

FABRICE NIYOKWIZERWA

Senior Full-Stack & AI Systems Engineer

Kigali, Rwanda | [+250 784 427 142](tel:+250784427142) | codingleone@gmail.com

[GitHub](#) | [LinkedIn](#)

TECHNICAL PROFILE

Lead Systems Engineer with 5+ years of experience architecting end-to-end production systems. Expert in **Java/Quarkus** and **Python/FastAPI** backends. Specialist in building complex **Monorepos**, **RAG systems**, and real-time mobile platforms. Proven track record of taking products from concept to the **iOS & Android** stores, managing everything from Database Schema design to Cloud Deployment and international Payment Gateways.

CORE SKILLS

- **Languages:** Java (JDK 17+), TypeScript, Python, SQL, C/C++ (HPC focus).
- **Backend:** FastAPI (Python), Quarkus (Java), SQLAlchemy, Beanie ODM (MongoDB), Node.js/Fastify.
- **Mobile & Web:** React Native (Expo 54), React 18, Vite, Tailwind CSS, Mantine UI.
- **Infrastructure:** **Turborepo**, pnpm workspaces, Docker, AWS, MongoDB Atlas, DigitalOcean Spaces (S3).
- **Payment Integration:** **PayPal (Webhooks)**, **Stripe**, **InTouch Mobile Money**, **Flutterwave**.
- **Computer Science:** DSA (Data Structures & Algorithms), OOP, Software Design Patterns.

PROFESSIONAL EXPERIENCE

Digital Umuganda | *Software Engineer* | Kigali, Rwanda

Jun 2025 – Present

- **Architecting a high-scale Data Collection Platform** for AI training, specifically focusing on high-fidelity Kinyarwanda ASR (Automatic Speech Recognition) datasets.
- **Developing RAG (Retrieval-Augmented Generation)** systems and automated **FastAPI** pipelines for intelligent data labeling and processing.

DCCS IT Business Solutions | *Software Engineer (Apprentice)* | Australia (Remote)

Feb 2025 – Jul 2025

- **Internal Systems Engineering:** Contributed to the development and optimization of enterprise-level internal tools, focusing on modular architecture and API scalability.
- **Java/Quarkus Optimization:** Engineered high-performance backend solutions using

- **Quarkus** to minimize memory footprint and optimize cloud-native deployment.
- **Cross-Functional Collaboration:** Partnered with an international team to build a robust **Course Management System**, implementing complex features for enrollment and user tracking.
- **Refactoring:** Modernized legacy Java components into maintainable TypeScript and Java microservices.

Genesis Technologies Rwanda | *Software Engineer & Co-Founder* | Kigali, Rwanda

Jan 2024 – Dec 2024

- **Technical Lead:** Managed all engineering decisions for MERN/PERN stack projects, translating complex business requirements into scalable code for diverse clients.
- **Product Ownership:** Owned the entire lifecycle for client solutions, from schema design to CI/CD deployment.

Andela | *ATLP Software Engineer Apprentice* | Remote (NYC/Kigali)

Nov 2023 – Feb 2024

- **Microservices Engineering:** Engineered services using the MERN stack and streamlined deployment pipelines using **Docker**.

Ida Technology | *Frontend Engineer & Mentor* | Kigali, Rwanda

Mar 2022 – Sep 2023

- **Frontend Architecture:** Converted complex Figma architectures into responsive React applications for **Freelancer.rw**.
- **Mentorship:** Led training sessions for **20+ developers and interns** in modern full-stack development practices.

PROMINENT PROJECTS (SOLO DEVELOPER)

Kivu Ride – Ride-Hailing Platform (iOS & Android)

- **Architecture:** Designed and implemented a **high-performance Monorepo** (pnpm + Turborepo) managing a FastAPI backend, React 18 admin dashboard, and Expo mobile app.
- **Backend:** Built a REST API with **JWT role-based auth**, trip-matching logic, and **SQLAlchemy/PostgreSQL 15**.
- **Infrastructure:** Managed asset storage via **DigitalOcean Spaces (S3)** and implemented shared TypeScript definitions for full-stack type safety.

Lidata – Digital Life Assistant (iOS & Android)

- **Backend:** Engineered a **FastAPI** service with **Beanie ODM** for asynchronous **MongoDB**

Atlas operations.

- **Subscription Engine:** Built a live **PayPal Webhook integration** to automate user subscription management and status updates.
 - **DevOps:** Designed the project structure with automated environment configuration and **Pydantic** data validation.
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EDUCATION & CERTIFICATIONS

- **Boot.dev:** OOP in Python & Back-End Foundations — *Mar 2026*.
- **IBM:** Introduction to Software Engineering — *Feb 2023*.
- **Codecademy:** Technical Interview Practice (DSA), Frontend Engineer Path, SQL, RegEx.
- **RTB/Ida Technology:** Software Engineer Certificate.
- **Advanced Software Development** | Saint Peter College of Shyogwe.