Peter Nyenzo Isabwa

(+254) 796-952247 | nyenzoisabwa@gmail.com | LinkedIn | nyenzo.is-a.dev | github.com/Nyenzo

Dedicated Software Engineer and Data Scientist with a solid background in Mathematics and Computer Science. Certified in AI and Software Engineering, I specialize in developing and maintaining monolithic and microservice-based applications with AI integration. Skilled at applying mathematical and algorithmic theory to real-world software systems to build robust backends and distributed systems that leverage machine learning for operational efficiency.

Education

Jomo Kenyatta University of Agriculture and Technology — Graduated Dec 2025
Bachelor of Science in Mathematics and Computer Science — *Juja, Kenya*

Utumishi Academy — Mar 2014 – Nov 2017
High School Education — *Gilgil, Kenya*

Work Experience

Visiondrill — May 2026 – Present
Lead Software Engineer — *Remote, Kenya*

- Incharge of the deployment of containerized backend services on AWS, using ECR, ECS, and EC2 to improve the reliability and scalability of production releases.
- Introduced CI/CD workflows for automated testing, Docker image builds, and deployments, making releases more consistent and reducing manual deployment work.
- Coordinate project planning by breaking larger goals into practical milestones, prioritizing tasks, and tracking progress to keep development aligned with product goals.
- Support and manage the engineering team through code reviews, task allocation, and technical guidance while encouraging collaborative problem-solving and steady delivery.

Visiondrill — Oct 2025 – May 2026
Software Engineer — *Remote, Kenya*

- Optimized database queries by implementing batch queries, reducing database round-trips by 95% and cutting vector search response times from 1200ms to 80ms.
- Implemented rate-limiting middleware for AI endpoints with per-IP and per-token tracking, returning standard Retry-After headers to prevent API abuse and control compute costs.
- Streamlined user onboarding by developing an automated CV data extraction pipeline using AI services, reducing profile completion time by 70% through seamless backend-to-frontend integration.
- Improved application stability by implementing a tiered testing strategy, from unit tests to end-to-end tests, reducing deployment-blocking bugs and ensuring type safety across the **React/TypeScript** stack.

CodeKenya — Jun 2025 – Aug 2025
Software Developer Intern — *Nairobi, Kenya*

- Managed the complete project lifecycle using professional Git workflows for version control and collaborative development.
- Integrated chatbots and conversational agents to websites to enhance user experience.

Projects

Aivestor AI | *Python, Flask, React, scikit-learn, Alpha Vantage API* — Jun 2025 – Present

- Developed an advanced investment advisory system utilizing machine learning, sentiment analysis, and economic indicators.
- The model significantly outperforms baseline models in real world data.
- Features: Personalized investment advice, real-time market data integration, sentiment analysis from news and social media, portfolio optimization, comprehensive backtesting.
- Tech Stack: Python (scikit-learn, pandas, NumPy), APIs: Alpha Vantage, FRED, Frontend: React.js, Backend: Flask.

Predicting Adverse Pregnancy Outcomes in Kenya | *R, Caret, rpart* Oct 2024 – Apr 2025

- Developed a decision tree-based machine learning model to predict adverse pregnancy outcomes using the 2022 Kenya Demographic and Health Survey (KDHS) dataset.
- Analyzed key factors such as total pregnancies, birth intervals, and education level to identify risk patterns, achieving up to 90.83% sensitivity.
- Compared weighted and unweighted models to assess prediction reliability, providing actionable insights for targeted maternal healthcare interventions in Kenya.

Certifications

Certification in AI Feb 2025 – Jun 2025
Huawei

Certification in Software Engineering Feb 2023 – Jul 2024
ALX Academy

Technical Skills

Languages: Python, Typescript, JavaScript, SQL
Frameworks: FastAPI, Flask, React, Next.js
Libraries: scikit-learn, TensorFlow, PyTorch, pandas, NumPy, Matplotlib
Developer Tools: Git, AWS, Docker, Firebase, Tableau, PostgreSQL, MySQL, MongoDB, Supabase