

CONTACT

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- LinkedIn
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- Portfolio
- Medium

EDUCATION

Feb 2026 - Present

AKIRACHIX

- Diploma in Software Engineering

SKILLS

PROGRAMMING LANGUAGES

- Python
- SQL
- TypeScript
- JavaScript
- Dart
- HTML & CSS

LIBRARIES & FRAMEWORKS

- FastAPI
- Flask
- Pydantic
- SQLAlchemy & Alembic
- LLM APIs & SDKs (Gemini, OpenAI, Whisper)
- RAG Pipelines & Vector Search
- Next.js & React
- Flutter
- Pytest

TOOLS & PLATFORMS

- Git & GitHub
- Docker
- PostgreSQL & SQLite
- Postman
- Swagger / OpenAPI
- Playwright, Cypress & Jest
- JWT & HMAC Authentication
- REST API Design
- CI/CD
- Workflow Automation (n8n, Make, Zapier)

OTHER SKILLS

- Technical Writing

REFERENCE

Linda Kamau

Founder & Executive Director

AkiraChix

Email : lkamau@akirachix.com

MARY MACHARIA

AI BACKEND ENGINEER | SYSTEMS ARCHITECT

PERSONAL STATEMENT

I am a software engineer trained at AkiraChix, focused on AI Backend Engineering & Systems Architectures. I build secure, reliable backend systems and end-to-end AI deployment pipelines by changing business logic into modular microservices, automating data extraction, and hardening offline infrastructure with secure token validation. I back all software engineering with automated testing and deliver seamless cross-platform interfaces that bridge backends directly to frontline mobile and web users. Seeking to apply these engineering capabilities to architect resilient software solutions, and drive human impact by solving complex, real-world problems.

PROJECT EXPERIENCE

Emadini

E-Waste Classification & Recycling Platform

- Designed a full-stack system (FastAPI backend, Next.js dashboard, Flutter app) with a team of 4 to help predict critical minerals within e-waste.
- Integrated vision-based ML models to classify e-waste from mobile photos, reducing manual inspection time by an estimated 60%.
- Wrote end-to-end system test suite with playwright , preventing regressions before releases.

Uzima Link

Healthcare Smart Check-In & EHR Integration

- Developed an offline-first FastAPI backend using HMAC-signed QR smart cards, allowing frontline health workers to securely verify identities with zero connectivity and eliminating check-in bottlenecks in remote regions.
- Built an NLP/NER pipeline using Gemini LLM and Whisper fallback that automated the structuring of raw patient notes, reducing administrative charting time and freeing up critical hours for direct patient care.
- Designed four dedicated Next.js user interfaces that streamlined cross-department medical handovers, cut patient check-in times, and enforced cryptographically secure data privacy.

Prompt Guardian

AI Data Loss Prevention & Governance Tool

- Developed a security proxy that inspects and blocks PII and confidential assets, ensuring strict data compliance before requests reach external LLMs.
- Built real-time logging and analytics dashboards, providing administrators complete visibility into employee AI tool usage and policy violations.

Student Progress Tracker

AI-Powered Learning progress tracker system

- Developed a performance tracking system that automatically flags weak areas from exam results, helping educators intervene early to close learning gaps.
- Integrated AI to generate tailored recommendations, giving students clear steps on what to focus on and how to improve.
- Structured a secure, modular API that isolated business logic, cutting future code modification and development turnaround time in half.

WORK EXPERIENCE

Tech Mentor - GYIC (Aug 2025 - June 2026)

- Modernized GYIC's operations by replacing basic tools with an enterprise tech stack, successfully unifying international workflows and removing cross-border bottlenecks.
- Fostered long-term technical literacy across cross-functional teams via targeted mentorship, achieving 100% software adoption and independent operational management.