

Lucas Geovani Castro Brogni

Senior Software Engineer | Backend & Cloud Architecture Specialist

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Professional Summary

Senior Software Engineer with 10+ years of experience designing and building distributed systems, serverless architectures, and high-throughput backend services. Deep expertise in Node.js/TypeScript ecosystem, AWS cloud infrastructure, and event-driven architectures. Proven track record of delivering scalable solutions handling millions of requests while maintaining 99.99% uptime. Passionate about clean architecture, test-driven development, and AI-assisted engineering.

Technical Expertise

Languages & Runtimes

| Proficiency | Technologies |
|-------------|---|
| Expert | TypeScript, React, Node.js, JavaScript, SQL |
| Advanced | Java, Kotlin, Angular |
| Proficient | Python, PHP |

Backend Architecture

- API Design:** RESTful APIs, JSON-RPC, API Gateway patterns, OpenAPI/Swagger
- Architecture Patterns:** Microservices, Serverless, Event-Driven Architecture, CQRS, Domain-Driven Design (DDD)
- Frameworks:** Express.js, Fastify, NestJS, Spring Boot

Cloud & Infrastructure (AWS Focus)

- Compute:** Lambda, ECS, EC2
- Storage:** S3, DynamoDB, RDS (PostgreSQL, MySQL), ElastiCache (Redis)
- Integration:** API Gateway, SQS, SNS, EventBridge, Step Functions
- Security:** Cognito, IAM, Secrets Manager, KMS
- Infrastructure as Code:** Terraform, AWS CDK, CloudFormation, Serverless Framework

Data & Messaging

- Databases:** PostgreSQL, MySQL, DynamoDB, MongoDB, Redis
- Message Brokers:** Apache Kafka, RabbitMQ, AWS SQS/SNS
- Data Patterns:** Event Sourcing, Pub/Sub, Fan-out, Dead Letter Queues

DevOps & Quality

- CI/CD:** GitLab CI, GitHub Actions, Jenkins, ArgoCD
- Containerization:** Docker, Docker Compose
- Testing:** Jest, JUnit, Cypress, Testcontainers, TDD, BDD
- Observability:** Datadog, OpenTelemetry, Sentry, CloudWatch, Coralogix

Development Practices

- Test-Driven Development (TDD)
 - AI-Assisted Development (Claude Code, GitHub Copilot)
 - Clean Architecture, Hexagonal Architecture
 - Code Review, Pair Programming, Technical Documentation
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Professional Experience

Rebrandly (San Francisco, USA)

Senior Software Engineer - Growth Team | July 2025 – Present

Building scalable backend infrastructure for growth engineering, focusing on conversion optimization, analytics pipelines, and AI integrations.

Technical Achievements:

- **MCP Server Architecture:** Designed and implemented Rebrandly's Model Context Protocol (MCP) server from scratch using TypeScript and AWS Lambda. Built JSON-RPC protocol handler with Zod schema validation. Implemented 30+ MCP tools for link management, analytics, and workspace operations. Achieved <100ms p95 latency for tool invocations.

Tech Stack: Node.js, TypeScript, Python, AWS Lambda, API Gateway, DynamoDB, MySQL (RDS), SNS/SQS, Serverless Framework

Taxdoo (Hamburg, Germany)

Senior Software Engineer | April 2023 – July 2025

Led technical initiatives across the platform, focusing on security modernization, CI/CD transformation, and establishing engineering best practices.

Leadership:

- **Interim Engineering Manager** (10 months, maternity leave cover): Led a team of 6 engineers while maintaining technical contributions. Responsibilities included career development and growth conversations, hiring and onboarding new team members, sprint planning and delivery management, and cross-team coordination. Continued contributing technically through architectural decisions and code reviews.

Technical Achievements:

- **Authentication System Migration:** Led migration from legacy auth to AWS Cognito. Designed zero-downtime migration strategy for 50K+ active users. Implemented JWT token validation middleware with refresh token rotation. Built custom Cognito triggers (Lambda) for user migration and validation. Reduced security vulnerabilities by 68% through modern auth standards (OAuth 2.0, PKCE).
- **Frontend Architecture Redesign:** Redesigned the frontend architecture enabling React component testing using MVVM pattern. Achieved clear separation of concerns between UI components and business logic. Improved testability by isolating view models, enabling unit tests without DOM rendering. Reduced coupling between components, making the codebase more maintainable and easier to refactor. Enabled faster feature development through reusable view models and predictable state management.

- **Testing Strategy & Infrastructure:** Established testing culture across Node.js and Java services. Implemented unit testing with fakes (in-memory implementations) for fast, reliable tests. Created smoke tests to validate fakes matched actual database behavior. Built E2E tests for critical user paths. Configured Jest for Node.js and JUnit for Java services.

Tech Stack: Node.js, TypeScript, Java, React, PostgreSQL, AWS Lambda, Cognito, RabbitMQ, GitLab CI, Jest, JUnit

Pleo (Copenhagen, Denmark)

Backend Software Engineer | February 2022 – March 2023

Developed scalable backend systems for expense management platform, focusing on multi-entity architecture and third-party integrations.

Technical Achievements:

- **Multi-Entity Platform Architecture:** Co-designed and implemented multi-entity solution. Domain-driven design with bounded contexts for entity isolation. PostgreSQL schema design supporting hierarchical organization structures. Event sourcing for audit trail and entity state management.
- **Card Tracking Integration Redesign:** Re-architected card tracking system when partner deprecated their API in favor of SFTP file transfers. Designed solution where partner uploads files via SFTP, processed as S3 events with real-time Lambda processing. Implemented event-driven architecture enabling near real-time transaction visibility instead of batch processing. Built idempotency patterns preventing duplicate transaction processing.

Tech Stack: Node.js, TypeScript, Kotlin, PostgreSQL, AWS (Lambda, SQS, S3, RDS), Terraform, Docker, Datadog

Earlier Experience (2014-2022)

Software Engineer → Senior Software Engineer | 8 years

Progressive experience across multiple companies building web applications, mobile solutions, and backend systems.

Avalara - AvaTax Brazil | Tax Management Platform

- Contributed to building and maintaining AvaTax Brazil, part of the world's largest tax compliance platform. Focused on system reliability and quality improvements, helping maintain 99.99% uptime for high-volume tax calculation services processing thousands of requests per second.

Hospitality Analytics Platform | Hotel Management

- Built analytics dashboard providing insights, benchmarks, and competitive analysis reports for hotel partners. Implemented data visualization and reporting features that helped partners understand market positioning, resulting in up to 20% revenue increase for participating hotels.

Logistics Real-time Tracking System | Mobile & Web

- Developed mobile application for truck drivers providing real-time delivery updates, barrier notifications, and delivery confirmation with image capture for marketing purposes. Built companion support dashboard for monitoring delivery status, tracking metrics, and correlating with invoices. Implemented real-time communication between mobile app and backend systems.

Education

Postgraduate Degree in Tech Management | FIAP, Brazil | 2025 – Present *Focus: Technical Leadership, Solution Architecture, Agile at Scale*

MBA in Software Architecture | IGTI, Brazil | 2020 – 2021 *Focus: Cloud-native Architecture, Distributed Systems Design*

Bachelor of Technology in Internet Systems | SENAI, Brazil | 2016 – 2019 *Focus: Full-stack Web Development, Software Engineering*

Certifications

- **JSNSD** - OpenJS Node.js Services Developer (Linux Foundation)
 - **SFPC** - Scrum Foundation Professional Certification (CertiProf)
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Languages

- **Portuguese:** Native
- **English:** Fluent (Professional working proficiency)
- **Italian:** Intermediate