

RAFAEL EL SHAFIE

Software Engineering | Generative AI | Backend



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EDUCATION

JAN 2025 - DEC 2028 (EXPECTED) | UNIVERSIDADE ESTÁCIO DE SÁ
Bachelor's in Software Engineering

APR 2026 - SEP 2026 | PUC-RIO

Artificial Intelligence and Data Science in the Cloud: AWS in Practice

- Trained, evaluated and deployed classification, regression and time-series models in Amazon SageMaker, exposing them through APIs.
- Analyzed data with Python, Pandas and NumPy from Amazon S3; used EC2, RDS and DynamoDB with access control, monitoring and cost-management practices.

APR 2026 - PRESENT | SANTANDER OPEN ACADEMY AND AWS
SANTANDER JORNADA TECH AWS

OCT 2026 - PRESENT | DIO · ITAÚ
Java, Spring Boot & AI Bootcamp

IN PROGRESS | KUMON
English — Level M

EXPERIENCE

JUN 2026 - OCT 2026 | BTG PACTUAL

Software Engineering Intern (Short Job) | IT Onboarding & AI

Developed an AI assistant from scratch in four months to answer banking onboarding questions and help prevent avoidable support requests. The application went live and the team began using it.

- Built a knowledge base with hundreds of documents, organizing business rules, workflows and technical information for use by the assistant.
- Developed the Python/FastAPI backend and React/TypeScript frontend, including chat, conversation history, feedback and administrative dashboards.
- Implemented intelligent document search with RAG and natural-language queries to PostgreSQL and MySQL, with source references and read-only data access.
- Developed conversational context management, question classification and feedback-based knowledge review, plus authentication, access controls and data protection.
- Prepared application delivery with Docker, Kubernetes and Azure DevOps; implemented Datadog observability and AI usage and cost controls.
- Built automated tests and AI response evaluations to assess quality, identify defects after changes and support further development.

JAN 2026 - FEB 2026 | BTG PACTUAL

Software Engineering Intern (Summer Job) | IT Asset Management & Funds

Worked with another intern on a Scrum-based Manhattan real estate data project to support investment analysis:

- Reworked the data processing layer and built analytical tables in Databricks using Python, SQL, Spark and Pandas.
- Integrated two sources, resolved inconsistencies and matched property listings using addresses and listing characteristics.
- Developed scoring and monitoring rules with the team to track prices, listings and status changes, with Teams notifications using RabbitMQ and EKS.
- Built the solution's dashboard in Databricks from an existing version, with filters, maps and price-per-square-foot comparisons; presented the project in English.

JAN-AUG 2024 | FLUXO CONSULTORIA - UFRJ JUNIOR ENTERPRISE

Project Consultant

- During onboarding, helped develop a management backend with Node.js, TypeScript, NestJS and PostgreSQL, covering user records, financial accounts, products, orders and events, with authentication, role-based permissions and API documentation.
- Contributed to a technology improvement group, identifying bottlenecks and helping reorganize the team toward full-stack development.
- Supported accounts payable, including reimbursements, and bank reconciliation in the Administration and Finance department.
- Visited a food manufacturer and interviewed staff to map processes and requirements; helped create documentation and conceptual and logical data models to support a redesign of its system.
- Conducted and observed interviews and group exercises; guided trainees, answered questions and assessed their deliverables.

SKILLS

- **Languages:** Python · TypeScript · JavaScript · SQL · Java (learning) · HTML5 · CSS3
- **Backend:** FastAPI · Node.js · NestJS · REST APIs · SQLAlchemy · Alembic · Spring Boot and Spring Data (learning)
- **Frontend:** React · Astro · TanStack Query · Zustand · Vite · responsive interfaces · internationalization · web accessibility
- **Data:** Data modeling · PostgreSQL · MySQL · Pandas · NumPy · Apache Spark · Databricks · Power BI · Excel
- **Applied AI:** LLMs · RAG · Text-to-SQL · scikit-learn · LightGBM · Amazon SageMaker · Amazon Bedrock
- **Cloud & DevOps:** AWS (S3, EC2, RDS, Secrets Manager, ECR) · Docker · Kubernetes · Azure DevOps/Pipelines · Git/GitHub · RabbitMQ · Datadog
- **Engineering & Quality:** Requirements engineering · Process mapping · pytest · Hypothesis · Vitest · Playwright · automated testing

LANGUAGES

- **Portuguese:** native
- **English:** intermediate
- **Spanish:** basic