

# Samuel Shadiva

Full Stack & AI Engineer · Flutter / Python / LLMs

Nairobi, Kenya · Remote-ready

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## PROFESSIONAL SUMMARY

Full Stack Engineer specialising in mobile development, backend architecture, and production AI systems. Two Flutter apps live on the Google Play Store. An autonomous AI job search agent running on a cron schedule. A RAG-powered portfolio assistant with semantic search over a pgvector knowledge base. A full ICT management platform deployed for a government institution on Oracle Cloud. All of it shipped. All of it live.

## EXPERIENCE

### Software Engineer · Kenya School of Government *Mar 2026 – Present*

- Building internal digital platforms for KSG's ICT department — asset management, service desk, and a digital recruitment system replacing a fully manual spreadsheet-based process.
- Service desk includes SLA tracking, escalation workflows, role-based access control, and real-time Socket.io notifications.
- Recruitment platform: candidate portal with automated document completeness checks, AI-assisted screening, and client visibility dashboard.
- Deployed on Oracle Cloud VPS with Docker and Nginx — currently serving KSG staff.

**Stack:** *React.js · Node.js · Express · PostgreSQL · Prisma · Socket.io · Docker · Nginx · OpenAI API*

### Mobile & Backend Developer · IVY Community *Jan 2025 – Nov 2025*

- Architected a cross-platform vendor management system using Flutter and Django with real-time inventory tracking for local vendors.
- Built a Computer Vision Measurement API using OpenPose to extract body measurements from 2D photos for a virtual fashion system.
- Led R&D on SMPLX 3D body mesh generation for virtual outfit fitting.

**Stack:** *Flutter · Dart · Django · Python · OpenPose · Firebase · OpenCV*

### Lead Technical Instructor · Sabatia Vocational College *Sep 2025 & Feb 2026*

- Designed and delivered workshops on Flutter mobile development and applied AI — integrating LLM endpoints into mobile applications.
- Mentored developers on breaking down complex ML concepts into actionable implementation steps.

### Software Engineer (Intern) · Uasin Gishu County Government *May 2023 – Aug 2023*

- Built Integrated Vehicle Management System replacing a paper-based fuel and repair requisition process across the county fleet.
- Integrated Google Maps API for route-based fuel quota calculation — directly mitigating fuel theft.
- Digitised the full approval chain from driver request through fleet manager sign-off.

**Stack:** *Flutter · Django · Python · PostgreSQL · Google Maps API*

## TECHNICAL SKILLS

<b>Mobile</b>	Flutter · Dart · Android SDK · Firebase · Riverpod · Bloc · MVVM · Hive · Drift
<b>AI &amp; LLMs</b>	LLM Integration · RAG · pgvector · Autonomous Agents · Prompt Engineering · Token Optimisation · OpenAI API · Gemini AI
<b>Backend</b>	Python · Django · DRF · FastAPI · Node.js · Express · PostgreSQL · Redis · SQLite
<b>Frontend</b>	React.js · Next.js · TypeScript · Tailwind CSS · HTML/CSS/JavaScript
<b>Infra &amp; Tools</b>	Docker · Nginx · Oracle Cloud · Git · CI/CD · Socket.io · Prisma · Google Maps API

## KEY PROJECTS

### shadivahlabs.com — RAG-Powered AI Portfolio [shadivahlabs.com/chat](https://shadivahlabs.com/chat)

- AI assistant grounded in a 140-chunk pgvector knowledge base — answers questions about professional background with real evidence, not generic summaries.
- Recruiter Mode: paste a job description, receive a structured fit report — score out of 10, matched requirements, gaps, and suggested interview questions.
- Responses stream in real time via Server-Sent Events. Guardrails decline personal questions and block jailbreaks without hitting the LLM.

**Stack:** *Next.js · FastAPI · Fastify · PostgreSQL + pgvector · Redis · Docker · Nginx · Oracle Cloud · OpenAI API*

### Atlas — Autonomous AI Job Search Agent

- Fully autonomous agent that discovers job postings via RSS, scores each against a professional profile using GPT-4o-mini, and drafts tailored applications for high-match roles.
- Runs 3× daily on a cron schedule on Oracle Cloud VPS — no human intervention required after initial setup.
- Conditional workflow: scores above 9 trigger auto-application, above 7 generate tailored drafts — strictly optimising API token usage.

**Stack:** *Python · OpenAI API · PostgreSQL · RSS · SMTP · Oracle VPS · Cron*

### Stratum — AI Personal Finance Tracker [Live on Google Play Store](#)

- Android app that automatically reads M-Pesa SMS notifications, parses every transaction without manual input, and generates monthly AI-powered financial analysis.
- Built to eliminate the friction of manual financial tracking for M-Pesa users in Kenya — open the app, your finances are already there.

**Stack:** *Flutter · Dart · Hive · Riverpod · OpenAI API · Android SMS API*

### Number Your Days — AI Journaling App [Live on Google Play Store](#)

- Journaling app with a tiered AI analysis system — daily insights with Gemini Flash, monthly and yearly synthesis with Gemini Pro.
- Summarisation chaining strategy reduces token usage by ~98% vs naive approaches while maintaining full analytical depth.

**Stack:** *Flutter · Dart · Firebase · Firestore · Gemini AI · Cloud Functions*

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## EDUCATION

**MSc Information Technology · Strathmore University** *May 2025 – Jun 2027 (Expected)*

Focus: Business Intelligence & Data Analytics · Part-time evening programme

**BSc Computer Science · Catholic University of Eastern Africa** *Sep 2020 – Oct 2024*

Second Class Upper Division