

Gerald Ikem

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SKILLS

Languages: Java 17/21, Kotlin, SQL, Python, TypeScript, JavaScript, C/C++

Backend: Spring Boot, Spring Security, Spring Data JPA/Hibernate, JDBC, REST APIs, JWT, Flyway, Node.js/Express

Cloud: AWS (EC2, VPC, Lambda, API Gateway, S3, IAM, ECR, EKS), Docker, Kubernetes, GitHub Actions

Data and testing: PostgreSQL, Redis, HikariCP, JUnit 5, Testcontainers, integration testing

PROFESSIONAL EXPERIENCE

Backend Engineer | Payaza Limited | Nov 2025 - Present

- Built a foreign-exchange rate-management module end to end in Java 17 and Spring Boot: currency-pair buy and sell rates, a change-audit history filterable by currency code, and analytics endpoints that attribute every rate to its source.
- Extended the checkout payment service with Redis-cached fee recalculation, duplicate-reference rejection, per-currency decimal rounding and support for ZAR, AED and XAF, and replaced console output with structured asynchronous logging.
- Built admin controls for which payment options each merchant can offer at checkout, and fixed the enable/disable logic behind them.
- Delivered merchant-onboarding features: scheduled onboarding-reminder emails, admin uploads of KYC documents on a business's behalf, and country, currency and bank lookup APIs.
- Secured back-office MFA administration with TOTP soft-token provisioning, an enable/disable toggle API, caller authentication against the admin user store and an audit entry for every privileged change.
- Diagnosed a multi-tenant persistence bug that silently reverted MFA updates; bound the tenant context before re-reads and forced a transactional flush so saved settings held across requests.
- Fixed three notification-settings defects (updates that reverted, came back blank or reached outdated recipients) and wrote the service's first unit tests: 10 JUnit 5 cases covering the rebuilt logic.

Web Developer, Part-time | Believer's LoveWorld | Sep 2021 - Present

- Maintain the ReachOut World Day and ROCK Solid campaign websites, improving form validation, accessibility and signup and donation flows.
- Adapted Linkify into the organization's campaign-link tool, with branded short URLs, social previews and click tracking.

PROJECTS

Linkify - Link Management and File Sharing | uselinkify.com

- Built a modular Spring Boot (Java 21) and Next.js product for short links, custom slugs, expiry, QR codes and click analytics, with private S3 multipart file sharing up to 1 GB.
- Designed the redirect path as a Redis cache in front of PostgreSQL that also caches unknown codes for 60 seconds, re-checks expiry on every hit and falls back to PostgreSQL when Redis is down.
- Moved click recording onto a bounded background executor that sheds work instead of slowing redirects, and counted unique visitors with a daily-rotating SHA-256 hash so no IP address is stored.
- Wrote 244 passing tests, including Testcontainers integration tests on real PostgreSQL and Redis that prove concurrent custom-slug claims produce exactly one winner and a replayed refresh token revokes the whole session family.

Threadfern - Concurrent Web Crawler | threadfern.dev/demo

- Built a Java 17 crawler and searchable metadata index with a bounded worker pool, URL deduplication, robots.txt rules, request pacing and strict crawl limits.
- Implemented atomic page and link writes with JDBC transactions; verified PostgreSQL rollback, URL uniqueness and persistence across Docker restarts.
- Exposed authenticated APIs for crawl progress, cancellation, saved history, broken-link reports and CSV/JSON exports.

EDUCATION

University of Illinois Urbana-Champaign | Master of Computer Science | Aug 2026 - Expected May 2028

York University | Honours BSc, Computer Science | Apr 2025