



# MPAIRWE LAUBEN

DEVSECOPS · CLOUD-NATIVE · ML ·  
AGENTIC AI ENGINEER

## ABOUT

DevSecOps engineer and applied ML practitioner. Co-founder of IONATECH (ionatec.com), an AI startup, and engineering partner at Sauti Health (sautihealth.com), building emergency-dispatch infrastructure for sub-Saharan Africa. By day, CI/CD, cloud, and security posture at AIBOS Uganda. Outside: training models, building agentic systems on LangChain and LangGraph, and instrumenting MCP servers that expose tools to LLMs.

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## WORK EXPERIENCE

### AIBOS Uganda

Kampala

Feb 2024 – Present

### DEVSECOPS ENGINEER





- ▶ Own CI/CD posture on GitHub Actions, cutting deploy time ~60% while adding SBOM generation, container scanning, and signature verification
- ▶ Run infrastructure-as-code (Terraform) across AWS, Azure, and GCP with policy-as-code gates on every plan
- ▶ Harden Kubernetes workloads with Pod Security Standards, NetworkPolicies, and supply-chain controls (cosign / Trivy)
- ▶ Wire Prometheus + Grafana + Loki dashboards with SLO-driven alerts and on-call runbooks
- ▶ Drive compliance posture (encryption, RBAC, secrets via Vault) across the cloud estate

GITHUB ACTIONS · TERRAFORM ·  
KUBERNETES · TRIVY · COSIGN · VAULT ·  
PROMETHEUS · GRAFANA · AWS

## SKILLS

TRIVY GRYPE SNYK COSIGN SIGSTORE  
SLSA OPA / GATEKEEPER KYVERNO  
FALCO VAULT EXTERNAL SECRETS  
POD SECURITY STANDARDS  
NETWORKPOLICIES GITHUB ACTIONS  
ARGOCD FLUX TERRAFORM PULUMI  
MLFLOW WEIGHTS & BIASES DVC FEAST  
KUBEFLOW RAY TRITON BENTOML  
EVIDENTLY SCIKIT-LEARN TENSORFLOW  
PYTORCH PANDAS NUMPY LANGCHAIN  
LANGGRAPH MODEL CONTEXT PROTOCOL  
VERCEL AI GATEWAY AI SDK V6 QDRANT  
PGVECTOR BRAINTRUST PROMPTFOO  
LANGSMITH DEEPEVAL GUARDRAILS AWS  
GCP AZURE VERCEL KUBERNETES DOCKER  
HELM PROMETHEUS GRAFANA LOKI  
OPENTELEMETRY ISTIO POSTGRESQL  
PGVECTOR MYSQL MONGODB REDIS  
QDRANT SNOWFLAKE FIREBASE SUPABASE  
NEXT.JS REACT TYPESCRIPT TAILWIND  
SHADCN/UI MOTION NODE.JS FASTAPI  
SPRING BOOT TRPC FLUTTER  
REACT NATIVE KOTLIN SWIFT FIREBASE  
APP STORE / PLAY

## LINKS

-  LINKEDIN  
mpairwe-lauben-3a1461344
-  GITHUB  
github.com/mpairweLandwind
-  IONATECH  
ionatec.com
-  SAUTI HEALTH  
sautihealth.com

## LANGUAGES

English (Fluent)  
German (Basic)

## Sauti Health

Kampala

2026 – Present

## DEVELOPER · ENGINEERING PARTNER

- ▶ Partner with the Sauti Health team on the engineering behind a pre-hospital emergency dispatch platform for sub-Saharan Africa
- ▶ Build and harden backend services that coordinate community responders and motorcycle riders over USSD on basic 2G phones
- ▶ Ship offline-first responder workflows on low-end Android, with sync, retries, and conflict resolution for patchy networks
- ▶ Integrate mobile-money payment flows (MTN MoMo · Airtel Money) and DHIS2 reporting for health-system interoperability
- ▶ Instrument telemetry, dashboards, and CI gates on safety-critical paths so dispatch reliability stays measurable

PYTHON · FASTAPI · POSTGRESQL · USSD/IVR · MOBILE MONEY · DHIS2 · OFFLINE-FIRST · OBSERVABILITY

## IONATECH

Kampala

Feb 2023 – Present

## CO-FOUNDER · ML & AGENTIC ENGINEER

- ▶ Co-founded IONATECH (ionatec.com) — a startup building applied ML, agentic AI, and secure cloud systems for East African operators
- ▶ Ship LLM agents with LangChain + LangGraph: tool-use, retrieval, multi-agent orchestration, and evals
- ▶ Build RAG pipelines on Qdrant / pgvector with hybrid retrieval, rerank, and Braintrust/ Promptfoo eval harnesses
- ▶ Deliver classical ML for classification, regression, and ranking — with monitoring, drift detection, and retraining loops
- ▶ Run the engineering curriculum and mentor residents from prototype through production

LANGCHAIN · LANGGRAPH · MCP · QDRANT · BRAINTRUST · PYTHON · FASTAPI · NEXT.JS · SCIKIT-LEARN

## PERSONAL DETAILS

### DATE OF BIRTH

22 October 1995

### NATIONALITY

Ugandan

### LOCATION

Kampala, Uganda

## REFERENCES

### Dr. Kimbugwe Nasser

Lecturer & Academic Supervisor

Makerere University, School of Computing & IT

### Kalema Martin

Supervisor

AlBOS Uganda

### Dr. Mark Magumba

Senior Lecturer

Makerere University, School of Computing & IT

### Fahadi Nguenguye

Technical Lead

PAHAPPA LIMITED

### Dr. Ggaliwango Marvin

Lecturer & AI/ML Mentor

Makerere University, School of Computing & IT

## Makerere University

Kampala

Jan 2022 – Present

## STUDENT SOFTWARE ENGINEER

- ▶ Built TaskApp — a Kotlin task management app with real-time Firebase sync
- ▶ Developed scalable cross-platform apps using React Native and Flutter
- ▶ Implemented secure JWT and biometric authentication flows
- ▶ Delivered a fintech mobile app with digital payments, rewards, and transaction tracking
- ▶ Integrated third-party payment APIs and designed scalable backend architecture

KOTLIN · REACT NATIVE · FLUTTER · FIREBASE · JWT · FINTECH

## PAHAPPA LIMITED

Kampala

Jun 2022 – Jan 2024

## DEVOPS INTERN → ENGINEER

- ▶ Built enterprise applications with Spring Boot (MVC, Data JPA, Security, Cloud)
- ▶ Used Hibernate ORM/JPA with MySQL, PostgreSQL, Oracle, and MongoDB databases
- ▶ Designed Microservice and Monolithic architectures based on project requirements
- ▶ Developed RESTful APIs and event-driven systems for high-throughput workflows

SPRING BOOT · JAVA · HIBERNATE · MYSQL · POSTGRESQL · MICROSERVICES · REST API

## WEB INFO-NET LIMITED

Kampala

Jun 2018 – Aug 2022

## APPLICATION DEVELOPER INTERN & TRAINER

- ▶ Developed mobile apps using Swift, Java, and Kotlin for iOS and Android platforms
- ▶ Built an Odoo-based Employment Management System for HR automation
- ▶ Implemented secure authentication and third-party API integrations
- ▶ Provided Level 1 technical support, troubleshooting, and end-user training

SWIFT · JAVA · KOTLIN · OD00 · IOS · ANDROID

## ZALONIDENTALHUB

Kampala

Apr 2022 – Present

## LEADING DEVELOPER & MAINTAINER

- ▶ Led full SDLC for dental practice management software from conception to delivery
- ▶ Built C#/VB.NET desktop systems for inventory and patient management
- ▶ Developed a Flutter mobile app with e-commerce, appointments, and booking features
- ▶ Ensured seamless desktop-mobile data interoperability
- ▶ Led a team of developers, defining software architectures and coding standards

C# · VB.NET · FLUTTER · DESKTOP · MOBILE · TEAM LEAD

## EDUCATION

### Makerere University

2022 – Expected  
2027

CGPA 4.31

### Bachelor of Science in Software Engineering

- ▶ Specialising in AI/ML and Enterprise Application Development
- ▶ Integrated Supabase, MongoDB, Cloudflare, and Firebase for scalable storage
- ▶ Implemented RBAC and encryption for secure multi-role systems
- ▶ Built a full HRMS system with advanced role and permissions management
- ▶ Worked on IoT and Embedded Systems research projects
- ▶ Optimised PostgreSQL queries for high-performance data retrieval

### Makerere University

2019 – 2023

### Bachelor of Science in Computer Engineering

- ▶ Transitioned to the Software Engineering programme
- ▶ Studied Digital Electronics and hardware design principles
- ▶ Hardware repair, maintenance, and systems diagnostics

**Uganda Technical  
College – Lira**

2016 – 2018

CGPA 4.77

**National Diploma in Information  
Communication Technology**

- ▶ Database Management and Web Development
- ▶ Internet technologies and networking fundamentals
- ▶ RBAC and Encryption implementation
- ▶ Java programming and object-oriented design
- ▶ Networking and Server Configuration

**Boston High School –  
Mpala**

2011 – 2015

**Uganda Certificate of Education  
(UCE)**

- ▶ Graduated in Top 5% of class
- ▶ Varsity Debate Team Captain

## CERTIFICATIONS

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**PLANNED**    **AWS Certified DevOps Engineer · Professional**    — Amazon Web Services

**PLANNED**    **Certified Kubernetes Security Specialist**    — CNCF

**PLANNED**    **Certified Kubernetes Administrator**    — CNCF

**PLANNED**    **HashiCorp Certified · Terraform Associate**    — HashiCorp

**PLANNED**    **AWS Solutions Architect · Associate**    — Amazon Web Services

**PLANNED**    **Google Cloud Professional ML Engineer**    — Google Cloud