

Rodrigo Souza

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Senior .NET & Azure Software Engineer

Senior Software Engineer with 20+ years of experience designing and building scalable, secure, and high-performance backend systems and distributed applications. Strong expertise in microservices architecture, message-driven systems (Azure Service Bus, RabbitMQ), and cloud-native development on Microsoft Azure. Proficient in C#, .NET / .NET Core, ASP.NET Web API, Microsoft SQL Server, and modern web stacks (React, TypeScript). Experienced technical leader driving architecture decisions, code reviews, CI/CD adoption, and Agile/TDD practices across distributed engineering teams.

TECHNICAL SKILLS

Back-end: C#, .NET 6/7/8/10, .NET Core, .NET Framework, .NET MAUI, ASP.NET MVC, ASP.NET Core, ASP.NET Web API, Microservices, RESTful APIs, OAuth 2.0, JWT, Hangfire, Dapper, NHibernate, Entity Framework / EF Core, Python, Node.js, Delphi

Front-end: React, Angular, TypeScript, HTML5, CSS3, JavaScript (ES6+), Bootstrap, PWA

Messaging & Event-Driven: Azure Service Bus, RabbitMQ, Azure Event Grid, Azure Logic Apps, Webhooks

Cloud & DevOps: Microsoft Azure (Functions, Service Bus, Cosmos DB, Logic Apps, App Services, Azure AD, Application Insights, API Management), Docker, Linux, IIS, Git, GitLab CI/CD, GitHub Actions, Azure DevOps, Terraform, ARM, DigitalOcean

Databases: Microsoft SQL Server, T-SQL, MySQL, PostgreSQL, IBM DB2, Cosmos DB

Testing & Quality: xUnit, Moq, NUnit, Playwright, Checkly, SonarQube, Postman

Logging & Monitoring: OpenTelemetry (OTel), Serilog, NLog, Microsoft Extensions Logging, Application Insights

Automation & Tools: n8n, NocoBase

Methodologies: Scrum, Kanban, TDD, DDD, Clean Architecture, SOLID, CI/CD

PROFESSIONAL EXPERIENCE

ED, Remote

03/2020 – Present

Senior Software Engineer

- Architect and develop scalable backend services and microservices for enterprise financial systems, billing, and payment platforms using C#, .NET Framework, and .NET Core (3.1 / 6 / 8) running on Windows and Linux environments.
- Design and implement event-driven, asynchronous workflows using Azure Service Bus queues and topics to decouple services and ensure reliable, ordered, and durable inter-service communication across payment processing pipelines.
- Build and consume RESTful Web APIs with ASP.NET Core Web API, applying OAuth 2.0 and JWT-based authentication and authorization for secure communication between internal microservices and third-party integrations.
- Develop and optimize complex T-SQL stored procedures, indexes, partitioning strategies, views, and execution plans on Microsoft SQL Server to support high-volume billing reconciliation and reporting workloads.
- Drove a modernization initiative that reduced a critical batch processing pipeline from 26 hours to under 2 hours through algorithmic refactoring, parallelization with TPL Dataflow / async-await, and SQL Server query tuning.

- Lead architecture decisions, code reviews, and adoption of Clean Architecture, Domain-Driven Design (DDD), SOLID principles, and Test-Driven Development (TDD) across distributed engineering teams.
- Author unit and integration tests in xUnit with Moq, integrating tests and quality gates with SonarQube into CI pipelines for automated regression validation on every pull request.
- Implement structured logging and distributed tracing across microservices using Serilog and Azure Application Insights, enabling proactive monitoring, alerting, and faster root-cause analysis in production.
- Build and maintain CI/CD pipelines in GitLab CI and Azure DevOps to automate build, test, container image creation, and deployment of .NET services to Azure App Services, IIS, and Docker hosts.
- Define and enforce Git branching strategies (GitFlow, trunk-based development) and code-quality standards via SonarQube static analysis on every pull request.
- Build no-code/low-code workflow automations with n8n and NocoBase to streamline support processes, ticket triage, and integration with internal APIs and CRM systems via REST and webhooks.

Oby Pagamentos — *ED Group Company*

02/2023 – 11/2023

Senior Software Engineer

- Modernized payments platform by migrating legacy ASP.NET MVC modules to a React + TypeScript front end backed by .NET Core microservices exposed through Azure API Management.
- Designed and developed a cross-platform mobile application using .NET MAUI for billing and payment functionality on iOS and Android.
- Integrated Azure Functions, Azure Service Bus, Cosmos DB, Logic Apps, and Azure Active Directory to ensure transactional integrity and near real-time data synchronization across the payments stack.
- Implemented event-driven communication between microservices using Azure Service Bus topics and subscriptions for fan-out scenarios such as billing notifications and payment status updates.

4MS Tech, Brazil

01/2019 – 02/2020

Cloud Engineer Consultant

- Led cloud migration projects for enterprise Microsoft Azure customers, designing the target architecture and executing infrastructure-as-code rollouts with minimal production downtime.
- Authored Terraform modules and Azure Resource Manager (ARM) templates to automate provisioning of resource groups, virtual networks, App Services, Azure SQL Databases, and Azure Service Bus namespaces.
- Designed event-driven integration patterns using Azure Service Bus queues and topics to enable asynchronous, reliable communication between migrated workloads and legacy on-premises systems.
- Refactored monolithic .NET applications into smaller, independently deployable microservices targeting Azure App Services and Azure Functions, leveraging C# and .NET Core.
- Implemented secure RESTful API gateways with Azure API Management, applying OAuth 2.0 and JWT for client authentication, throttling, and rate limiting.
- Built CI/CD pipelines in Azure DevOps using multi-stage YAML pipelines for automated build, test, infrastructure deployment, and application releases.
- Configured monitoring and observability with Azure Application Insights and Log Analytics, integrating Serilog-based structured logs from .NET workloads.
- Optimized SQL Server / Azure SQL Database performance through index tuning, partitioning strategies, and stored-procedure rewrites during cloud migrations.
- Documented runbooks, network topologies, and operational procedures, training customer engineering teams on Azure best practices and DevOps workflows.

Add Technologies, Brazil**11/2011 – 02/2020***Senior .NET Developer*

- Designed and developed billing, premium calculation, and payment reconciliation modules for a major life insurance company using C#, .NET Framework, and .NET Core.
- Built distributed backend services in a microservices architecture, communicating asynchronously through Azure Service Bus queues and topics for reliable processing of insurance transactions and downstream notifications.
- Implemented RESTful Web APIs with ASP.NET Web API and ASP.NET Core, securing endpoints with OAuth 2.0 and JWT bearer tokens for B2B integrations with banks and partners.
- Applied Domain-Driven Design (DDD) and Test-Driven Development (TDD) using NHibernate and Dapper as ORM / micro-ORM layers against IBM DB2 and Microsoft SQL Server databases.
- Authored complex T-SQL stored procedures, views, triggers, and indexes for SQL Server, and equivalent objects in DB2, optimizing queries powering monthly batch reconciliation cycles.
- Wrote unit and integration tests with xUnit and Moq, integrating coverage reports and quality gates with SonarQube into building pipelines.
- Built and maintained CI/CD pipelines in GitLab and Jenkins for automated build, test, packaging, and deployment of .NET services to IIS and Linux hosts.
- Implemented structured logging and error tracking with NLog and Serilog across services, ensuring traceability and rapid incident response in production.
- Collaborated with cross-functional teams (Business Analysts, QA, DBAs) following Scrum and Kanban to define data contracts, service interfaces, and integration flows.
- Refactored a legacy ASP.NET MVC monolith into modular services with clear domain boundaries, improving maintainability and enabling independent deployments per domain.

Alterdata Software, Brazil**04/2003 – 10/2011***Senior Systems Analyst*

- Designed and developed accounting automation software used by thousands of small and mid-sized businesses, covering payroll, fiscal, and tax modules.
- Architected and built a database migration tool that imported and reconciled legacy accounting datasets from multiple competing systems into the company's PostgreSQL and SQL Server data stores.
- Developed Windows desktop applications using Delphi 7 with Nexus DB, PostgreSQL, and Microsoft SQL Server back ends.
- Wrote complex SQL stored procedures, triggers, and views in T-SQL and PL/pgSQL to support high-volume accounting transactions and reporting.
- Designed normalized relational database schemas and optimized indexes to ensure scalability across multi-tenant accounting deployments.
- Implemented integration components consuming SOAP and REST web services for data exchange with banking, fiscal, and government APIs.
- Built ETL routines for importing/exporting customer data between accounting platforms, including format conversions, validation, and reconciliation reports.
- Performed code reviews, mentored junior developers, and contributed to architectural decisions on the company's flagship accounting suite.

- Provided third-line production support for enterprise customers, performing debugging, diagnostics, and database tuning to resolve critical issues.

SELECTED FREELANCE / SIDE PROJECTS

Fleet on Sight — *Fleet & Truck Telemetry Platform (Independent Consulting)*

- Build backend services for Fleet on Sight, a fleet/truck telemetry platform, using C#, .NET 10, and a microservices architecture, processing high-volume IoT events asynchronously through RabbitMQ exchanges and queues.
- Implement retry, dead-letter, and back-pressure patterns on RabbitMQ consumers to guarantee reliable delivery and processing of telemetry events on a scale.
- Use Hangfire for reliable background job processing and scheduling in .NET, handling recurring telemetry rollups, deferred message processing, and scheduled tasks with automatic retries and persistence.
- Design PostgreSQL schemas optimized for time-series telemetry data and high-frequency writes from connected vehicles, applying partitioning and indexing strategies.
- Develop the operations front-end with Angular and TypeScript, integrated with the .NET backend through RESTful APIs.
- Instrument services with OpenTelemetry (OTel) for distributed tracing, metrics, and logs, integrated into a centralized observability stack.
- Author automation tests (unit and integration) to ensure reliability of telemetry ingestion, processing pipelines, and message-consumer logic.
- Deploy via Microsoft Azure DevOps CI/CD pipelines to Linux servers on DigitalOcean, with automated build, test, containerization, and rollout stages.

Equilibrahq — *Financial Management SaaS (Founder / Owner — In Production with Paying Customers)*

- Founded, designed, and operated Equilibrahq, a multi-tenant SaaS financial management platform live in production with active paying customers, covering a hierarchical chart of accounts, OFX-based bank reconciliation, and cash flow (DFC) reporting.
- Architect and develop a polyglot backend: an authentication REST API in C# / .NET Core and a financial REST API in Python, each backed by a dedicated MySQL database, exposing endpoints for accounts, transactions, reconciliation, and reporting.
- Designed a hierarchical chart-of-accounts data model supporting synthetic vs. analytic accounts, multi-tenant isolation, and treatment of payment methods as transaction attributes rather than account categories.
- Implemented OFX file parsing and a bank-reconciliation engine that maps institutional transactions to internal account categories, with manual-review workflows for ambiguous matches.
- Built the front-end as a Progressive Web App (PWA) using React and TypeScript, with cookie-based authentication and offline-friendly behavior across desktop and mobile.
- Designed and shipped a Cash Flow Statement (DFC) report engine that aggregates categorized transactions over configurable periods, supporting customer financial decision-making.
- Use n8n to orchestrate system notifications and automate operational workflows across the platform.
- Operate the production stack on owned Linux infrastructure with two dedicated servers — one for databases and another for application services — using GitHub Actions CI/CD pipelines and structured logging to ensure high availability and rapid iteration based on real customer feedback.

EDUCATION

- **Analysis and Systems Development**, Estácio de Sá, Brazil, *2014*
- **Bachelor in Data Processing**, Fundação Educacional Serra dos Órgãos, Brazil, *2006*

CERTIFICATIONS

- AI & Automation Manager Practitioner — Flowgrammers (2026)
- Certified CMMI Associate — ISACA (2023)
- Azure Functions: Running Serverless Code — Alura (2021)
- Terraform: Automate Cloud Infrastructure — Alura (2021)