

Aaron Mwirigi Kailikia

Senior Full-Stack Software Engineer | Enterprise systems · ERPs · FinTech · Observability

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Professional Summary

Senior full-stack engineer delivering enterprise-grade systems end to end — microfinance, ERP, LMS, biometrics, insurance and licensing platforms and vertical SaaS — for finance, education, energy and entertainment clients at Techsavanna. On Safaricom engagements, delivered a full-stack OCR project and led frontend for a mobile-apps observability platform. Focused on performance, security, scalability and clean architecture.

Core Skills

Mobile: Flutter, Dart, React Native, Android (Java, Kotlin), iOS (Swift)

Frontend: TypeScript, JavaScript, React, Next.js, Vue 3, Tailwind CSS, Bootstrap

Backend: Java / Spring Boot, Node.js (Express, NestJS), Python (Django, Frappe), PHP (Laravel, Symfony, CodeIgniter), Go, REST APIs

Platforms & integrations: Frappe / ERPNext, Apache Fineract, Moodle, M-Pesa, KRA TIMS, Biometric devices

Data: PostgreSQL, MySQL / MariaDB, Redis, ClickHouse, SQL

Cloud & DevOps: Docker, AWS, GCP, Oracle Cloud, GitHub Actions, Bitbucket Pipelines, Jenkins, Terraform, Ansible, CloudFormation, nginx, Linux, Nagios, Dynatrace

Ways of working: Agile / Scrum, Jira, Git, Stakeholder management, Customer training & support

Professional Experience

Senior Full-Stack Software Engineer | Techsavanna Technology, Nairobi County, Kenya Jul 2022 – Present

- **Fintech & insurance:** delivered microfinance systems and Heritage Insurance systems, including the Bima Yetu mobile app and its TypeScript / Java Spring back office.
- **ERP & vertical SaaS:** built ERP platforms and vertical products for spas, barbershops and salons, gyms, property management and school canteens.
- **Biometrics & operations:** delivered a biometrics management system with ZKTeco device integration, visitor management and an energy meter gauge solution.
- **Education & licensing:** shipped a Moodle-based LMS and the MCSK music-licensing solution with its cross-platform mobile app.
- Built Java/Spring REST APIs and integrations with KRA TIMS invoicing, CRM systems and M-Pesa; delivered Flutter, React Native and Java Android apps.
- Set up CI/CD with Bitbucket and GitHub Actions, deployed on premise and to Oracle Cloud and AWS, and supported and trained customers in Scrum delivery.

Software Engineer (Liquid Workforce engagements) | Safaricom PLC

- Delivered a full-stack OCR project.
- Led frontend development of a mobile-apps observability platform: a Next.js dashboard for crash, performance and network telemetry from Android and iOS SDKs.

Remote DevOps Engineer | Upwork (freelance), Remote

Aug 2023 – Present

- Packaged applications into Docker containers and deployed them to AWS and GCP.
- Built CI/CD pipelines and automated build and release processes; diagnosed and fixed production issues with client teams.

Quality Assurance Engineer | Spectrum Engineering

Apr 2021 – Jul 2022

- Developed the company quality matrix and procedures, including quality strategy, KPIs and periodic evaluation metrics.
- Reviewed requirements, quality specifications and technical design documents, and introduced regular customer alignment meetings.

Selected Projects

Palla Credit | Flutter, Dart, Provider, Apache Fineract, Java, Next.js

- Built a Flutter app for field loan officers on Apache Fineract: KYC client onboarding with an officer approval pipeline, live loan detail and PDF statements.
- Added Fineract sign-in with optional email OTP two-factor authentication and secure session storage; earlier delivered the Java Android version.
- Rebuilt the legacy AngularJS Mifos back-office as a Next.js loan-management dashboard on the Fineract API.

TechSavanna POS | Frappe, ERPNext, Python, Next.js, Flutter, M-Pesa

- Built a multi-tenant POS SaaS as a Frappe/ERPNext app exposing 570 whitelisted API endpoints across 58 modules.
- Integrated M-Pesa payments and delivered a salon & spa vertical (Next.js) plus a Flutter mobile POS.

APEX-BIO SaaS | Java, Spring Boot, MySQL, Next.js, nginx, Docker

- Built a multi-tenant workforce and property-management SaaS as seven Spring Boot 3 microservices (auth, devices, HR, attendance, reports, property, gym) behind an nginx gateway, with a Next.js 16 front end.
- Integrated ZKTeco biometric devices over the iClock push protocol; JWT auth with per-tenant isolation and module toggling.

Learning Management Platform | Moodle, PHP, React, TypeScript, Vite, MariaDB, Docker

- Packaged Moodle 5.2 with a custom theme, learner/tutor dashboard and ERPNext fee blocks into a single Docker image.
- Built a React + Vite student portal on Moodle: courses, quizzes, assignments, forums and certificates.

Apex Tech Global | JavaScript, Node.js, Express, JWT, Docker, nginx

- Built the company website and an admin CMS (Node.js/Express, JWT auth, media uploads), containerised with Docker behind nginx; live at apextechglobal.co.ke.

Other Projects

- **Parliament Management System** — transparency, member and admin portals for bills, sessions and voting (Next.js, NestJS, PostgreSQL, Redis)
- **Boardify** — board meetings, agendas, evaluations, elections and approvals (Next.js, Express, Prisma, PostgreSQL)
- **School Transport System** — buses, routes, stops and trips with parent notifications (Next.js, Express, Prisma, PostgreSQL)
- **SheriaHub** — paid legal-content marketplace with M-Pesa checkout (Next.js, Express, Prisma)
- **SomaCheza** — Android app with parent accounts, progress sync and M-Pesa subscriptions (Capacitor, Fastify)
- **Chama Group** — savings-group contributions, loans and repayments (Flutter, Express, Prisma)
- **KALRO Grievance App** — anonymous and confidential grievance reporting and tracking (Flutter)
- **TechSavanna SaaS front ends** — POS, HR & payroll, school ERP and ERP apps (Vue 3, TypeScript)
- **Apex Social** — real-time messaging (Express, Socket.IO)
- **Client apps** — Hero Learning CBC, RiverCourt PMS, Domestic Workers, Safaribust PWA; PHP POS and hospital systems (Flutter, Java Android, React Native, MERN, PHP)
- **Open source on GitHub** — OCRProd, ZK-Middleware, SchoolCanteenMS, SchoolBusPlanBackend, TeacherPortal, National ID replacement system (TypeScript, Python, Java, PHP, Kotlin)

Achievements

- Employee of the Year 2023 at Techsavanna for commitment and quality project delivery.
- Best team and best project ("Touch a Life with Tafsiri") at the Safaricom PLC TechAcademy pitch, 2022.
- Key developer on the Africa Climate Summit 2023 application.
- I4G x Zuri Cohort 2 scholarship, Ingressive for Good.

Education

BSc Computer Science (Computer Software Engineering) — **Second Class Honours, Lower Division** — Laikipia University, Sep 2018 – Dec 2022

Kenya Certificate of Secondary Education — B- (60/84) — Thitha High School, 2014 – 2017

Certifications

Google Cybersecurity Certificate — Tomkin Outreach, 2024 – 2025

Oracle Cloud Infrastructure Data Management Associate — Oracle University, 2023

Oracle Cloud Associate — Oracle University, 2023

Responsive Web Design — freeCodeCamp, 2023

AWS Associate certification — Amazon Web Services, In progress