Kigali, Rwanda
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NIYONSHUTI Emmanuel
Python Backend developer

GitHub | linkedIn
personal blog

Experience

Backend Developer	Netpipo - On-site	Sept. 2025 - Dec. 2025

- Designed and built a multi-tenant event booking and management system with per-tenant isolated databases, deployed to a remote Linux server.
- Optimized employee bulk-upload in the HR management service by offloading the task to Celery for background processing with real-time progress tracking.

Software engineer intern	tecGrw LTD - Hybrid	April 2025 - Sept. 2025

- Developed company website and Built REST APIs to integrate AI services with internal dashboards

Software engineering programme	ALX SWE - Remote	Aug. 2023 - Nov. 2024

- Completed a 12-month intensive, fully remote programme — structured around daily project delivery, peer code review, and Git-based collaboration
- Specialized in backend development; built projects spanning systems programming in C, REST APIs in Python, and full-stack web applications
- Projects included: an Airbnb clone, Receipto (receipt management API with OCR), a custom `printf` implementation, a Monty bytecode interpreter, and a POSIX-compliant shell in C
- Practised Data structures and Algorithms, Linux administration, Nginx configuration, remote server deployment, and system design

projects

whatdeps · Python · PyPI · GitHub API

- Published CLI tool on PyPI that surfaces key metadata about a Python project's dependencies using the PyPI and GitHub APIs.

sift · Python · GitHub Actions

- A job searching and application tool that fetches and scrapes job listings from different sources , matches them to a profile, passes the match to an LLM and sends a match response back to the user via an email.

sg — Sentinel NDVI Pipeline · FastAPI · PostgreSQL · Sentinel Hub API

- Periodic pipeline ingesting NDVI data for farm parcels, storing time series in PostgreSQL, and generating vegetation/drought alerts.

Library Check-In Management System · React · Express.js · PostgreSQL

- Full-stack application for university library managing student check-ins and book borrowing records.

Open Source

- *openagri-irrigationmanagement* — Configured structured logging for the backend, improving observability.

Skills

- *Programming:* Python, JavaScript, C, Shell scripting
- *Backend /Frameworks:* FastAPI , Flask, Express.js
- Testing: Unit, Integration, End-to-End & Fixture-Based Testing
- Automation & CI/CD: Git, Docker, GitHubActions
- *Databases:* PostgreSQL , MySQL, MongoDB, Redis
- *System Administration:* Nginx, Self-Hosted Infrastructure
- Networking: DNS, TCP/IP, UDP

Certificates

ALX Software engineering Programme - 12 month Graduation Certificate	2023 - 2024
Kubernetes and Cloud Native Essentials (LFS250)	Apr 2025 - May 2025
Mastering REST APIs with FastAPI	December 2025

Education

Bachelors of Science in Crop production	UR-CAVM	2021-2025
General Secondary Education	GSOB | Indatwa n'inkesha	2017-2019

Community Involvement

Technical Writing — Personal Blog

- Maintain a personal blog where I occasionally write and share about backend development, APIs, and software engineering concepts, breaking down technical topics and sharing practical lessons learned while building projects.

ALX Software Engineering Alumni Community

- Part of the ALX alumni network, engaged with other developers through technical discussions, peer learning, and knowledge sharing.

Open Source Contribution

- Contribute to open source projects by reviewing issues, communicating with maintainers, and submitting pull requests for bug fixes, improvements, and documentation updates.