

Ítalo Vinícius Guimarães

Software Engineer

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EXPERIENCE

Senior Software Engineer — Nubank

Nov 2025 — present

Remote — Brazil

- Build AI agent tooling (LangGraph, ReAct, MCP) integrated with internal platform services and data pipelines, designing clear service boundaries, retry/fallback strategies, and observability for production-grade agentic workflows.
- Lead technical design reviews and code reviews, mentoring engineers on Spark performance tuning, data modeling trade-offs, and scalable design patterns.
- Implement CI/CD workflows for pipeline code and infrastructure artifacts, enabling safe, reproducible deployments with automated testing and quality gates across environments.

Data Engineer — Industrial IoT — TRACTIAN

Oct 2024 — May 2025

Remote — Brazil

- Built production Python-based data ingestion pipelines for structured and unstructured sensor data generated by industrial equipment monitoring devices (vibration, temperature, current, runtime telemetry).
- Integrated MongoDB as the primary operational source, extracting heterogeneous equipment telemetry and event data and loading it into ClickHouse (optimized for high-frequency time-series queries) and PostgreSQL for operational analytics.
- Orchestrated Python extraction and ingestion scripts for scheduled and event-driven data flows, ensuring reliable, low-latency processing of high-frequency industrial sensor readings in production at scale.

Software Engineer — Ministério da Saúde

Jan 2024 — present

Remote — Brasília, DF, Brazil

- Automated CI/CD workflows via GitLab for infrastructure and code artifacts; implemented schema migration tooling and multi-environment deployments.
- Developed a Django REST API serving as the data access layer, abstracting storage complexity behind clean, versioned interfaces consumed by internal product teams and government partner integrations.
- Designed service architectures with microservices patterns, integrating components via synchronous and asynchronous message exchange; deployed applications on Kubernetes with CI/CD via GitLab.

Software Engineer (Data) — Embraer

Nov 2021 — Nov 2023

Remote — São José dos Campos, SP, Brazil

- Led the Data Ecosystem initiative: designed raw-to-refined Data Lake zones (raw, trusted, refined) ingesting operational manufacturing data from heterogeneous sources (SQL Server, Oracle, SAP, GCP databases) using PySpark, NiFi, and Airflow across AWS and GCP.
- Built analytical dashboards in Power BI for IT teams (Service, Quality, Delivery, Costs); automated KPIs, spreadsheets, and management systems; administered Power BI capacity.
- Applied DevOps practices for production reliability and monitoring; managed relational and non-relational data across SQL and NoSQL stores.

Software Engineer (Contract) — Polícia Civil do Estado de Goiás

Mar 2022 — Jul 2023

Remote — Brazil

- Developed the Schedules project using agile methodologies (Lean Inception, Scrum, XP); collaborated with clients on system requirements and results validation.
- Built backend microservices with TypeScript, NestJS, and PostgreSQL; implemented CI/CD pipelines and Docker containerization; developed frontend with React and Vue.
- Delivered training to students on software development methods covering Git/GitHub, Docker, and Front-end/Back-end development.

Software Engineer (Intern) — Tribunal de Contas da União (TCU)

Jan 2021 — Oct 2021

Brasília, DF, Brazil

- Managed Oracle databases and developed enterprise Oracle APEX applications; optimized relational schemas and query performance for internal government audit systems.
- Developed and corrected JavaScript code for UI/UX improvements and front-end functionality.

Computer Vision Researcher — Universidade de Brasília

Aug 2020 — Jan 2021

Brasília, DF, Brazil

- Developed and researched predictive models for road lane detection using convolutional neural networks and deep learning in the CARLA autonomous driving simulator; applied data mining and analysis techniques.

EDUCATION

M.Sc. in Applied Computing (PPCA) — Distributed Systems & Cloud Lakehouse Architecture

Oct 2024 — present

University of Brasília

B.Sc. in Software Engineering

2018 — 2023

University of Brasília

CERTIFICATIONS

AWS Certified Cloud Practitioner — Amazon Web Services (AWS), Sep 2023

STACK

Languages: Python, SQL, TypeScript, JavaScript, Shell scripting, YAML, C++

Cloud: GCP (BigQuery, Cloud Composer, GCS, GKE, Dataproc, Pub/Sub, Dataflow, IAM), AWS (S3, Glue, Redshift, Athena, Lambda, RDS, EMR, EC2, IAM)

Infrastructure: Terraform, Docker, Kubernetes / GKE / EKS

CI/CD: GitHub Actions, GitLab CI

Databases: PostgreSQL, Oracle / Oracle APEX

AI / Agents: LangGraph, MCP (Model Context Protocol), RAG

Backend: Django / Django REST Framework, NestJS

Frontend: React, Vue.js

LANGUAGES

Portuguese — Native

English — Professional working proficiency (spoken and written)