KITANDWE ARTHUR

Full-Stack Engineer · React · Next.js · React Native · Node.js · PostgreSQL

Kampala, Uganda · Remote (UTC+3, flexible across European and US hours)
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PROFESSIONAL SUMMARY

Full-stack engineer with two years building and operating production web and mobile products end to end. Sole engineer on PesaFii, a live multi-tenant WiFi billing platform covering the React dashboard, the React Native app, the Node and PostgreSQL backend, and the RADIUS and router infrastructure beneath it, delivering over 1,800 commits and roughly 214,000 lines since February 2026. Equally comfortable trimming bytes off a captive-portal critical path, enforcing ledger correctness on real mobile-money transactions, and proving cross-site failover in production. Available for remote contract or full-time work.

TECHNICAL SKILLS

Frontend: React, Next.js (App Router), TypeScript, JavaScript (ES2023), Tailwind CSS, MUI, Radix and shadcn, GSAP, Framer Motion, Recharts, react-hook-form, Zod, next-intl, responsive and mobile-first UI

Mobile: React Native, Expo (SDK 54), React Navigation, Zustand, EAS Build, offline-tolerant state, themed component systems

Backend: Node.js, Express, REST API design, JWT authentication, TOTP two-factor, Redis (ioredis), background workers, idempotency, rate limiting, observability

Data: PostgreSQL, Drizzle ORM, Neon serverless, Supabase, SQL performance tuning, schema migrations, multi-tenant isolation, ledger modelling

Infrastructure: Cloudflare Workers, Vercel, Linux VPS, PM2, nginx, WireGuard, Git, CI/CD, staged migration and rollback design

Domain: Mobile-money payments, wallet ledgers, fee accounting and payouts, FreeRADIUS, MikroTik RouterOS v7

PROFESSIONAL EXPERIENCE

Freelance Full-Stack Engineer, Remote

2024 to present · Client work across Uganda and East Africa

PesaFii: Multi-tenant WiFi Billing and Payments Platform

Sole engineer · February 2026 to present · React, React Native, Node.js, PostgreSQL, Redis, FreeRADIUS, MikroTik

- Designed, built and operate the entire platform single-handedly: a 296-file React dashboard, a 114-file React Native and Expo mobile app spanning 16 feature areas, a 184-file Node and Express API, and a PostgreSQL schema evolved across 83 migrations, with 1,807 commits to date.
- Cut time-to-first-data on the customer captive portal by restructuring the critical path, moving the package request from 83.9 KB (83.5%) into the document down to 2.3 KB (2.0%), a 97.3% reduction, and removing roughly 330 ms of DNS, TCP and TLS handshake using parse-time preconnect. Returning devices now paint from cache with no network at all.
- Closed a duplicate-charging defect on mobile-money payments by making payment initiation idempotent when the portal loses its intent identifier, a fault that was taking real money from real customers twice.
- Built a Redis-backed session cache with revocation fencing so a cached positive can never resurrect a revoked session, plus startup reconciliation of outstanding fences, while keeping PostgreSQL as the sole authority on session validity.
- Delivered RADIUS high availability across two geographic sites and proved failover end to end, then made CoA disconnects site-aware so each router is reached over the tunnel it is genuinely attached to rather than the one that reported it.
- Removed four N+1 query patterns and collapsed dashboard request waterfalls, working against a 107 ms application-to-database round trip where every avoidable query is visible to the user.
- Engineered wallet, transaction-fee and payout flows treating the ledger as the source of truth: gross sale credits separated from fee debits, idempotent voucher-fee charging, PIN and OTP authorisation, reserved-funds accounting and full audit trails.

- Wrote 152 test files covering payments, ledger integrity, tenant isolation, RADIUS accounting and failover behaviour.

Duya Discoveries: Tourism Discovery Platform

Client project · June 2025 to present · Next.js, TypeScript, Neon PostgreSQL, GSAP

- Rebuilt an earlier static HTML site into a typed, server-rendered Next.js App Router application backed by Neon serverless PostgreSQL.
- Implemented multi-language support with next-intl and a GSAP-driven motion layer, with Zod validation across data boundaries.

Pearl Trails: Lodge and Campsite Booking

2026 · Next.js on Cloudflare Workers, Drizzle ORM, Neon PostgreSQL

- Built the launch release on Next.js deployed to Cloudflare Workers via OpenNext, chosen deliberately for edge delivery and low operating cost at launch traffic levels.

Agrinal Enterprises: Company Platform

2026 · Next.js, TypeScript, Drizzle ORM, Neon PostgreSQL

- Built a TypeScript Next.js platform with a Radix-based component system, Framer Motion interactions and Zod-validated forms.

SELECTED PROJECTS

- **Tahlia Fischer:** Next.js application integrating Google Genkit AI, a complete Radix and shadcn design system, react-hook-form with Zod validation, and Recharts data visualisation.
- **Catalog SaaS:** multi-tenant product catalogue built on Next.js and Supabase with Zustand state management and typed form validation.
- **Telegram Mini Apps** (LUXVERSE, Qryptal): JavaScript mini-applications built against the Telegram WebApp platform.
- **Alchemist Trading:** MQL5 expert advisor and companion TradingView indicator for automated trading strategy execution.

EDUCATION AND CERTIFICATIONS

Certificate in Computer Science, YMCA Comprehensive Institute, Uganda (2026)

Relational Databases Certification, freeCodeCamp

Responsive Web Design Certification, freeCodeCamp

AVAILABILITY

Open to remote contract or full-time engagements and available to start immediately. Based in Uganda (UTC+3) with flexible working hours and reliable daily overlap with European and United States business hours.