

BENSON KAMAU

Software Engineer | Fintech · Enterprise Systems · Microservices

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PROFESSIONAL SUMMARY

Backend Software Engineer focused on fintech infrastructure and enterprise systems. I build microservices platforms in Java Spring Boot that handle regulated financial workflows from invoice discounting and dealer lending to payment integrations with major Kenyan banks. I have led end-to-end delivery of platforms across supply chain finance, lending, and e-government payments, including a World Bank supported initiative that distributed over KES 10,000,000 in vaccine subsidies across Kenya.

WORK EXPERIENCE

Software Engineer · Stread Tech

February 2026 – Present | Nairobi, Kenya

- Developing an Enterprise Property Management System on a cross functional team using Microsoft Business Central (BC), streamlining property operations and financial management for enterprise clients.
- Contributing to system architecture, module development, and integration of BC workflows to digitize and automate property management processes.
- Collaborating with business analysts and stakeholders to translate operational requirements into scalable technical solutions.

Software Engineer · E&M Tech

February 2025 – Present | Nairobi, Kenya

BodaPlus — SACCO & Financial Inclusion Platform (Team/Tech Lead)

- Leading the architecture of BodaPlus, a multi-tenant microservices core-banking platform (Spring Boot, Kafka, PostgreSQL/Flyway, Eureka/Feign) digitizing SACCO and boda boda rider operations end-to-end onboarding, KYC, wallets, savings, loans, and welfare claims.
- Directed design of the financial engine loan origination through disbursement and repayment, a double-entry general ledger, and mobile money integration (M-Pesa STK Push, paybill, agency banking) replacing informal, cash-based SACCO record-keeping with an auditable digital platform.
- Leading the engineering team through service decomposition and multi-tenant architecture, taking the platform from initial build toward production rollout as a financial-inclusion initiative for an underserved rider population.

Mifugo360 / ANITRAC — Livestock Biometric Identification Platform

- Architected the Spring Boot backend for Mifugo360/ANITRAC, a livestock biometric identification system that captures and matches cattle muzzle prints analogous to a fingerprint via a detection-and-embedding ML pipeline (512-dimension vectors, cosine-similarity matching) to issue each animal a unique, traceable digital ID and prevent duplicate records.
- Enabled nationwide onboarding of close to 2 million cattle across Kenya, underpinning a World Bank supported vaccine subsidy program by giving every animal a verifiable identity for subsidy disbursement and tracking.
- Extended the platform with partner integration layers, an SDK for external onboarding partners plus data-sync integrations with KARLO (livestock research body) and a dairy partner (Meru) connecting biometric animal records across the wider agricultural ecosystem.

Reverse Factoring (Supply Chain Finance) Platform

- Architected a Spring Boot microservices backend for a supply chain finance platform connecting financial institutions, anchor buyers, and suppliers with Keycloak-based authentication, Eureka service discovery, and CBS integration for RTGS/EFT disbursements. Delivered and accepted by client, pending production deployment.
- Designed the end-to-end payment engine managing the full invoice financing lifecycle: multi-party transaction ledgering, Core Banking disbursement callbacks, repayment scheduling, and automated penalty computation on overdue loans.
- Engineered entity onboarding with multi-level KYC validation (IPRS, KRA, CRB integrations), S3 document management, tiered multi-FI program configuration, and Keycloak UMA role-based access control, replacing manual onboarding processes with a fully digital workflow.

Dealer Finance Platform

- Built and delivered a production-ready Dealer Finance platform for a licensed Kenyan microfinance bank, currently in pre-deployment architected on Spring Boot microservices with custom JWT authentication, centralized gateway token validation, and inter-service trust via signed API keys.
- Designed a tax-compliant loan engine with maker-checker approval workflows across dealer and FI levels, fee computation covering interest, processing fees, and excise duty per the Kenya Finance Act, pessimistic credit limit management, and automated 5-transaction ledger generation on disbursement.
- Delivered the full integration layer: Spring Cloud Gateway with dynamic route rewriting, Feign inter-service communication, Kafka audit eventing, multi-channel notifications (email, SMS, Firebase), bulk repayment via Excel upload, and enforced first-login credential workflows.

Fintech & Payment Systems

- Led payment integrations with major Kenyan banks, implementing B2B transfers, Inter-Fund Transfers (IFT), RTGS, EFT, and B2C payment flows, enabling seamless financial transactions at scale.
- Served as Team Lead on the E-Voucher Platform, a World Bank supported initiative that digitized vaccine subsidy payments for farmers across Kenya. The platform enabled farmers to pay subsidized amounts from their phones to county collection accounts, with automated distribution to vaccine providers, county and national government bodies, and ground level vaccination workers. The system successfully collected and distributed over KES 10,000,000.

Quality Assurance

- Wrote and maintained unit and integration tests to validate business logic and API contracts, ensuring reliable, regression-free releases across payment and management system modules.
- Conducted code reviews and enforced coding standards across backend services to improve overall code quality and team consistency.
- Collaborated with stakeholders during UAT cycles to validate system behaviour against functional requirements before production deployment.
- Identified and resolved bugs across payment and management system modules, reducing production incidents and improving system stability.

Freelancer: Data Engineer • Omdena

June 2024 – December 2024 | Remote

- Collected and cleaned large datasets from diverse sources, ensuring high quality data for analysis and ML modelling pipelines.
- Applied data wrangling techniques using Pandas to preprocess data for machine learning models and analytics.
- Conducted exploratory data analysis to identify trends, patterns, and anomalies using Pandas, Matplotlib, and Seaborn.
- Developed interactive dashboards using Tableau to communicate key project insights to stakeholders and team members.

Data Analyst — Bancassurance • NCBA Group

March 2023 – January 2024 | Nairobi, Kenya

- Performed detailed analysis on commission receivables, ensuring accurate and timely reporting for daily commissions worth ~KSh 500,000, improving transparency in payment tracking.
- Led reconciliation of premium collection accounts, managing credits worth KSh 30 million monthly in compliance with SLAs.
- Analyzed and resolved premium related discrepancies, processing over KSh 200,000 in daily transactions to support efficient claims and refund workflows.
- Managed and updated Tableau performance dashboards to visualize sales performance and track business growth metrics.
- Developed custom visualizations using Matplotlib and Seaborn, delivering in depth insights to support data driven decision making.

Community Manager • Nairobi AI Community

January 2023 – Present | Nairobi, Kenya

- Developed and curated content highlighting trends and advancements in data science and AI.
- Organized webinars and meetups, fostering a network of data scientists, analysts, and industry professionals.
- Addressed community queries, providing insights and support on data science and machine learning topics.

LEADERSHIP

Team Lead: E-Voucher Platform · E&M Tech

2025

- Led end to end delivery of a World Bank supported vaccine subsidy payment platform, coordinating backend engineers, stakeholders, and integration partners to successfully distribute over KES 10,000,000 across Kenya.
- Defined technical architecture, managed sprint planning, and ensured delivery of a secure, scalable, and compliant payment system.

Team Lead: Kanisa Management System · E&M Tech

2025

- Directed the development of a full featured church management platform, overseeing system design, team coordination, and delivery of digital collections and financial transparency modules.

Tech Lead: BodaPlus · E&M Tech

2026 – Present

- Leading architecture and delivery of a multi-tenant SACCO core-banking platform for boda boda riders, directing service decomposition, the financial engine, and mobile money integration toward production rollout.

EDUCATION

Data Science Bootcamp · Moringa School

February 2023 – August 2023 | Nairobi, Kenya

- Completed rigorous training in statistical analysis, machine learning, and data visualization.
- Developed practical skills in Python, SQL, and data manipulation libraries; built and deployed data driven projects.

B.Sc. Actuarial Science · University of Nairobi

September 2018 – September 2022 | Nairobi, Kenya

- Graduated with Second Class Upper Honours.
- Core Modules: Data Analysis, Linear Algebra, Statistics, Programming Methodology, Probability Modelling, Time Series Analysis.

TECHNICAL SKILLS

Languages: Java, Python, R, SQL, JavaScript

Frameworks: Spring Boot, React, REST APIs

Architecture: Microservices, System Design, Payment Integration

Databases: MySQL, PostgreSQL, Google BigQuery

DevOps & Cloud: Docker, Azure, AWS, GCP

Enterprise: Microsoft Business Central (BC)

Security: Authentication & Authorization, Logging & Monitoring

Data & Visualization: Pandas, Matplotlib, Seaborn, Tableau

AI & Tools: Claude Code, Codex, MCP, CLI, Git, Microsoft Office Suite

CERTIFICATIONS

- Data Visualization | Kaggle (2021)
- Data Cleaning | Kaggle (2021)
- Python Programming | Kaggle (2021)
- Pandas | Kaggle (2021)