leveraging S3, DynamoDB, and EventBridge to handle high-volume retail transactions with resilience.
- Implemented monitoring, alerting, and performance tuning in Datadog; reduced average Lambda latency and error rates on critical paths.
- Drove adoption of best practices in code quality, CI/CD, and IaC; standardized workflows with VS Code, Jira, and Confluence to improve team velocity and collaboration.

Lead Angular Migration Developer *(May 2024 – June 2025)*

Client: Cencosud SA (SSE: CENCOSUD)

Focus: Legacy → Latest Angular migrations; performance and maintainability

- Led migrations of legacy Angular apps to current versions, improving performance, maintainability, and security posture.
- Conducted comprehensive code analysis and refactoring; decomposed monolithic modules into modern, testable units.
- Updated and managed libraries/build tooling to ensure compatibility and reduce supply-chain risks.
- Collaborated with product, QA, and business stakeholders to align technical solutions with objectives and timelines.
- Institutionalized front-end best practices (TypeScript rigor, accessibility, error handling) to enhance UX and reliability.

JavaScript Full-Stack Developer *(July 2022 – May 2024)*

Client: Telecom Argentina (NYSE: TEO) — Personal Pay (digital wallet)

Stack: React.js, React Native, Node.js, Express.js, PostgreSQL, TypeORM; Agile SCRUM

- Developed customer-engagement initiatives for Personal Pay, integrating front-end and back-end components for cohesive user experiences.
- Built a BackOffice for loyalty program management (benefits, promotions, banners) with robust role-based workflows.
- Designed and implemented a rule engine to automate benefit allocation and campaign orchestration.
- Collaborated with stakeholders to define/refine requirements; delivered incrementally with measurable outcomes.
- Practiced CI/CD, code reviews, and testing strategies to maintain high quality across services and apps.

.NET Developer *(September 2019 – July 2022)*

Client: Tenaris (NYSE: TS)

Stack: .NET Framework, WCF, jQuery, SharePoint (CAML), Windows Server; Agile Kanban

- Developed and maintained a web application for the IT help-desk system, streamlining ticket lifecycle and resolution SLAs.
- Implemented features to improve triage, routing, and reporting; reduced manual overhead for support teams.
- Modernized legacy components while maintaining SLA stability for business-critical operations.
- Collaborated with IT stakeholders to ensure system reliability, security, and compliance.
- Provided technical support and onboarding/training for end-users and administrators.

Education

Engineering Degree in Informatics (completed) — [Ingeniería en Informática](#), Universidad del Salvador, Buenos Aires, Argentina

Certifications

- [Informatics Engineering: Academic Record](#)
- [Front-End Web Development with React \(Coursera\)](#)
- [Multiplatform Mobile App Development with React Native \(Coursera\)](#)
- [Instructor in Full Stack Java-React Course](#)
- [Microfrontends with React \(Udemy\)](#)
- [React + Firebase \(Udemy\)](#)
- [Understanding TypeScript \(Udemy\)](#)
- [Certiprof Scrum Foundation Professional](#)

Skills & Tools

- **Languages:** JavaScript, TypeScript, C#, Java
- **Web & Mobile:** React, React Native, Expo, Expo Router, Material UI, Astro
- **Back-End:** Node.js, Express.js, Bun, TypeORM, REST APIs
- **Cloud & DevOps:** AWS (Lambda, API Gateway, S3, DynamoDB, EventBridge, EC2, Route 53), CloudFormation, Datadog, Docker/Podman, Nginx, Linux (Ubuntu), GitHub Actions, EAS CLI
- **AI & Architecture:** AWS Bedrock, Bedrock AgentCore, MCP, multimodal AI, deterministic workflows, bounded AI agents
- **Databases:** PostgreSQL, SQL Server, MySQL, SharePoint lists (CAML), basic Redis
- **Testing & QA:** Jest, React Testing Library, Playwright/Cypress (familiarity), Postman
- **Agile & Collaboration:** SCRUM (certified), Kanban, Jira, Confluence, Notion, Figma
- **Productivity & AI:** GitHub Copilot, ChatGPT, Claude AI, Codespaces, Microsoft Office