

BETINI AKARANDUT

Backend & DevOps Engineer | Data-Driven Systems | Agricultural Technology

PROFESSIONAL SUMMARY

Backend & DevOps Engineer with 3+ years of experience building and operating data-intensive technology systems across agricultural technology, AI-enabled platforms, payments, and digital services. Currently lead backend and infrastructure work for TracTrac, a Nigerian agricultural mechanization platform supporting farmers and service providers across low-connectivity environments. My work spans backend architecture, offline-first systems, data infrastructure, geospatial services, payments, and event-driven systems. With a BEng in Chemical Engineering and a strong quantitative foundation in mathematics, statistics, numerical methods, modelling, and programming, I am pursuing advanced training in data science and decision analytics to build intelligent, resilient technology that addresses practical development challenges in Nigeria and across Africa.

PROFESSIONAL EXPERIENCE

TRACTRAC, Abuja, Nigeria | Lead Backend/DevOps Engineer | Feb 2025 – Present

- Architect and operate two production FastAPI backends supporting **60,000+ registered users** on a nationwide agricultural mechanization and logistics platform.
- Led an **offline-first system** for tractor and labour-saving-device requests in low-connectivity areas, expanding digital access for remote farming communities and replacing reliance on a paid third-party data-collection tool.
- Built reporting infrastructure that reconciles platform and field data for monitoring **hectares mechanized, farmers reached, revenue, cooperatives, states, and service delivery**.
- Built GPS-based farm measurement and offline synchronization/reconciliation workflows, alongside payment, notification, and operational systems supporting agricultural service delivery.
- Provisioned and migrated infrastructure to a self-managed **Contabo VPS and Coolify**, managing 20+ containerized applications and reducing infrastructure costs through capacity modelling and right-sizing.
- Designed Kafka/outbox event flows, Redis caching, PostgreSQL/PostGIS infrastructure, Celery workers, and PgBouncer transaction pooling.
- Diagnosed and resolved production performance issues, including redesigning a high-load administrative dashboard around page-scoped fetching and server-computed summaries.
- Provided field and technical support and trained mechanization service providers in **Nasarawa and Kaduna** on technology used to support smallholder farmers.
- Delivered monthly and quarterly technical reporting supporting program monitoring and donor documentation.

SOLARAFRIC (FEEXET LIMITED), Remote | Backend/DevOps Engineer (Contract) | Apr – Jun 2026

- Engineered backend infrastructure for an AI-assisted solar equipment diagnostics platform integrating vision inputs, structured LLM outputs, equipment/location data, and technician context.
- Built escrow-style payments, technician communication, file-storage fallback, and learning-management workflows end-to-end.
- Delivered the backend independently from architecture through production implementation.

VITAL 2 (IKORE INT'L DEVELOPMENT) | Backend/DevOps Engineer | May – Aug 2026

- Delivered a production-ready farmer field-operations platform within **six weeks**, supporting offline data capture in low-connectivity areas and onboarding **5,000+ farmers**.
- Built voucher and QR-code workflows contributing to a **15% increase in farmer onboarding**, alongside bulk data import with rollback and audit trails.
- Served as the **sole backend engineer** supporting two frontend engineers, owning backend updates, bug resolution, production support, and post-review improvements.

SUBSEL DIGITAL SERVICES, Remote | Co-Founder | Sep 2026 – Present (Pre-launch)

- Co-founded a digital services venture with the vision **"Where Innovation Meets Opportunity."**
- Building platform infrastructure spanning marketplace, payments, subscriptions, rewards, and commission workflows.
- Developing the venture alongside my younger brother as part of supporting his professional development in digital marketing.

JOIN MOMENTUM, Dover, Delaware, USA | Backend Developer | Jun 2024 – Jan 2025

- Designed scalable Django REST APIs for an AI-powered Job Simulator platform, reducing response time by **25%** and integrating OpenAI GPT and LangChain for automated candidate feedback.
- Integrated secure digital badge APIs using OAuth2, increasing engagement by **40%**, while automating workflows that reduced errors by **30%**.
- Mentored junior developers, two of whom progressed into key contributors, while collaborating within Agile Scrum teams.

RETINY, Port Harcourt, Nigeria | Backend/Mobile Engineer | Mar – Jun 2024

- Designed APIs with Swagger, 2FA, OAuth, role-based mobile routes, standardized error handling, Postman testing workflows, and Nginx load balancing.

ALX-AFRICA | Backend/DevOps Engineer | Jan – Oct 2023

- Built secure authentication and user-management systems, designed cross-service database schemas, and deployed APIs on AWS EC2 with logging, validation, and error tracking.

EDUCATION

University of Port Harcourt — B.Eng. Chemical Engineering | 2017–2024

CGPA: 3.72/5.00 | Second Class Honours (Upper Division)

Relevant quantitative coursework: Calculus • Probability & Statistics • Numerical Methods & Computer Applications • Mathematical Modelling & Operations Research • Computer Programming for Engineers

CONTACT

betiniakarandut@gmail.com
+234-7011933504
betini.onrender.com
github.com/betiniakarandut
linkedin.com/in/betiniakarandut/

TECHNICAL SKILLS

Programming & Frameworks: Python (FastAPI, Django, Flask), JavaScript/TypeScript (Node.js, React, Next.js)

Data & Distributed Systems: PostgreSQL, PostGIS, Redis, Kafka, Celery, MySQL, MongoDB, Outbox Pattern, PgBouncer

Cloud & DevOps: Docker, Docker Compose, Contabo VPS, Coolify, Render, AWS EC2, GCP, GitHub Actions, Azure DevOps, Alembic

AI & Integrations: OpenAI, LangChain, LangGraph, Paystack, Firebase/FCM, CommCare, Contentful

Engineering & Tools: REST APIs, OpenAPI/Swagger, OAuth2, WebSockets, Socket.IO, Testing, TDD, Git, Linux, Nginx

CERTIFICATIONS & ACHIEVEMENTS

- Bertelsmann Gen-Y Tech Booster Scholarship Recipient — 2024**
- Software Engineering Certification — ALX/Holberton School — 2023**
- AWS Machine Learning Foundations Scholarship Recipient — 2022**
- Hacktoberfest Winner — Open-Source Contribution — 2022**
- Web Development Certification — Zero to Mastery Academy — 2022**
- AWS Certified Solutions Architect – Associate — In progress, expected 2026**

COMMUNITY & SERVICE

Clean Sweep Community, Abuja, Nigeria | Volunteer

- Participated in community cleanup activities at a refuse dump site, helping clear and pack waste and advocating for practical waste-bin solutions to improve local waste management.

TECHNICAL WRITING

Engineering & Technology Writer — Hashnode

Publish technical articles on production AI systems, PostgreSQL performance and connection pooling, cloud deployment security, and engineering lessons from Nigerian agricultural technology.

KEY PROJECTS

- TracTrac** — Agricultural mechanization and logistics platform (60,000+ users)
- VITAL 2** — Farmer field-operations platform (5,000+ farmers)
- SolarAfric** — AI-assisted solar equipment diagnostics platform
- SubSel** — Digital services marketplace (pre-launch)
- Job Simulator** — AI-powered interview simulation platform
- Open Source** — Hacktoberfest contributions