Marcel Scognamiglio Senra Lourenço

Senior Software Engineer | System Architect | AI & Automation Specialist

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Languages: Portuguese – Native | English – Professional

Professional Summary

Senior Software Engineer and System Architect with over 8 years of experience in building and scaling platforms. Proven track record in developing high-impact digital products using Next.js and PostgreSQL, with deep experience in the MERN stack (MongoDB, Express.js, React, Node.js) as well. I'm an expert in designing end-to-end systems, from backend orchestration to a polished user experience, and a specialist in implementing AI-powered automation to improve efficiency and reduce operational costs. My background includes contributing to an edtech platform that served hundreds of thousands of users and building a B2B marketplace from the ground up. I naturally take on the role of an integrator—the one who helps teams navigate complexity with confidence and brings clarity through strong communication.

Technical Skills

Languages & Frameworks

- **JavaScript**: Node.js, React, Next.js, Vue, TypeScript - Expert level full-stack development
- **Python**: Backend development, AI integration, automation scripts
- **PHP**: Server-side scripting, web development, legacy system maintenance
- **GraphQL**: API design, data fetching optimization, schema development
- **Rust**: Systems programming (in progress), performance-critical applications

Frontend & UX Tools

- **Figma**: Design systems, prototyping, collaborative design workflows
- **Design Systems**: Component libraries, consistent UI patterns, accessibility
- **Responsive Design**: Mobile-first development, cross-browser compatibility
- **Markdown**: Documentation, content management, technical writing
- **Mermaid Diagrams**: System architecture visualization, workflow documentation

Databases

- **PostgreSQL**: Advanced queries, performance optimization, data modeling
- **MongoDB**: Document databases, aggregation pipelines, schema design
- **Supabase**: Real-time databases, authentication, edge functions
- **Firebase**: Cloud database, real-time sync, serverless functions
- **Redis**: In-memory data structures, caching, pub/sub messaging

Cloud & DevOps

- **AWS**: Lambda, EventBridge, CloudWatch, CodePipeline - Event-driven architecture
- **Docker**: Containerization, multi-stage builds, orchestration
- **Vercel**: Frontend deployment, edge functions, performance optimization
- **CI/CD**: GitHub Actions, automated deployments, testing pipelines
- **GitHub**: Version control, collaboration, project management

AI & Automation

- **Orkes/Conductor**: Workflow orchestration, business process automation
- **Novu**: Multi-channel notifications, real-time messaging systems
- **n8n**: Workflow automation, API integrations, data processing
- **Trigger.dev**: Background jobs, event processing, scheduled tasks
- **OpenAI API**: AI integration, content generation, intelligent automation
- **AI-based data enrichment**: Smart notification systems, automated decision making

Architecture & Product

- **Event-driven systems**: Scalable, decoupled architecture patterns
- **Microservices**: Distributed system design, service communication

- **API-first design**: RESTful services, GraphQL schemas, documentation
- **AI-embedded agents**: Human-AI collaboration, intelligent automation
- **UX-focused development**: User-centered design, accessibility, performance
- **Modular Component Patterns (MCPs)**: Reusable, maintainable code architecture
- **Linear / Notion / Jira**: Agile project management, documentation, workflow

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Professional Experience

AI Software Engineer | Clipboard Health

Oct 2025 – Present · Remote – San Francisco, CA, USA

Engineering intelligent document processing systems for healthcare workforce operations using TypeScript, NestJS, and Prisma with PostgreSQL. Building production-grade AI pipelines that combine LLM capabilities (OpenAI, Anthropic) with deterministic validation rules to automate complex medical document analysis, data extraction, and classification workflows at scale. Implementing event-driven microservices architecture on AWS (EventBridge, SQS, S3) with comprehensive observability through Datadog and OpenTelemetry.

Key Achievements:

- Architected hybrid AI systems combining GPT-4/Claude with rule-based validation engines, achieving 99%+ accuracy in medical document processing and classification
- Developed automated document analysis workflows with confidence scoring and fallback mechanisms, reducing manual review time by 70% while maintaining HIPAA compliance
- Implemented layered architecture with strict type safety, dependency injection patterns, and 100% test coverage for mission-critical healthcare data processing
- Built scalable microservices handling high-volume document ingestion with async job processing, distributed tracing, and comprehensive error handling

Founding Engineer | Verios.ai

Jul 2025 – Oct 2025 · Remote – São Paulo, Brazil

Led technical foundation and rapid development of an AI-powered legal research platform—a "Cursor for Legal Companies." Made critical architecture decisions and

implemented full-stack infrastructure from ground zero using Claude Code and modern AI-assisted development workflows, achieving exceptional velocity without compromising code quality.

Key Achievements:

- Delivered production-ready MVP with multi-tenancy architecture in 3 months, enabling simultaneous onboarding of multiple law firms
- Designed scalable system architecture supporting AI-powered legal document analysis and competitive intelligence features
- Established engineering practices, tech stack decisions (Next.js, PostgreSQL, AI APIs), and development workflows for future team growth

Lead Software Developer | Automation & AI Engineer | FoodReady

Nov 2024 – Jul 2025 · Remote – Chicago, IL, USA

Architected the evolution of the platform from cron-based scheduling to a fully event-driven infrastructure using AWS Lambda, EventBridge, Supabase, PostgreSQL, and MongoDB. Introduced AI-powered automation agents for food safety and regulatory workflows using N8N, OpenAI (Claude, Perplexity) API, Orkes/Conductor, and Novu, resulting in smarter and more autonomous operations.

Key Achievements:

- Streamlined backend orchestration with reusable JavaScript/TypeScript workflows, improving consistency and onboarding time across teams
- Led the migration from third-party authentication to a secure, custom-built identity layer with MFA and centralized access control
- Defined architecture principles, versioning strategies, and documentation standards for high-velocity engineering squads

Senior Software Developer | FoodReady

Nov 2023 – Nov 2024 · Remote – Chicago, IL, USA

Developed fullstack features for food safety and compliance tools, with React, Node.js, and TypeScript. Contributed to data pipelines and backend services, focusing on code reliability, observability, and regulatory accuracy.

Key Achievements:

- Partnered with product and design to iterate quickly on user flows, feedback loops, and internal dashboards
- Built scalable data processing systems handling regulatory compliance workflows
- Implemented comprehensive testing strategies ensuring 95%+ code coverage

Tech Lead (Consultant) | Synthetic Systems

Jan 2023 – Oct 2023 · Remote – São Paulo, Brazil

Technical lead for full-stack monorepo platform (Next.js, GraphQL, MongoDB). Led backend-to-frontend integration with focus on performance and user experience.

Key Achievements:

- Facilitated agile ceremonies, technical planning, and architectural decisions
- Mentored developers and improved team delivery speed significantly
- Implemented performance optimizations resulting in 40% faster page load times

Full Stack Software Developer, Frontend heavy | Quero Educação

May 2022 – Nov 2023 · São José dos Campos, Brazil

Developed frontend features for educational marketplace (Vue, Nuxt.js, React, TypeScript). Delivered SEO improvements and Core Web Vitals optimization.

Key Achievements:

- Integrated frontend with backend services (Node.js, Ruby on Rails, PostgreSQL)
- Set up CI/CD pipelines with AWS, Docker, and Kubernetes
- Improved Core Web Vitals scores by 60% through optimization techniques

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Education

Systems Technology (Associate Degree)

FIAP | *2021–2023*

Focused on modern software development practices, system architecture, and emerging technologies.

BA in Journalism, Philosophy & Technology

FAPCOM | *2009–2013*

Certifications

Selected certifications

- **Full Stack Applications** | FIAP | *Jul 2023*
- **Java Development** | FIAP | *Jul 2023*
- **Front-End Engineer** | Codecademy | *May 2023*
- **TypeScript** | Codecademy | *Oct 2023*
- **React Native** | Codecademy | *Nov 2023*
- **Official ChatGPT Course** | Codecademy | *May 2023*
- **Mobile Development** | FIAP | *Jul 2023*
- **MTA: Software Development Fundamentals** | FIAP | *Jul 2023*