

# Nilton Santos – Software Engineer

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## TECHNICAL SKILLS

**Languages:** Python (asyncio, OOP), JavaScript/TypeScript (ES6+), Kotlin (Coroutines, Multiplatform)

**Frameworks:** FastAPI, Django, Express, NestJS, React, Next.js, Jetpack Compose, OpenCV

**APIs & Protocols:** REST (OpenAPI), GraphQL, gRPC, WebSocket, MQTT

**Databases & Cache:** PostgreSQL, Redis, MongoDB, SQLite

**Infrastructure & Cloud:** Docker, Kubernetes, Terraform, AWS, GCP, Firebase

**Messaging & Streaming:** Kafka, RabbitMQ

**CI/CD & Observability:** GitHub Actions, Prometheus, Grafana, ELK Stack

**Methodologies:** TDD, SOLID, Clean Architecture, Agile

## PROFESSIONAL EXPERIENCE

### Software Development Intern

Jun 2021 – Jun 2023

SEMA/MT

Cuiabá, MT, Brazil

- Developed RESTful APIs with FastAPI (Python), defining OpenAPI contracts and test coverage.
- Designed offline/online sync in Kotlin Multiplatform + SQLite, ensuring data consistency on unstable networks.
- Built geospatial ETL pipelines in Python (Pandas), publishing data via RabbitMQ for downstream analysis.
- Configured Grafana and PowerBI dashboards connected to PostgreSQL and Redis for real-time monitoring.

### Junior Solutions Engineer

Jan 2024 – Jul 2025

PGE/MT

Cuiabá, MT, Brazil

- Led migration to NestJS (TypeScript) microservices, containerized with Docker and Kubernetes on AWS.
- Automated legal workflows with Kafka and ChatGPT API, reducing processing time by 40%.
- Developed Python NLP summarization module using GPT-4, improving accuracy by 30%.
- Implemented legal chatbot with Dialogflow + WebSocket, handling 300+ daily requests.
- Managed IaC with Terraform and monitored systems using Prometheus, Grafana, and ELK Stack.

### Mid-Level Kotlin Developer

Jul 2025 – Present

PAGWAY

Cuiabá, MT, Brazil

- Built POS applications in Kotlin/Jetpack Compose for SmartPOS terminals, focusing on UX and reliability.
- Integrated payment SDKs (Ingenico, Gertec, PAX, Verifone) via secure APIs.
- Implemented asynchronous messaging with Kafka, RabbitMQ, and WebSocket for real-time transaction status.
- Deployed CI/CD pipelines with Docker, GitHub Actions, and automated AWS Lambda releases.

## PERSONAL PROJECTS

### RADARE – Data Reconciliation and Analysis

Duration: 12 months

Industrial Data Reconciliation

- Developed microservices in Python (FastAPI) and NestJS, containerized with Docker/Kubernetes and deployed on AWS (Lambda, RDS).
- Implemented ETL and reconciliation using Pandas, PostgreSQL, RabbitMQ, and Kafka, ensuring 99% data integrity.
- Built a Kotlin Multiplatform client with SQLite for offline/online synchronization.
- Designed React/TypeScript frontend (Next.js, Material-UI) with CI/CD via GitHub Actions and Grafana monitoring.

### AIICP – AI Image Correction and Augmentation Pipeline

Duration: 6 months

Pixel Art Enhancement

- Created Python pipeline with OpenCV, Pillow, and Stable Diffusion in Docker containers.
- Streamed processing tasks with Kafka and leveraged ChatGPT API for automated label generation and validation.
- Implemented CI/CD with GitHub Actions and set up observability using ELK Stack and Grafana.

EDUCATION

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Federal University of Mato Grosso  
*B.Sc. in Computer Engineering*

Cuiabá, MT, Brazil  
2025