

Nicholas Mwaniki Musee

PhD Candidate in Computer Science (AI/ML) | Lecturer | Data Scientist | Full-Stack Developer  Nairobi, Kenya |  [www.linkedin.com/in/nmusee2025] |  [nichol.musee@gmail.com] [nmusee@daystar.ac.ke]

Professional Summary

Innovative and faith-driven Data Scientist and Full-Stack Developer with deep expertise in AI/ML, Big Data Analytics, and MERN stack development. Currently pursuing a PhD in Computer Science (AI/ML) at the University of Nairobi, with a strong track record mentoring students and building reproducible, scalable solutions across education, cloud, and community platforms. Skilled in PySpark, AWS, MLOps, and machine learning pipelines, with hands-on experience deploying intelligent web apps using Streamlit, Flask, and React. Passionate about empowering learners and organizations through transparent workflows, data-driven insights, and compassionate leadership.

Technical Skills

◆ Programming & Development

- MERN Stack: MongoDB, Express.js, React.js, Node.js
- Front-End: Tailwind CSS, JSX, HTML, CSS
- Real-Time Communication: Socket.io
- Backend APIs: RESTful services, Express middleware
- Testing & Debugging: Unit testing, performance optimization
- Deployment & DevOps: CI/CD, Git/GitHub, Docker, Streamlit, Flask

◆ Data Science & Analytics

- Python, R, SQL, MongoDB
- NumPy, Pandas, Matplotlib, Seaborn, Power BI, Tableau
- Exploratory Data Analysis (EDA), Feature Engineering, Web Scraping
- MySQL, MongoDB Compass, CRUD operations, joins, queries

◆ Machine Learning & AI

- ML Models: Regression, Classification, Clustering, Ensemble Learning
- Evaluation Metrics: MAE, RMSE, R², Accuracy, Precision, Recall, F1 Score
- Deep Learning: ANN, CNN, RNN, LSTM
- NLP: Tokenization, Lemmatization, Word2Vec, TF-IDF, Doc2Vec, Spacy, NLTK
- Computer Vision: Object Detection, Segmentation, Tracking

◆ **Big Data & Distributed Systems**

- Big Data Concepts: Architecture, Scalability, Fault Tolerance
- Apache Spark & PySpark: RDDs, DataFrames, Spark SQL, Spark ML, Spark Streaming
- PySpark DataFrame Operations: Basic Functions, Data Handling, Analysis Tasks
- Problem Formulation & Implementation for Big Data Projects

◆ **Cloud & MLOps**

- AWS: EC2, S3, IAM, Lambda, SageMaker
- MLOps: Docker, MLflow, AutoML with PyCaret
- Model Deployment & Monitoring: Streamlit, Flask, GitHub Actions

◆ **Professional & Leadership**

- Mentorship: MERN stack, Data Science, Hackathons, project-based learning
- Troubleshooting: Node.js, npm, nvm, Vite, Google Cloud, Python/Anaconda
- Workflow Optimization: Reproducible project structures, transparent documentation
- Faith-Centered Leadership: Community building, pastoral guidance

Education

PhD in Computer Science (AI/ML) — University of Nairobi (*Ongoing*)

MSc in Computer Science — [UoN]

BSc in Computer Science — [KEMU]

Certifications

- Full-Stack MERN Development — Power Learn Project
- Big Data Analytics with PySpark —Digital Regenesys
- Machine Learning & Deep Learning — Digital Regenesys
- NLP & Computer Vision — Digital Regenesys
- AWS Cloud Computing — Digital Regenesys
- MLOps & ML Deployment -- Digital Regenesys
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