**Denis Kinyua Kamachu**

**+254-111426110 | kinyuadenno1@gmail.com**

**Portfolio: <https://portfolio-9qli.onrender.com> |GitHub: <https://github.com/kinyuadennis>**

Results-driven **Machine Learning and DevOps Specialist** with expertise in **Python, ML model deployment, CI/CD pipelines, and software development.** Experienced in **healthcare IT, business systems, and government digital services,** with projects including a **Patient Visit Prediction System, PhishScanner**, and a **Petrol Station Management System.** Strong foundation from the **ALX Software Engineering Programme** with certifications.

## ****Technical Skills****

**Programming:** Python, C++, Javascript, SQL

**Frameworks & Tools:** Flask, FastAPI, Git, GitLab CI/CD, Docker, Kubernetes, YAML

**Machine Learning & AI:** Scikit-learn, TensorFlow, XGBoost, Random Forests, Recommendation Systems

**DevOps & Infrastructure:** Linux systems, CI/CD pipelines, containerization, orchestration, monitoring tools

**Cybersecurity:** Network scanning, phishing detection, penetration testing basics, Flask security dashboards

**Databases & Data Handling:** MySQL, PostgreSQL, SQLite, data preprocessing, ETL workflows

**Artificial Intelligence (AI**): Natural Language Processing(NLP)- Hugging Face Transformers, **Generative AI-**OpenAI APIs, LangChain, Stable Diffusion, Hugging Face Diffusers

**Professional Experience**

**Cool Petroleum Products – IT & Systems Administrator**  
**Feb 2025 – Sep 2025**  
Manage IT systems supporting daily fuel station operations, including POS, tank monitoring, and inventory software.

Play a key role in transitioning business processes from manual to automated systems, enhancing efficiency and reporting accuracy.

Enhanced operational efficiency by reducing downtime in POS and pump monitoring systems.

Provided technical support and training to staff, ensuring smooth adoption of digital systems.

**Murang’a Level 5 Hospital – ICT Officer, Health Systems Support**  
**April 2024 – Oct 2024**  
Supported the hospital’s digital systems, including health records, network infrastructure, and user training.

Contributed to hospital system upgrades, including system configuration and data management for patient records.

Supported IT staff in ensuring system uptime, enhancing reliability in a high-demand healthcare environment.

Integrated hospital data systems with county-level reporting tools to support evidence-based health planning.

**Murang’a County Government – IT Intern**

**April 2023-Oct 2023**

Oversaw ICT projects across various departments, driving the digitization of county operations. Led initiatives in cybersecurity, cloud adoption (AWS), and systems integration. Provided IT support to over 100 staff across departments, improving service delivery. Documented processes and created training materials to reduce repetitive IT queries.

Supported deployment of IT infrastructure and digitization efforts across county offices.

**ALX – Software Engineering Programme**-**Student Intern**

**March 2022-November 2022**

Completed an intensive software engineering programme with a focus on problem-solving, programming, and building scalable applications.

Gained hands-on experience in collaborative software development and version control.

Developed foundational skills in Python, C++, and Java through project-based learning.

Applied software engineering principles to design, build, and test small-to-medium scale applications.

Collaborated in peer-learning groups, simulating real-world agile teamwork environments.

Strengthened knowledge in algorithms, data structures, and debugging best practices.

## Projects

**Patient Visit Prediction System**

Built a machine learning pipeline to predict hospital patient visits, achieving 82% accuracy.

Designed the workflow using Python, Scikit-learn, and XGBoost, optimizing data preprocessing and feature selection.

Enabled hospitals to plan resources more efficiently, reducing patient wait times.

**Petrol Station Management System**

Designed and implemented a **full-stack system** to manage fuel tracking, sales monitoring, and staff operations.

Integrated **Flask, SQL, and reporting dashboards** to provide real-time operational insights.

Reduced manual errors and improved reporting efficiency for daily operations.

**PhishScanner – Phishing Domain Detector**

Developed a cybersecurity tool combining web scraping, Python regex, and threat intelligence APIs to detect phishing domains.

Built a Flask dashboard to visualize flagged domains and generate risk reports.

Enhanced email/web security awareness by providing actionable alerts.

**Recommendation System**

Implemented collaborative filtering and content-based models for personalized content suggestions.

Optimized algorithms using **TensorFlow and Scikit-learn**, achieving improved recommendation precision.

Designed modular architecture for deployment into larger applications.

**DevOps Automation Pipelines**

Created CI/CD pipelines with **GitLab CI/CD** to automate testing and deployment of Flask applications.

Containerized applications using **Docker**, with beginner exploration into **Kubernetes orchestration**.

Improved deployment reliability and reduced manual workload for application updates.

## Education

## Murang’a University of Technology September 2020- March 2024

Bachelor of Science in Information Technology- Second class upper division

Relevant Courses: Machine Learning, Cybersecurity, Data Structures, DevOps Practices, Software Development, Computer Programming.

**Njiiri School**

**January 2016- December 2019**

Kenya Certificate of Secondary Education

KCSE GRADE C+

**Certificates**

**CISCO NETWORKING ACADEMY**

cyber security

Data Science

networking management

Internet Of Things

**UDEMY ACADEMY**

Certified Professional IT Manager (CPIT

Cyber Security and Ethical hacking Online Course

Python Programming Masterclass

**AWS CERTIFICATIONS**

AWS Cloud Practioner

AWS Certified Machine Learning Engineer

## Additional Information

Strong teamwork, leadership, and adaptability skills, with proven ability to collaborate in agile, cross-functional environments.

Passionate about continuous learning and applying emerging technologies, particularly in **AI/ML, and DevOps.**

Effective communicator with the ability to translate complex technical concepts into business value.

Committed to professional growth through **certifications, projects, and community involvement** in tech.