

João Marcos Maia

Full Stack Software Engineer | AI Engineer | RPA

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Biografia

- I've always been fascinated by solving difficult problems. For me, software engineering goes far beyond writing clean code; it's about designing competitive advantages. I navigate between robust back-ends and the agility of ecosystems like n8n, and I do so to deliver what today's market demands: speed without sacrificing security. From academic research in Generative AI that earned me co-authorship of an article to the architecture of regulated Fintechs, my work is to ensure that technology is the engine of growth and not a cost. I build bridges between complex business ideas and scalable technology. Throughout my journey, I've realized that the client doesn't care if the system is built in Python or Low-Code; they want efficiency. That's why I combine the robustness of traditional engineering with the speed of hyperautomation and generative AI. My focus is simply this: transforming operational bottlenecks into revenue streams and operational efficiency.

Professional Experience

Ship Smart Global

Senior AI & Automation Engineer

03/2026 - present

- Laying the technical foundation for international financial hyper-automation, connecting AI, data pipelines, and robust engineering to support global operations.
- **Global Orchestration (n8n & Python):** Designed and managed the integration architecture between ERPs and billing platforms across 5 countries, centralizing and automating multi-currency accounts payable/receivable reconciliation.
- **Resilient RPA & Scraping:** Implemented high-availability RPA workflows using Python and Playwright (Node.js) for data extraction and injection into legacy financial systems, eliminating critical manual bottlenecks.
- **AI Squad Leadership:** Founded and led the company's internal AI Squad, mentoring cross-functional team members, evangelizing AI tool adoption, and accelerating engineering velocity.
- **Data Governance & BI:** Spearheaded the management of the global financial database, building scalable data pipelines and Business Intelligence (BI) dashboards for real-time compliance and executive decision-making.

Watrix Tecnologia

RPA Sênior Developer

06/2025 - 05/2026

- **Multi-Agent Systems & RAG:** Architected and deployed complex conversational AI environments combining n8n, Multi-Agent systems, and RAG (Retrieval-Augmented Generation) to automate high-ticket lead qualification and real-time conversion.
- **Platform Engineering & DevOps:** Designed and engineered a proprietary internal automated deployment and provisioning tool using Python, Node.js, and Supabase that dramatically cut client onboarding and workflow setup times from 2 hours to just 56 seconds, eliminating human error.

- **Scalable Infrastructure (Supabase & Cron):** Built transactional backend operations and heavy scheduling infrastructure utilizing Supabase and customized Cron Jobs engineered for massive data loads and high availability.
- **Governance & Observability:** Managed end-to-end integration ecosystems (connecting CRMs, real estate portals, and communication APIs), implementing robust logging, alerting, and monitoring pipelines to ensure absolute operational stability.

Center of Excellence in Artificial Intelligence - CEIA

AI Researcher & Developer

02/2025 - 10/2025

- **Scientific Publication & NLP (WebMedia 2025):** Co-authored the peer-reviewed paper "An emotional support conversational agent for individuals with anxious states", published at WebMedia 2025, advancing practical NLP applications for social impact.
- **Core AI Engineering (LangChain & Postgres):** Developed advanced cognitive architectures utilizing LangChain and Postgres (relational/vector data), implementing long-term memory and precise semantic contexts for autonomous agents.
- **LLM Fine-Tuning & Prompt Engineering:** Curated specialized datasets and executed fine-tuning on domain-specific LLMs, establishing robust security guardrails and advanced prompt engineering frameworks.
- **Hybrid UX Interfaces:** Designed and integrated reactive web front-ends, leveraging custom React/JavaScript components and agile tools like Bubble.io and n8n to connect users to complex AI layers seamlessly.

Flex ON

Head of Technology / Technical Product Manager

02/2024 - 06/2025

- **Hybrid Architecture & High-Performance MVPs:** Led end-to-end product engineering from scratch, designing a technical strategy that combined custom development with the aggressive agility of Bubble.io for rapid market validation, scaling the platform according to business traction.
- **Agentic Systems & AI-Driven Engineering:** Implemented cutting-edge development workflows utilizing Cursor to accelerate core code writing, and orchestrated AI Agents and automation ecosystems within n8n, transforming complex manual processes into autonomous workflows.
- **Mobile & Asynchronous Infrastructure:** Designed and deployed mobile applications utilizing PWA (Progressive Web Apps) architecture, integrated with complex asynchronous routines and background data processing scheduled via Cron Jobs.
- **Technical Product & Team Leadership:** Served as the strategic bridge between business objectives and engineering, leading multidisciplinary teams across design, product, and development. Ensured intuitive user experiences (UX) for AI interactions and drove ROI-oriented deployments.

SISDIM - Brazilian Ministry of Health

Software Engineering Intern

02/2022 - 02/2024

- **Engenharia de Back-end (Python & Django):** Desenvolvi e sustentei arquiteturas robustas de back-end utilizando **Python e Django**, desenhando APIs seguras, escaláveis e com foco em alta performance e segurança de dados.
- **Data Science & Deep Learning:** Implementei modelos de Redes Neurais e algoritmos clássicos de Machine Learning (K-Means, KNN) estruturados para análise preditiva, transformando dados brutos em inteligência acionável e suporte à tomada de decisão.
- **Hiperautomação & RPA:** Construí robôs sob medida para automação de processos complexos, eliminando tarefas manuais repetitivas, mitigando erros operacionais e escalando a produtividade interna do time.

- **Infraestrutura & SysAdmin:** Atuei no provisionamento, configuração e monitoramento de ambientes de rede e servidores, garantindo resiliência, conectividade interna e a integridade do tráfego de dados.

Education

Federal University of Goiás (UFG) Bachelor of Science in Computer Science (2022 - Present | Expected Graduation: Late 2026)

Core Skills



Technical Expertise |

AI & Agents: AI Agents | AI Prompt Engineering | LangChain | Agno (PhiData) | Cursor | Claude Code | Lovable

Machine Learning Backend & Databases: Python | Django | FastAPI | Node.js | SQL | PostgreSQL

Frontend & Mobile: JavaScript | TypeScript | Next.js | React | Tailwind CSS | Flutter

Low-Code & Automation: n8n | Bubble.io

Processes, Practices & Architecture

Methodologies: Agile, Scrum, Kanban, Product Metrics

Architecture & Modeling: Microservices, Monolithic Architecture, Domain-Driven Design (DDD), Business Process Management (BPM)

Collaboration Tools: Miro, Asana, Trello

Languages

Portuguese: Native

English: Intermediate

Spanish: Beginner