ERICK JILLO

Backend Engineer · Python · Go · Node.js/TypeScript · Payments

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PROFILE

Self-taught backend engineer and startup CTO who builds and runs production FinTech and marketplace platforms end to end. Builds in Python (FastAPI), Go and Node.js/TypeScript (Express, NestJS), with deep experience in East African payment rails (M-Pesa Daraja, Paystack, PayHero), Stellar/Soroban smart contracts and Linux operations, running three production servers on a self-hosted Headscale/Tailscale network with key-only SSH. Has shipped products used by real customers: a car rental marketplace (200+ users), a campus marketplace app (40+ users) and an ISP billing system (30+ subscribers).

TECHNICAL SKILLS

Languages	Python, Go, TypeScript, JavaScript (Node.js), Rust, C, Bash
Backend	FastAPI, Express.js, NestJS, Flask, Go net/http, gRPC/Protobuf, REST, Socket.IO, SQLAlchemy, Alembic, Prisma, sqlc, ARQ/Celery
Data	PostgreSQL, MySQL, Redis, ConvexDB
Payments & Web3	M-Pesa Daraja (STK Push), Paystack, PayHero, Stellar, Soroban, USDC
Infra & Testing	Docker, Nginx, GitHub Actions CI/CD, Headscale/Tailscale, Prometheus, Testcontainers, pytest, Jest, Linux, FreeRADIUS, MikroTik
Frontend	React, React Native (Expo)

PROFESSIONAL EXPERIENCE

Ardena: Car Rental Marketplace & Ardena Business

Feb 2026 – Present

Chief Technology Officer · Python, FastAPI, Go, PostgreSQL, Redis, Soroban

- Lead the FastAPI/PostgreSQL backend of a peer-to-peer car rental marketplace serving 200+ users, covering bookings, host payouts, chauffeurs and Dojah KYC with HMAC-verified webhooks.
- Built multi-rail payments: M-Pesa Daraja as the primary rail with automatic Paystack and PayHero fallback, STK Push for M-Pesa and Airtel Money, and failed-charge handling.
- Wrote the design for, and am building, a Go rewrite of the API (net/http, pgx, sqlc, JWT), shipped in chunks covering auth, catalogue, profiles and notifications; 54 test files, race-enabled CI, Testcontainers Postgres tests and Prometheus metrics, checked route by route against the Python API.
- Delivered Ardena Business, a B2B SaaS for fleet operators with staff invites, invoicing, a 30-day trial and payment wall.
- Wrote open-source Soroban contracts, live on testnet, that hold rental deposits and damage-waiver funds in USDC (Stellar Instawards).
- Secured the servers: SSH is reachable only over a self-hosted Headscale/Tailscale network with key-only login; CI/CD deploys join that network with short-lived keys, pin the server host key, and roll back on failure.
- Moved background jobs into a standalone ARQ/Redis worker and set up a staging environment.

Korva Ventures (formerly Bunifu Capital)

Feb 2026 – Present

Backend Software Engineer · Python, FastAPI, gRPC/Protobuf, Paystack, Mailgun, Docker

- Built an M-Pesa statement ingestion service that accepts statements by Mailgun inbound email from approved senders and extracts their transaction tables from the PDFs.
- Migrated the payment service to Paystack: fixed a critical HMAC webhook-signature bug, added server-side transaction verification, custom payment plans and automatic customer creation.
- Laid the gRPC/Protobuf foundation for the services and built a shared gRPC logging service with a request-logging interceptor and log streaming.
- Moved service-to-service JWTs from HS256 to RS256 so each service verifies tokens with a public key.

KEY PROJECTS

Vendas: Campus Marketplace

Live on Google Play · vendas.co.ke

Founder & Lead Engineer · Node.js, Express, Prisma, PostgreSQL, Socket.IO, React Native (Expo)

- Launched at Egerton University with 40+ active students; marketplace API has maintained 99.9% uptime.
- Built Paystack seller payouts and buyer refunds, real-time chat, Firebase push notifications and Google sign-in, plus a React admin dashboard with moderation, real-time support tickets and AI safety checks.

ISP Billing & Hotspot Platform

Freelance · In Production

Full-Stack Engineer · TypeScript, Express, Prisma, MySQL, FreeRADIUS, MikroTik, React, Docker

- Built PPPoE and hotspot billing on MikroTik, enforced through FreeRADIUS and paid via M-Pesa, for 30+ subscribers.
- Added M-Pesa callback reconciliation to stop double-crediting, RADIUS-enforced suspension and nightly off-server backups.

Open Source

github.com/Ericode254

- **PassTUI** (Rust): terminal UI for the pass password manager with an Argon2id master password, Browserpass integration, CodeQL scanning and attested releases.
- **Swift Deliver API** (TypeScript, NestJS): JWT/Passport auth with role guards, Prisma, and email plus real-time Socket.IO notifications.
- **FluxNote** (React, Convex): real-time collaborative editor. Also **PyDown** and **Code Constellation**.