KEVIN SHAHALE VIDOLO

Senior Mobile Developer • Full-Stack Software Engineer • ML Enthusiast

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PROFESSIONAL SUMMARY

Senior Mobile Developer and Full-Stack Software Engineer in the final year of BSc. Information Technology at Masinde Muliro University of Science and Technology (MMUST). Experienced in architecting, developing, and deploying production-grade systems across consumer FinTech on Google Play, enterprise banking operations, and distributed cloud microservices. Proven engineering track record across cross-platform mobile architecture (Flutter), high-concurrency Go and Spring Boot backend services, relational spatial databases (PostGIS, PostgreSQL, Redis), and applied Machine Learning (XGBoost, Edge Computer Vision). Committed to architectural integrity, performance, and delivering high-trust solutions.

TECHNICAL EXPERTISE

Languages:	Dart, Go (Golang), Java, Python, TypeScript, JavaScript, SQL, C/C++, HTML5/CSS3
Mobile & App Dev:	Flutter, Android (Kotlin/Java), Google Play Console Publishing, Biometric Auth (local_auth), Secure Storage, Zero-Permission SMS Retriever API, Deep Linking, Firebase Messaging (FCM)
Backend & APIs:	Go (Chi Router), GraphQL (graph-gophers/graphql-go), Spring Boot, Node.js/Express, Hexagonal / Ports-and-Adapters Architecture, Domain-Driven Design (DDD), JWT RBAC, RESTful APIs
Databases & Cache:	PostgreSQL, PostGIS (Spatial Distance & Geo-queries), Redis In-Memory Caching, GORM ORM, Connection Pooling (pgxpool), MongoDB
Machine Learning:	XGBoost, Scikit-Learn Pipelines, Computer Vision, Edge NPU Inference, Uber H3 Spatial Indexing, Pandas, NumPy, Joblib, Google Gemini AI
DevOps & Hardware:	Docker, Docker Compose, Git & GitHub, Linux (Ubuntu Server), Embedded C/C++, ESP32 (Wemos Lolin32), SIM800C GSM, Leaflet GIS

WORK EXPERIENCE

Senior Mobile Developer • FamPesa (Lwatech Technologies) Active Role Google Play

Dec 2025 – Present | Nairobi, Kenya

Production FinTech mobile platform published on Google Play (fampesa.com)

- Spearheaded complete mobile architecture and release cycles for FamPesa on the **Google Play Store**, managing production rollouts and build signing.
- Architected multi-tier state management for Chama group savings, micro-loans, peer request authorizations, and mobile money transaction ledgers.
- Implemented Google Play policy-compliant, zero-permission OTP autofill via the **Google SMS Retriever API** and SMS User Consent API.
- Engineered biometric authentication (Fingerprint / Face ID) via `local_auth`, root/jailbreak tamper detection, and hardware-backed token encryption.
- Designed custom-scheme (`fampesa://invite`) and universal web deep-linking workflows for frictionless member onboarding and verification.
- Integrated Firebase Cloud Messaging (FCM) and optimized memory footprint, network caching, and compiled AppBundle sizes.

Software Engineer Intern • **Crowbyte Technology Limited** Active Role — June 2026 – Present | Nairobi, Kenya

Shambabot digital agricultural marketplace connecting farmers with products and logistics (shambabot.com)

- Develop high-performance backend microservices for Shambabot using **Java, Spring Boot, Domain-Driven Design (DDD)**, and Hexagonal Architecture.
- Built vendor and product lifecycle management including vendor verification, catalog publishing, operational permissions, and deactivation workflows.
- Improved marketplace product search discovery using PostgreSQL full-text search, trigram similarity (`pg_trgm`), and multilingual search ranking.
- Engineered inventory reduction, out-of-stock guards, order status transitions, and dispatch logistics APIs backed by PostgreSQL and Redis.

Full-Stack Software Engineer • **Guaranty Trust Bank (GTBank)** Enterprise Platform — 2026 | Nairobi, Kenya

Enterprise field-sales, anti-fraud verification, and offline sync platform (gtbank.crowbyt.com)

- Architected and developed enterprise backend services in **Go (Golang)** with Chi router, PostgreSQL 17, and PostGIS spatial extensions.
- Engineered a zero-code dynamic form schema engine with a dependency Directed Acyclic Graph (DAG) evaluating conditional rules (`SHOW`, `HIDE`, `REQUIRE`, `TRIGGER_TASK`, `FLAG_FRAUD`).
- Built proof-of-visit anti-fraud security using **PostGIS ST_DWithin** spatial queries, mock GPS detection, and 1 Agent = 1 Bound Device hardware fingerprinting.
- Developed an offline-first batch synchronization protocol with client-generated UUID idempotency, paired with Flutter mobile background workers.
- Built an administrative operations console with React, TypeScript, Leaflet, and Tailwind CSS for manager review queues, funnels, and spatial GPS heatmaps.

Full-Stack Software Engineer • **Thorn & Trails Safaris** Production Platform — 2026 | Nairobi, Kenya

Luxury East African safari booking engine, dynamic questionnaire builder & operations hub

- Constructed a high-concurrency **Go GraphQL API** using `graph-gophers/graphql-go`, GORM, and normalized PostgreSQL schemas for itineraries and inquiries.
- Engineered an administrative operations hub with a dynamic inquiry form builder allowing operators to customize questionnaire fields and rates in real time.
- Built a multipart media upload micro-handler in Go with MIME format validation, safe unique filename generation, static asset distribution, and CORS security.
- Developed responsive web interfaces using React, TypeScript, and Tailwind CSS with interactive safari planners and cost calculators.

Software Engineer • **Suvira Africa** Pan-African Platform — 2026 | Nairobi, Kenya

Pan-African digital research and policy platform (suviraafrica.org)

- Architected concurrent Go backend REST APIs, PostgreSQL database schemas, connection pooling, and secure JWT authentication.
- Built responsive client interfaces using React, TypeScript, and Tailwind CSS for workspace management and policy initiative tracking.

KEY MACHINE LEARNING & ENGINEERING PROJECTS

MB HEX V3 Land Valuation ML Engine — Python • XGBoost • Scikit-Learn • Uber H3 Spatial • Pandas

- Trained and optimized a production land valuation engine on **246,522 real-world parcel records** across 64 engineered geospatial dimensions.
- Integrated an **XGBoost Regressor** (3,000 estimators, max depth 8, hist tree method) with an automated rule-based Confidence Estimator.
- Implemented Uber H3 multi-resolution hexagonal spatial clustering (Res 7, 8, 9) and comprehensive GIS proximity distance modeling to infrastructure.

OpenFlexure Edge AI Microscope • Computer Vision Subsystem — C++20 • Computer Vision • Edge AI • NPU Acceleration • DMA-BUF

- Engineered the real-time edge computer vision and ML inference engine for digital microscopy in C++20 using Ports and Adapters architecture.
- Implemented neural network inference on on-device Neural Processing Units (NPU) to detect cell nuclei and mitotic phases in real time.
- Integrated zero-copy DMA-BUF frame buffers and direct DRM/KMS HDMI bounding-box annotation rendering.

IoT SMS Automation Gateway **ESP32 (Wemos Lolin32) • SIM800C GSM • Embedded C/C++ • Go • MQTT**

- Built an autonomous hardware SMS gateway converting microcontroller sensor thresholds into instant cellular text alerts in remote, low-connectivity zones.

EDUCATION & CERTIFICATIONS

BSc. in Information Technology • Masinde Muliro University of Science and Technology (MMUST) **Sept 2023 – April 2027 | Kakamega, Kenya**

Status: Final Year Scholar • Active Participant at MMUST-Ihub

- **Coursework:** Distributed Systems, Software Engineering, Database Systems, Computer Networks, Internet of Things (IoT).
- **Honors & Awards:** JS Developer of the Year 2023 • MMUST Hardware Innovation Award 2025 • Build with AI Finalist.

Professional Certifications **2023 – 2025**

- **Software Engineering Specialization:** PLP Academy (Flutter, Dart, Mobile Architecture) • 2025
- **Full Stack Web Development:** Cisco Networking Academy (React, Node.js, Web Technologies) • 2023

REFEREES

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