TIMOTHY NDICHU

FULL-STACK SOFTWARE ENGINEER | BACKEND & BANKING INTEGRATIONS

Nairobi, Kenya | +254741095752 | timndichu@gmail.com
linkedin.com/in/timothy-ndichu | timndichu.github.io

PROFESSIONAL SUMMARY

Full-stack software engineer with 6 years of experience shipping web, mobile, and backend systems, from e-commerce and payment integrations to production core banking platforms for central and commercial banks. Recently delivered integration, performance, and reliability work across Temenos Transact (T24), Kafka, and Java services, including a concurrency redesign that cut batch processing time by 78% and cleared 119,177 offline ATM transactions in 26 minutes. Strongest in React/Next.js, Node.js, Java, and PostgreSQL.

TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, SQL
Frontend & Mobile: React, Next.js, Redux, Tailwind CSS, Flutter
Backend & APIs: Node.js, Express, REST APIs, WebSockets, microservices, multithreading
Databases: PostgreSQL, SQL Server, MySQL, MongoDB, indexing, table partitioning
Cloud & DevOps: AWS, Docker, Red Hat OpenShift, Linux, JBoss, CI/CD, Git
Messaging & Banking: Apache Kafka, Apache Spark, Temenos Transact (T24), Temenos Data Hub, M-PESA, Flutterwave
Practices: API integration, payment processing, observability, performance tuning, production support

PROFESSIONAL EXPERIENCE

INLAKS LIMITED | Fintech Consultant / Banking Technology Architect *November 2023 – Present*

National Bank of Malawi PLC, Malawi | Digital Channels & Transaction Processing

- Built a multithreaded background service that processes loaded transactions concurrently, cutting processing time by 78% (3 min to 40 secs for 762 transactions) and clearing 119,177 offline ATM transactions in 26 minutes.
- Diagnosed T24 connectivity bottlenecks across 30+ channel services and tuned connection pools, reducing timeouts and improving response times.
- Removed a single-adapter bottleneck by migrating 30+ services from the default core adapter to custom TCP adapters, ending the resource contention that was causing timeouts.
- Refactored legacy integrations for performance and compatibility after a Temenos Transact upgrade.

Central Bank of Kenya (CBK), Kenya | Data Streaming & Infrastructure

- Built and enhanced services streaming banking events from Apache Kafka into Temenos Data Hub for downstream analytics and reporting; contributed to data modeling for the streamed data.
- Indexed core tables such as CUSTOMER and partitioned large FUNDS.TRANSFER tables, improving read/write performance.
- Supported deployment of Temenos Data Hub on Red Hat OpenShift using Docker-based workloads, including Kafka and Spark.
- Managed JBoss and Linux environments and supported production deployments and operational stability.

GTI Bank, Sao Tome and Principe | API Reliability & Database Operations

- Resolved a production issue that drove API failure rates as high as 90% by optimizing database performance and correcting interface authentication configuration, ending repeated service-account lockouts and restoring reliable transaction processing.
- Aligned timeout configuration across application layers, eliminating premature timeouts between services.
- Corrected middleware handling of Override and business-error responses, which were being treated as retriable failures and leaving transactions pending.
- Implemented idempotency for Funds Transfer using a unique transaction identifier, preventing duplicate postings when failed transactions are retried.
- Traced failures using application logs and observability tools, and hardened API implementations for resilience under load and future transaction growth.
- Documented transaction-log management procedures to reduce the risk of database storage exhaustion.

Akiba Commercial Bank PLC, Tanzania | Core Banking Upgrade & Mobile APIs

- Retrofitted legacy code for compatibility with a newer Temenos Transact release, addressing integration issues raised by the core banking upgrade.
- Developed and enhanced approximately 20 APIs/services connecting mobile banking applications to T24

ADDITIONAL PROFESSIONAL EXPERIENCE

App Town Technologies, Kenya | CTO & Full-Stack Developer *January 2023 – November 2023*

- Led technical direction for J-Uza (j-uza.com), a multi-vendor marketplace connecting customers with reviewed providers of sustainable products and solutions, built with Next.js, React, Redux, Node.js, and PostgreSQL.
- Directed a small product team of a junior developer, an external developer, and a UI designer, setting architecture and delivery priorities in partnership with the CEO and platform admins.
- Designed the REST API layer behind product, vendor, inventory, order, and transaction workflows, supporting the onboarding of 5+ major vendors across East Africa.
- Built vendor tooling for product listings, inventory tracking, and order administration, letting providers manage their own catalog and fulfillment.
- Integrated M-PESA and Flutterwave to support mobile-money and card payments at checkout.

Ecospace Services Ltd, Kenya | Full-Stack Developer *January 2022 – January 2023*

- Built web and mobile features for Ecofield, a geospatial portal that lets organizations securely publish, visualize, and query spatial datasets for land, agriculture, planning, and infrastructure projects, using React, Node.js, and Flutter.
- Built upload and mapping tools supporting KML/KMZ, Shapefile, and GeoJSON, letting clients define and visualize resource boundaries for agriculture, transportation, and natural-resource management.
- Worked with government organizations and cross-functional teams to turn requirements into working software

Kicks and Heels, Kenya | Co-founder & Full-Stack Developer *August 2020 – December 2021*

- Co-founded and built a cross-platform mobile app dedicated to selling shoes in Kenya, among the first of its kind, using Flutter, Node.js, and MongoDB, with M-PESA and Flutterwave payments.
- Led university marketing campaigns that drove 100+ purchases within days and brought in orders from across multiple counties.
- Prevented overselling with atomic database-level stock updates, so out-of-stock items couldn't be ordered during concurrent checkouts.
- Built backend services for authentication, product management, and order processing, and owned architecture, database design, AWS deployment, and maintenance.

Nywele Nyumbani, Kenya | Freelance Frontend Developer *December 2020 – January 2022*

- Built the booking and scheduling system for a platform connecting clients with hairstylists, with real-time slot availability and appointment management for stylists.
- Developed responsive web and mobile interfaces in Flutter, giving clients a consistent booking experience across devices.

SELECTED PROJECTS

1U Nanosatellite Development | Kenya Space Agency *May 2021 – October 2021*

- Built a mobile app and responsive web dashboard for nanosatellite telemetry received through a VHF ground station, using WebSockets for near-real-time updates.
- Contributed to development, testing, and integration with a multidisciplinary engineering team.

What I Do | Real-Time Social Audio Platform *February 2023 – July 2023*

- Built a real-time audio chatroom using Node.js and WebSockets, with room management, participant controls, audio recording, and playback.

EDUCATION & TRAINING

BSc Electronics and Computer Engineering, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Second Class Honors, Upper Division *June 2023*

Computer Programming Training, Institute of Advanced Technology (Java and VB.NET)