Thiago Luiz Silva Pereira
Staff Backend Engineer & Technical Leader

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SUMMARY

Staff-level engineer with 20+ years building and scaling high-performance backend systems across fintech, hospitality, and enterprise domains. Led architectural transformations — monolith-to-microservices, event-driven systems with message queues, and cloud-native CI/CD on Azure/Kubernetes. Builds LLM-powered agents, machine learning pipelines, and AI-augmented development workflows that multiply team productivity. Proven technical leader who drives TDD culture, cross-team technical strategy, and developer growth.

SKILLS

AI & Intelligent Systems
Master

LLM, LangChain, Machine Learning, Fine-tuning, Claude API, OpenAI API, Gemini, AI Agents & Orchestration, RAG, Prompt Engineering, AI Pipeline Design, MCP, NLU/Intent Recognition, AI-Augmented Development

Backend & Architecture
Master

Distributed Systems, Microservices, Event-Driven Architecture, gRPC, Message Queues, Data Pipelines, API Design (REST/OpenAPI), System Design at Scale, Performance Optimization, Scalability, Job Orchestration, Serverless

Languages
Master

C#, Go, Python, TypeScript, F#, JavaScript, Elixir, PowerShell

Cloud & DevOps
Master

Azure, Azure Functions, Durable Functions, AWS, GCP, Docker, Kubernetes/Argo CD, CI/CD, Terraform, Observability, GitHub Actions, Linux, nginx

Databases
Master

SQL Server, PostgreSQL, SQLite, MongoDB, Redis, CosmosDB

Technical Leadership
Master

Staff-Level Technical Leadership, Technical Strategy, Architecture & System Design, Mentoring & Developer Growth, TDD/DDD, Cross-Team Influence, Agile (Scrum, Kanban, XP)

WORK EXPERIENCE

Mar 2021 - Current
Staff Engineer, Tech Lead & Mentor at BairesDev

Staff Engineer, Tech Lead, and Mentor working with backend systems and AI integration using Microsoft technologies (Azure, .Net, SQL Server), Go, Node.js, and cloud-native architectures.

- Migrated legacy applications to microservice solutions with Azure Functions and event-driven patterns in record time
- Integrated LLM-based APIs (Claude, GPT) with LangChain patterns into product features and development pipelines, accelerating code review, documentation, and implementation
- AI-augmented development workflows that multiplied team productivity across multiple projects
- Designed observability and monitoring strategy for distributed microservices
- Automated API client generation for JavaScript with OpenAPI and DevOps, reducing frontend adoption time
- Introduced TDD culture from scratch — hundreds of tests covering critical paths, eliminating regressions in production
- Used Kubernetes/Argo CD with CI/CD pipelines and Terraform to automatically scale dockerized applications
- Received R&D Spotlight Award for Q4 2021 at a key player in the hospitality industry
- Expanding end-to-end test coverage with Cypress using AI-assisted development (Claude/Cursor), accelerating test creation and maintenance across complex user flows
- Developing AI-assisted legacy displacement skills using the Strangler Fig pattern — leveraging Claude and Cursor to accelerate incremental migration of monolithic modules to modern microservices, with automated tests to keep replacement safe
- Mentored developers to increase productivity across multiple clients

Nov 2009 - Mar 2021

Backend Engineer & Technical Leader at White Fox (B&T)

Backend engineer and technical leader for one of Brazil's most outstanding money exchange brokers. Led architectural evolution from monolith to microservices, financial system integrations, and early AI adoption using agile methodologies (Scrum, TDD, XP).

- Evolved monoliths into microservices via message queues (SQL/Azure ServiceBroker), achieving scalability from dozens to thousands of requests per minute
- Integrated with Brazil's Central Bank (Bacen STA), Federal Revenue Service, PIX, and Bitcoin payments
- Built Jarvis — an early AI agent using NLU (LUIS) to orchestrate multi-step business processes, a precursor to modern LLM-based agents
- Implemented TDD culture, eliminating regressions and bugs in production
- Automated deployments with Azure DevOps and management activities with Microsoft Bot Framework
- Implemented cross-domain libraries in F# for proper DDD abstractions and encapsulation
- Migrated internal scheduling system to F# and Azure Functions, achieving performance optimization and reducing maintenance cost
- Enhanced performance and maintainability of complex mathematical calculations using F#
- Applied machine learning techniques for atypical transaction detection and compliance monitoring
- Ensured MonoRepos and Modular Monolithic applications work across 20 years and multiple .Net versions
- Since 03/2021, continued as consultant for critical solutions and specifications

Jan 2009 - Nov 2009

BizTalk and SharePoint Consultant at Ecorp

Senior consultant and developer in Microsoft BizTalk, SharePoint, SQL Server, ASP.NET. Worked directly with Light and L'Oréal performing technical management, requirements gathering, and SAP integrations.

- Implemented BizTalk integration between Oracle problem system and SAP mobile gateway, handling all external support requests for Light customers in Rio de Janeiro
- Automated publishing of Light KPIs from Excel into the company's internal SharePoint

Nov 2007 - Jan 2009

Senior Developer at Oi - Accenture

Maintenance of CRM/ERP systems for the Oi Tsunami project (SIA) and EPM with C# (ASP.Net and Desktop), SQL Server, WCF, and Oracle.

- Built M.A.R.T — a decision engine using external APIs for phone line quality testing that guided call-center operators through diagnostic workflows
- Improved monthly conciliation process (Batimento) performance by 24x — from 12 hours to under 30 minutes

Jun 2006 - Nov 2007

Senior Developer & Team Leader at Always Web

Programming in C#, VB, PHP, JavaScript, ASP, and ActionScript. Project Manager and Team Leader managing two teams between Rio de Janeiro and São Paulo. Clients: Aliança do Brasil (Banco do Brasil), Cultura Inglesa, Thomson Edu.

Nov 2004 - Jun 2006

Web Developer at AG Sistemas

Web Developer with PHP and ASP Classic. Developed Apligraf's CRM/ERP for StockMarket and Digipix's photographic revelation service, still used by major Brazilian e-commerces (Americanas.com, Submarino, Shoptime, Saraiva, Extra).

PROJECTS

Jun 2025 - Current

Vox-Intelligence — AI Gateway & LLM Router

Multi-provider LLM gateway with intelligent routing, prompt caching for cost optimization (~75% token cost reduction), fallback chains to local models, and structured presets for content processing. Handles up to 1M characters per request with vision support and streaming.

- Multi-provider abstraction (Anthropic, OpenAI, Ollama, DeepSeek)
- ~75% token cost reduction via prompt caching
- System design and cost optimization for production AI infra

Jun 2024 - Current

Toscanini — AI Pipeline Orchestrator

End-to-end data pipeline with 8-stage orchestration: collection → GPU transcription → AI summarization → publishing. Intelligent GPU scheduler with time-based windows, CPU/GPU fallback, and concurrent job limits. MCP server for Claude Code integration.

- 8-stage pipeline orchestration with Oban
- Intelligent GPU scheduling with CPU/GPU fallback
- MCP server for Claude Code integration

Jan 2023 - Current

Hermes-PT — AI Infrastructure Platform

AI development platform running multiple microservices: LLM gateway, transcription service (Whisper-API with CUDA), notification gateway, health monitoring, and 13+ AI agent skills. Dynamic GPU scheduling across services.

- 13+ AI agent skills orchestrated across microservices
- Dynamic GPU resource management
- Infrastructure architecture for self-hosted AI development

Sept 2018 - Dec 2022

Jarvis — AI Agent for Team Productivity

https://github.com/thluiz/jarvis-whitefox

Early AI agent using Natural Language Understanding (LUIS) to orchestrate multi-step business processes via conversational interface — a precursor to modern LLM-based agents. Handled scrum master activities, billing, planning, and repetitive tasks through Skype and Microsoft Teams.

- NLU-driven multi-step business process orchestration
- Precursor to modern LLM-based agent patterns
- Built with TypeScript, Node.js, and Microsoft Bot Framework

Jan 2023 - May 2025

Vida Kung Fu — Podcast

https://youtube.com/@vidakungfu

Host and producer of a martial arts podcast featuring in-depth interviews with masters, grandmasters, and practitioners across multiple Kung Fu lineages. 29 episodes across 3 seasons.

- 29 episodes across 3 seasons with interviews in English and Portuguese
- Full production pipeline: recording, editing, publishing, audience engagement

Jan 2016 - Jan 2022

Elug |> RJ — Elixir Meetup

https://www.meetup.com/elixir-rj/

Co-organizer of Rio de Janeiro's Elixir meetup. Led hands-on events building real-time distributed systems including a WebRTC audio/video chat and a multiplayer starship game using OTP supervision trees.

- Real-time distributed systems with OTP
- Community leadership and developer education

Nov 2018 - Current

SIG (Integrated Management System)

https://github.com/thluiz/sam-apinode

Backend-driven CRM/ERP system with TypeScript (Node.js) handling business logic, multi-branch data synchronization, and real-time updates. Designed for multinational expansion.

- Full-stack TypeScript application with Node.js backend
- Multi-branch real-time synchronization
- Multinational expansion architecture

Jun 2019 - Jan 2022

Genesys SRD

https://github.com/thluiz/genesys-srd

Gatsby PWA for Grifo Editorial — an offline reference guide for tabletop RPG players with automated publication via Vercel.

Nov 2006 - Jan 2015

.TV — Video Channel Platform

Ruby on Rails application to upload, orchestrate, and encode videos in different formats for the web. Explored niche content delivery before YouTube's dominance.

- Video encoding pipeline and content orchestration
- Multiple niche channels (Psychology, Jewish content, IT corporate)

EDUCATION

Jan 2023 - Jun 2026

Bachelor of Philosophy Ethics, Politics, and Economics at UCS - Cruzeiro do Sul University

Jan 2005 - Jan 2024

Master Ving Tsun Kung Fu at Instituto Julio Camacho

Jan 2003 - Jan 2006

Engineering Chemical Engineering at UERJ (Rio de Janeiro State University)

AWARDS

Dec 2021

R&D Spotlight Award at BairesDev / Hospitality Industry Client

Recognized as a key contributor for outstanding technical leadership and delivery in Q4 2021.

LANGUAGES

Portuguese

Native speaker

English

Full Proficiency

Spanish

Intermediate

INTERESTS

Martial Arts

Skills:
Ving Tsun Kung Fu Master

Arts

Skills: Painting ,Drawing