

# ELIUD MUNYALA

**Senior Backend & Data Engineer** · Python, Go, AWS, PostgreSQL (pgvector, BM25), Vector Search

Nairobi (UTC+3) · 6h overlap with US Eastern, full overlap with EU · Available immediately for remote full-time or 3 to 6 month contract

📍 Nairobi, Kenya | 📞 +254 793 601 115 | ✉️ eliud@munyala.pro | 🔗 [linkedin.com/in/eliud-munyala](https://www.linkedin.com/in/eliud-munyala) | 🐙 [github.com/meaLuda](https://github.com/meaLuda)

## SUMMARY

I build data and retrieval systems with measured accuracy, plus the access control, audit logging, and tenant isolation that let companies, government departments, hospitals, and 50+ diplomatic missions put them in front of real users. Recent proof: hybrid BM25 + vector search behind PostgreSQL row-level security, a hospital imaging platform running at 3.5M+ DICOM records in production, and an analytics dashboard live in the UN Environment Programme. Backed by 4+ years across Python, Go, PostgreSQL, and AWS, most recently leading platform engineering at IDI. I stay accountable for these systems in production. Looking for senior backend, data, or platform roles, fully remote, full-time or contract.

**Languages:** Python, Go (Golang), TypeScript, SQL, Bash

**Backend:** Django, Django REST Framework, FastAPI, Echo (Go), Wagtail, Celery, Asynq, microservices, REST, GraphQL

**Data & Search:** PostgreSQL (pgvector, ParadeDB BM25), Redis, ETL / ELT, data warehousing, PySpark, Pandas, vector search, semantic retrieval

**AI & LLM:** LiteLLM (Groq, DeepSeek, Gemini), OpenAI and Anthropic APIs, RAG, FastText classification, OCR (Tesseract, Kreuzberg)

**Cloud & Infra:** AWS (EC2, RDS, S3, IAM), GCP Compute, Docker, Ansible (30+ playbooks), Traefik, Zitadel OIDC, Nginx, GitHub Actions, Linux

**Healthcare:** DICOM (pynetdicom, Orthanc), OHIF Viewer, JPEG-LS transcoding, Kenya Data Protection Act 2019, RBAC, audit logging

## EXPERIENCE

### Senior Technical Lead

January 2025 – June 2026

*Institute of Design & Innovation (IDI)*

*Nairobi, Kenya (Remote)*

- Shipped **EA-READY**, an East Africa regional early-warning and analytics dashboard now live in the **UN Environment Programme WESR** sandbox at [stg-wesr-search.unep.org](https://stg-wesr-search.unep.org). Flask, Celery, Redis, HTMX, Leaflet maps, with pluggable providers for GDACS, ReliefWeb, Open-Meteo, and HumData.
- Owned a multi-tenant Electronic Document and Records Management System (EDRMS) serving 50+ diplomatic missions: Django REST Framework, 49 endpoints, 305 schema migrations, 2,000+ tests. Designed tenant isolation via PostgreSQL row-level security and per-tenant S3 prefixes, object-level RBAC via `django-guardian`, and Zitadel OIDC SSO with MFA.
- Built hybrid search combining ParadeDB BM25 with pgvector semantic embeddings, plus async Celery and Redis pipelines for OCR (Tesseract, Kreuzberg), IMAP ingestion, and barcode routing. Wired LLM-powered document classification through LiteLLM (Groq, DeepSeek, Gemini fallback chain) with FastText auto-categorisation.
- Shipped a Wagtail 7 and Next.js 14 multi-site CMS powering an institutional ministry portal with 6 microsites: cross-site content syndication via Celery, Zitadel SSO, Traefik TLS, Garage S3 object storage.
- Delivered two further `.go.ke` public sites: **techenvoy.go.ke** (Office of the Special Envoy on Technology, Django + Tailwind) and **africaforwardsummit.go.ke** (Kenya government flagship summit, Dockerised).
- Led a team of 5 engineers and 3 researchers across concurrent platforms: picked the stack (Python, Django, Wagtail, Next.js, PostgreSQL, AWS plus self-hosted), wrote the technical roadmaps, and set the review and on-call standards.

### Senior Data Engineer

August 2024 – December 2025

*NeuralLabs Africa*

*Nairobi, Kenya (Remote)*

- Built a multi-tenant Picture Archiving and Communication System (PACS) from scratch, now live at 4 hospitals including **Murang'a County Level 5 Referral Hospital**. Scale: **15,768 studies**, **3.57M DICOM instances**, **14,990 patients**, **770+ GB** since October 2024.
- Cut printing and manual report distribution by replacing film with digital workflows: 412 radiology reports authored and 435 electronic study shares delivered to referring clinicians, reducing reporting turnaround.
- Wrote a Go authentication service (Echo, Bun ORM) with JWT auto-refresh, hospital-scoped RBAC, patient data anonymisation for Kenya Data Protection Act 2019 compliance, and PostgreSQL multi-tenant isolation. Implemented DICOM C-STORE, C-FIND, and C-ECHO via `pynetdicom` across 119+ storage contexts with JPEG-LS lossless transcoding.
- Owned the full AWS stack: 4 EC2 nodes, 3 RDS PostgreSQL, S3 image storage, Nginx TLS, plus a custom Go DICOM proxy with real-time monitoring and an HTML-to-PDF reporting pipeline (Chromedp). GitHub Actions CI/CD with automated health checks and zero-downtime deploys.

### Senior Data Engineer

July 2023 – August 2024

*SpaceAI Kenya*

*Nairobi, Kenya*

- Shipped a WhatsApp Business API ordering and field-reporting system on IBM Watson for Tanykina Dairy farmers, plus the data transformation pipelines that cleaned raw collection data into Power BI and AWS QuickSight dashboards used by operations leadership.

- Cut downstream discrepancies by 30% in the first quarter by adding ingest-time data quality checks that caught malformed records before they reached the warehouse.

### Data Scientist (Concurrent)

November 2023 – July 2024

Tectona Group

Nairobi, Kenya

- Built a Go and Python research tool for large-scale web scraping, semantic text analysis, and lead scoring used internally for competitive intelligence across multiple market segments.
- Wired up data pipelines and AI microservices that integrated OpenAI and Gemini into the company's internal products and client-facing tooling.

### Data Analyst

March 2022 – June 2023

Freight In Time Kenya

Nairobi, Kenya

- Built a web dashboard for freight quote entry and analysis, driving an 80% productivity tracking improvement across Kenya, Tanzania, and Uganda sales teams.
- Analysed quote data from 8 branches, surfaced pricing gaps, and presented findings that triggered a company-wide pricing overhaul.

## PERSONAL PROJECTS & SAAS

---

**LightningPDF** · Sub-100ms PDF generation API for HTML, CSS, and Markdown

[lightningpdf.dev](https://lightningpdf.dev)

- Go 1.24 (Echo) backend with Asynq task queue, Redis cache, MarotoV2 and pdfcpu, JWT auth, and S3-compatible storage. Public REST API serving documents for two of my other shipped products.

**ThunderHooks** · Webhook capture, replay, and debugging tool

[thunderhooks.com](https://thunderhooks.com)

- Go (Echo) backend, templ + HTMX + Alpine.js frontend, per-tenant Turso (libsql) database isolation, JWT plus GitHub and Google OAuth, real-time delivery dashboard.

**devformat.tools** · 54+ free developer tools, blog, and MCP server

[devformat.tools](https://devformat.tools)

- Go 1.25 monolith hosting 54+ in-browser developer tools alongside an MCP (Model Context Protocol) server, blog engine, admin, and ad-rotation system. SQLite store, Dockerised deploy.

## EDUCATION

---

**Data Science & Machine Learning Certificate**

July 2021 – January 2022

Moringa School

Nairobi, Kenya

**Diploma, Electrical & Electronic Engineering**

September 2018 – April 2021

Nairobi Technical Training Institute

Nairobi, Kenya

## ACHIEVEMENTS & OPEN SOURCE

---

**Fintech Hackathon Winner** · Sankalp 2022, sponsored by I&M Bank

[Profile](#)

**Speaker** · "Data Science Pipeline in Business" at Women Techmakers Nairobi 2023

[GitHub](#)