

WANYONYI ALEX WAFULA

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PROFESSIONAL SUMMARY

Data Engineer & Systems Specialist with a foundation in Applied Physics and Computer Science. Expertise in architecting automated data pipelines, configuring secure financial software environments, and maintaining high-availability distributed systems. Currently specializing in the end-to-end deployment and security of financial hardware-software ecosystems. Proven ability to transform raw system telemetry into actionable insights through Python, SQL, and modern ETL methodologies.

TECHNICAL SKILLS

- **Languages & Core Engineering:** Python (Pandas, NumPy), SQL, Java (Spring Boot), Bash Scripting.
 - **Data Engineering & ETL:** ETL Pipeline Design, Data Modeling, Power BI (DAX), Streamlit, REST APIs.
 - **Databases & Infrastructure:** Firestore (NoSQL), SQL Server, Git/GitHub, Docker, Linux System Administration.
 - **Systems & Security:** OS Hardening, Full-Disk Encryption, Hardware-Software Integration, Network Troubleshooting.
 - **Analytics & AI:** Scikit-learn, OpenCV, Predictive Modeling, Exploratory Data Analysis (EDA).
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PROFESSIONAL EXPERIENCE

SYBYL | Nairobi, Kenya ATM Engineer Trainee | March 2026 – Present

- **Systems Deployment:** Execute end-to-end OS installations and secure software configurations for ATM terminals, ensuring seamless data communication between edge devices and the central bank switch.
- **Security & Compliance:** Implement full-disk encryption and SSD solidifying protocols, maintaining 100% compliance with strict financial data security standards (PCI-DSS environments).
- **Operational Reliability:** Perform precision hardware-software calibrations and diagnostics to optimize mechanical reliability and minimize transaction latency in high-volume financial environments.

- **Log & System Analysis:** Analyze system logs and hardware telemetry to troubleshoot transmission errors, ensuring high-availability transaction processing across distributed networks.
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REREC | Nairobi, Kenya ICT Technician (Attachment) | June 2024 – September 2024

- **Data Management:** Managed critical enterprise data backups and maintained database integrity within a secure IT environment to prevent data loss.
 - **Infrastructure Support:** Optimized department-wide hardware and software deployments, reducing system downtime through proactive maintenance and network troubleshooting.
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TECHNICAL DATA PROJECTS

Retail Customer Analytics & ETL Dashboard | Python, Streamlit, Pandas

- **Pipeline:** Engineered an automated data pipeline to extract, transform, and load (ETL) complex retail transaction datasets for real-time visualization.
- **Impact:** Developed an interactive dashboard to identify purchasing trends, using Pandas for deep-dive statistical analysis of operational data.

Customer Churn Prediction Engine | Python, Scikit-learn, Pandas

- **Data Modeling:** Designed a predictive machine-learning pipeline utilizing Random Forest and Logistic Regression to identify key drivers of customer attrition.
- **Results:** Achieved 82% prediction accuracy, providing a structured data model for proactive business decision-making.

AI-Enabled System Monitoring | Python, OpenCV, NumPy

- **Real-time Processing:** Developed a resource-efficient computer vision system for real-time motion detection and automated data logging.
- **Automation:** Engineered zero-latency alert protocols to trigger notifications based on edge-device data triggers.

Chain Verify System | Next.js, Solidity, Hardhat

- **Data Integrity:** Developed a block chain-based verification platform focused on immutable data validation and secure ledger management using ethereumsepolia.
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EDUCATION

Bachelor of Science in Applied Physics and Computer Science *Multimedia University of Kenya /*
Graduated: October 2025

- **Relevant Coursework:** Data Structures & Algorithms, Database Management Systems, Machine Learning, Computer Vision.