📍 **Kenya, Nairobi +254769501328**

FELIX ELADI

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SUMMARY

Accomplished Systems Software Engineer focused on the hardware-software interface, operating system internals, and low-level networking. Transitioned from product-level development into systems programming with a first-principles understanding of the full execution stack—from pre-boot firmware through kernel and user space. Equipped with hands-on experience in UEFI-level security, production environment hardening, and building low-level abstractions for security-critical systems.

PORTFOLIO

🔗 **www.portfolio.felixelad.co.ke** 🔗 **Résumé**

KEY TECHNICAL SKILLS

Frontend
Languages: JavaScript, HTML5, CSS3
Frameworks: Livewire, Flutter
Testing: TDD with PHPUnit, PyUnit
Tools: Webpack, WebHooks, Git, Figma
Code Management: Git, GitHub

Backend & Infrastructure
Languages: Node.js (JavaScript), Python, PHP, C/C++
Frameworks: Laravel,FastAPI
Web: REST, GraphQL, WebHooks, WebSockets
Deployment: Netlify, Vercel, Heroku, Microsoft Azure
OS Internals: Windows Internals, Linux Kernel (SELinux), System Call Interception
Security: Zero Trust Architecture, RBAC, Cryptographic Identity (Ed25519)
Databases: MySQL, MongoDB

PROFESSIONAL EXPERIENCE

Business Systems Architects Ltd — *Technical Operations Support (Internship)*
May 2025 - September 2025
Currently, I manage infrastructure reliability and automation, focusing on hardware-software interoperability and aggressive fault isolation in production environments.

- **Infrastructure Automation**: Developed Python-based health checks and observability pipelines, reducing manual intervention by 30% and improving Mean Time To Recovery (MTTR).
- **Distributed Monitoring**: Engineered deployment strategies for enterprise IoT monitoring (AKCP) to maintain 99.9% availability across distributed nodes.
- **Access Control**: Architected Least Privilege (PoLP) and RBAC policies at the OS level for production servers to mitigate lateral movement risks.

Daystar University — *Network & Systems Operations (ICT Intern)*
2021 - 2022
Supervised campus-wide infrastructure, data center health, and large-scale hardware reclamation projects serving over 5,000 users.

- **Hardware Recovery**: Orchestrated the salvage of 300+ legacy systems; reclaimed RAM, storage, and power units to deploy two new fully functional computer labs.
- **Network Resilience**: Diagnosed L2/L3 bottlenecks using packet analysis (Wireshark) to optimize routing tables and increase network uptime by 20%.
- **OS Deployment**: Managed mass migrations from Windows 7/8/10 to Windows 11 and Linux, handling critical data recovery and user-mode isolation.

Daystar University, Machakos, Athi River,

Independent Engineering — *Systems & Software Engineer*

2021 - Present

Established a long-running practice spanning hardware repair, operating system internals, and full-stack architecture to understand modern platforms end-to-end.

- **Low-Level Diagnostics**: Diagnosed and repaired hundreds of personal computing systems, mastering safe-mode diagnostics, boot-mode configurations, and hardware surgery.
- **Enterprise Architecture**: Built full-stack systems including job portals and e-commerce platforms to study high-concurrency patterns and strict RBAC architectures.
- **Payment Integration**: Implemented real-world payment orchestration using M-Pesa Daraja API, PayPal, and Paystack, managing secure transaction callbacks and authentication.

HIGHLIGHTED PROJECTS

My Portfolio (OS-Windows-11-inspired portfolio) - Ela-OS-Portfolio

A high-fidelity desktop environment built in the browser to showcase complex state management and systems thinking.

- Reimagined the browser as a desktop OS using **Next.js** and **TypeScript** to mimic Windows 11 features.
- Managed deep system states using **Redux Toolkit**, handling overlapping window z-indexing and taskbar logic.
- Proven technical depth by pairing intuitive UI/UX design with heavy architectural state synchronization.

Regional Career Infrastructure - jobs.felixeladi.co.ke

Architected a high-concurrency engine with multi-tenant logic to unify youth employment pipelines in regional markets.

- Utilized **Laravel** and **MySQL** to build a robust **RBAC** (Role-Based Access Control) system for thousands of users.
- Transformed fragmented educational data into a scalable regional infrastructure for matching talent to opportunity.

Up-Skill: Fintech-Enabled Learning - up-skill.felixeladi.co.ke

A mobile solution addressing software compliance and payment friction in local skill-acquisition hubs.

- Integrated **M-Pesa APIs** for instant liquidity and built a **GitHub-synced** engine for mandatory fleet updates.
- Ensured 100% version compliance across distributed devices via automated update protocols.

High-Resilience Device Control - Secure-Device

Engineered a multi-layered security system to manage hardware remotely in high-latency environments.

- Designed a secure control plane using **C++** for Kernel-level operations (**IOCTL**) and **FastAPI** for WSS orchestration.
- Implemented cryptographically secure device identity using **Ed25519** signatures to enforce command integrity.
- Bridged the gap between low-level hardware constraints and high-level architectural leverage.

EDUCATION

B.Sc. Applied Computer Science — *Software Systems & Infrastructure*

Daystar University, Kenya *2022 – 2025 (Awaiting Graduation 2026)*

Transitioned via a high-performance bridge program; focused on advanced software systems, distributed infrastructure, and applied computing.

- **Relevant Coursework**: Operating Systems, Compiler Design, Distributed Systems, Network Security, Data Structures & Algorithms.
- **Self-Directed Research**: Exploration of **xv6** kernel internals, x86-64 assembly, and UEFI firmware security protocols.

Diploma in ICT — *Networking & Systems Administration*

Daystar University, Kenya *2020 – 2022*

Completed a comprehensive ICT foundation program with a heavy emphasis on practical systems and network engineering.

- **Core Focus**: Network configuration (Cisco/Ubiquiti), hardware diagnostics, and systems troubleshooting.
- **Achievement**: Awarded departmental recognition for leadership in laboratory hardware reclamation projects.