Renan Mello

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Professional Summary

AI Engineer building production LLM agents for customer support on voice (IVR) and WhatsApp, with TypeScript/Node.js on AWS (Amazon Bedrock, Lambda). Work covers prompt and deterministic flow design, agent and tool orchestration, integration with corporate APIs and root cause analysis of production incidents. Earlier full-stack experience with Next.js, React and Django, and a background in financial markets that includes Python automation for investment operations. Communicates well with business, QA and functional teams, turning specifications into technical solutions.

Experience

Accenture - Custom Software Engineering Analyst

Belém, Brazil | 09/2025 – Present

- Build conversational AI agents with generative AI (LLMs on Amazon Bedrock) for a large company's customer support in 6 Latin American countries, on voice and WhatsApp channels.
- Developed AI outbound voice campaigns covering product offers, objection handling and consent confirmation.
- Implemented self-service use cases integrated with corporate APIs, and tuned routing between the intent classifier, use cases and human handoff, including contact logging for support KPIs.
- Designed prompts and deterministic flows (static responses, forced tool calls, variable capture) that reduced LLM hallucinations and kept answers aligned with business-approved text. Fixed failure patterns that caused wrong use case execution, cutting agent misrouting and response errors by ~15%.
- Ran root cause analysis on QA and production incidents, investigating CloudWatch and OpenSearch logs and confirming or ruling out hypotheses through local reproduction.
- Technologies: TypeScript, Node.js, Amazon Bedrock, AWS Lambda, DynamoDB, S3, EventBridge, OpenSearch, CloudWatch, Jenkins.

OEI - Contract

Belém, Brazil | 06/2025 – 11/2025

- Developed a real estate management system for SECOP (Extraordinary Secretary for COP, PA, Brazil) to support infrastructure for **COP30**, expected to host over 60,000 attendees.
- As Belém has only ~30,000 hotel rooms, the system enables the secretary to onboard real estate agencies, allowing them to list private properties for short-term rental to meet the remaining demand.
-By streamlining the property onboarding process for real estate agencies, significantly accelerated the standardization and validation of listings to match COP30 requirements, cutting correction and response time by over 70%.
-Technologies**:** Next.js, Tailwind CSS, TypeScript, Node.js, AWS, PostgreSQL

XP Investimentos – Investment Advisor

Belém, Brazil | 08/2022 – 08/2024

- Managed client investment portfolios, overseeing more than 1 billion Reais in assets under custody.
- Developed Python automation tools, reducing manual processes by 50%, improving speed and accuracy of investment visualizations.
- Improved data quality and optimized advisor workflows, saving the team over 20 hours per week.

INOA – Fullstack Developer

Rio de Janeiro, Brazil | 01/2021 – 08/2021

- Collaborated with B2B clients to automate processes for leading financial brokers in Brazil.
- Implemented market options automation, reducing manual operations and streamlining funds transfers.
- Created a client data query platform using web scraping techniques from the B3 (Brazilian Stock Exchange), reducing query times by 30%.
- Technologies: Python, Django, SQL, JavaScript.

Projects

Brigabis Bot – WhatsApp AI Assistant

- Built and run in production a WhatsApp assistant for a confectionery business, using retrieval-augmented generation (RAG) to answer customer questions.
- Added an AI configuration agent that proposes changes to the bot's content and settings, applied only after human review.

Skills

AI & LLMs: Amazon Bedrock, prompt engineering, agents and tool calling, agent orchestration, RAG, deterministic conversation flows, voice (IVR) and WhatsApp channels
Programming Languages: Python, JavaScript, TypeScript, SQL, HTML
Frameworks & Tools:React, React Native, Next.js, Node.js, Django, Prisma, MongoDB, Postgres, TypeORM, Alchemy, FastAPI, Express, Jest, Zod.
Cloud & DevOps: AWS (Lambda, DynamoDB, S3, SQS, EventBridge, OpenSearch, CloudWatch), Docker, Git, Jenkins

Languages: English C1, Portuguese

Soft Skills

Detail-oriented, Problem-solver, Strong collaboration skills, Continuous learner and self-starter

Education

CESUPA - Centro Universitário do Pará
2016 – 2020
Bachelor of Computer Science