

Elizabeth Mwanja

Data Scientist | Software Developer

mwanja.m.elizabeth@gmail.com | +254 794 319 208 / +237 688 587 354

<https://www.linkedin.com/in/elizabethmwanja/>

<https://github.com/Elizabeth-Mwanja/>

Professional Summary

Results-driven professional with a solid foundation in Data Science and Machine Learning, currently pursuing a Master's in Mathematical Sciences at AIMS Cameroon specializing in Data Science. My background in Software Development (BSc in Mathematics and Computer Science) and Cybersecurity (Cybersafe Foundation) equips me with a diverse and unique blend of technical expertise and innovative problem-solving to projects. My passion for innovation fuels my commitment to continuous learning and skill improvement. Additionally, I excel in communication, presentation, and collaboration, to ensure seamless teamwork and impactful results.

Education

Master of Science in Mathematical Sciences (Ongoing)

- Africa Institute of Mathematical Sciences (AIMS) Cameroon | September 2024 – Present
- Specialization: Data Science
- Course: Machine Learning (Supervised and Unsupervised models), Natural Language Processing, Hugging face LLMs, Deep Learning, Statistics, Mathematics.

Cybersecurity at Cybersafe Foundation

- Cybersafe Foundation | Lagos, Nigeria | March 2024 – December 2024
- Specialization: DevSecOps
- Courses: Cloud Security (AWS), Threat Detection, Networking, Digital Forensics, Incident Analysis, IOT security, Cloud and Virtualization.

Bachelor of Science in Mathematics and Computer Science

- Maseno University, Kenya | August 2016 – April 2021
- Specialization: Computer Science
- Courses: Software Engineering, Database administration, Information Security, Applied Statistics, Mathematics, Probability.

Areas of Expertise

Technical Skills

- Data analysis: Excel, Power BI, SQL, Python, R.
- Programming: Python, JavaScript, Java.
- Deep Learning and Natural Language Processing.
- Machine Learning & Statistical modelling.
- Predictive Modeling & Deployment.
- API development and secure coding.

Soft Skills

- Strong communication & negotiation skills.
- Documentation and reporting skills.
- Excellent problem-solving skills.
- Time management.
- Leadership & Collaboration.
- Flexibility and adaptability.
- Critical thinking and analytical skills.
- Great prioritization skills.
- Project Management

Experience

Software Engineer

November 2022-August 2024

Kenya Revenue Authority

- Integrated a GenAI Tax Calculator, automating access and boosting efficiency by 40%.
- Collaborated with data scientists to optimize APIs for the Customs Auction platform, improving system responsiveness and reliability that improved satisfaction by 25%.
- Built a data-driven dashboard, promoting easy visualization of tax analytics, resulting in improved system oversight by 90%.
- Optimized APIs for the Customs Auction platform, increasing platform uptime to 99.9%.

System Analyst

November 2021 – December 2022

Kenya Revenue Authority, Nairobi – Kenya

- Tuned SQL scripts using Redis, boosting web app response times by 20% and cutting user-reported issues by 15%.
- Set up monitoring systems for production databases, reducing downtime by 25% through early issue detection.
- Led a database migration that cut transition time by 30% while maintaining 99.9% data accuracy.
- Resolved 100% of escalated system issues from the ICT team improving business performance.

Oracle Cloud Solutions Trainee

January 2022 – June 2022

Oracle, Nairobi-Kenya

- Earned OCI Foundations Certification with a 90% score, demonstrating strong cloud fundamentals.
- Completed Oracle training in autonomous databases and cloud integration with 80% proficiency.
- Led a team of 10 trainees, enhancing collaboration and accelerating cloud adoption.

Data Analyst

June 2021 – October 2021

Jirani Smart Microfinance Ltd., Kenya

- Designed and implemented monitoring frameworks to track and improve financial system reliability.
- Led a team of 5 analysts to maintain financial systems, improving escalation processes of known issues.
- Developed dashboards and database using reliability metrics, improving decision-making.
- Identified financial system issues, recommended solutions, and integrated the ICT network to align with company standards.

Software Developer Intern

April 2019 – September 2019

UNESCO, Kisumu-Kenya

- Collaborated with a team of analysts and developers in development of a Universal Health Coverage (UHC) system for Kisumu County Government, improving healthcare access.
- Developed performance dashboards and tested government health systems, increasing data processing efficiency by 95%.
- Delivered actionable insights through monthly analytics reports, significantly boosting user satisfaction and system adoption.

Projects

Blood Donation Campaign Dashboard, Cameroon

Built an interactive dashboard for donor analysis and campaign tracking. Tools used: Pandas, Matplotlib, Streamlit, Scikit-learn, Geo-pandas, Machine learning.

- Tools: Python, Pandas, Streamlit, GeoPandas, Scikit-learn
- Impact: Enabled profiling of ideal donors, trend analysis, and prediction of blood donor eligibility.

Multilingual POS Tagging using Hugging Face Transformers

Fine-tuned a multilingual transformer for POS tagging on Masakhane dataset.

- Tools: Python, PyTorch, Hugging Face, NLP
- Outcome: Improved low-resource language support for NLP models.

Secure API with Token-based Authentication using Keycloak

Led a team to build a secure REST API integrating Keycloak and CI/CD.

- Tools: Flask, Docker, GitHub Actions, Keycloak, Kubernetes.
- Use: Demonstrated DevSecOps practices for secure API development.

Credit score application approval app

Built a predictive model using Gradient Boosting and 53 Bucket for credit pre-qualification, supporting financial inclusion.

- Tools: Gradient Boosting, S3 Bucket, Streamlit.
- Benefit: Helps users assess approval likelihood and supports pre-qualification.

Forex Trading on Malagasy and Sudanese Market Analysis

Conducted market analysis to understand exchange rate to predict trading trends in the Malagasy and Sudanese markets, supporting strategic decision-making for stakeholders at Ubuntu Stock Exchange, Sakode, Togo.

- Technologies: NumPy, Scikit-learn/TensorFlow, PowerPoint

Certifications

- Hugging Face NLP course (Ongoing)
- Credit Risk Modelling and Management
- AWS AI & Machine Learning
- OCI 2024 GenAI certified
- IBM Machine Learning
- Oracle Java Developer
- Oracle Data Management
- Project Management: PRINCE 2
- CompTIA Linux+

Awards

- Mastercard Foundation Scholarship
- Best Machine Learning Student
- AIMS-Cameroon Awards
- Cybergirl Awards
- Best student leader at Maseno university
- Presidential Digi-Talent Program awards