

# Marcel Scognamiglio Senra Lourenço

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**Senior Software Engineer | System Architect | AI & Automation Specialist**

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**Languages:** Portuguese – Native | English – Professional

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## Professional Summary

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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.

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## Technical Skills

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### 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

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### AI Software Engineer | Clipboard Health

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

Engineering intelligent document processing systems that combine LLM capabilities with deterministic tooling to automate healthcare workforce operations. Building production-grade AI pipelines that handle complex document analysis, data extraction, and validation workflows at scale.

#### **Key Achievements:**

- Architected hybrid AI systems combining GPT-4/Claude with rule-based validation for 99%+ accuracy in document processing
- Developed automated workflows reducing manual document review time by 70%
- Implemented robust error handling and fallback mechanisms for mission-critical healthcare data processing

### 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**

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### **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**

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## **Certifications**

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### **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*