

# MIAKO JOYCE NJERI

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## Professional Summary

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Performance-oriented Business Information Technology (BBIT) degree holder with sound skills in data science, software development and machine learning. Experienced in python, flask, SQL experience, NLP, deep learning, and recent visualization package knowledge. Interest in the design of AI-based products to solve real-life issues such as economic prediction and analysis or student performance tracking. Practical track record of successfully delivering the projects that entailed data analysis, web design, and stakeholder cooperation in under dual pressure situations.

## Technical Skills

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**Languages:** JavaScript, Python(Advanced), R, SQL, PostgreSQL, HTML, CSS

**Frameworks:** Flask, TensorFlow, LSTM, PyTorch, Scikit-Learn, NumPy, Pandas, Matplotlib, Keras

**Developer Tools:** Git, GitHub, Docker, AWS, VS Code, PyCharm, Jupyter Notebook, Postman, Google Colab, SQLite

**ML/Deep Learning:** CNN, RNN, GANs, Transformers, Reinforcement Learning, NLP, Computer Vision

**Visualization:** Matplotlib, Seaborn, Plotly,

## Professional Experience

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### Procurement Officer (Attachment)

**VRLab** (Dedan Kimathi University of Technology) & Siemens

June 2025 – To date

- Monitor supplier performance and resolve issues related to delivery, quality, and payment.
- Collaborate with cross-functional teams to support technical projects by ensuring availability of necessary materials and equipment.
- Maintain accurate procurement records and generate reports for management review.
- Support budgeting and cost-control initiatives to optimize resource allocation.

### DATA SCIENCE PRACTITIONER

March 2025 – June 2025

**SKIES Program** (World Bank & Ministry of Finance)

Nyeri, Kenya

- Spearheading the development of AI-driven economic forecasting models to enhance public financial management, using **time-series techniques** like **LSTM**.
- Implementing **Natural Language Processing (NLP)** pipelines extract insights from government policy documents, reports, and budget speeches.

- Created dynamic, stakeholder-friendly dashboards, enabling real-time visualization of fiscal trends, debt patterns, and budget allocations.
- Collaborating with economists and IT experts to integrate machine learning outputs into decision-making processes for budgeting and forecasting.

### **Software Engineering & Data Analyst Intern**

Aug. 2024 – Dec. 2024

*Jomo Kenyatta University of Agriculture And Technology*

*Nairobi, Kenya*

- Automated and optimized university data workflows using Python, Pandas, and SQL, reducing manual report generation time by over 40%, and improving accuracy in student enrollment and performance tracking.
- Designed and deployed a responsive academic portal using HTML (frontend) and Flask (backend), integrating predictive analytics (Scikit-learn) to monitor academic progression, identify at-risk students, and recommend academic interventions.
- Conducted data wrangling, preprocessing, and visualization with Matplotlib, Seaborn, and Plotly, creating interactive visual dashboards to support university management and quality assurance teams.
- Implemented role-based access control and authentication flows for students, lecturers, and administrators to ensure secure and personalized experiences.
- Integrated automated email alerts for low-performing students using Flask Mail and scheduled tasks with Celery and Redis.
- Engaged with university stakeholders, including faculty heads and IT staff, to gather user requirements, enhance system usability, and ensure mobile responsiveness and accessibility.
- Created comprehensive documentation and user manuals for system administrators, ensuring a smooth handover and ease of future updates.

### **Web Developer & ML Deployment Intern (Attachment)**

*Dedan Kimathi University of Technology (DKUT)*

Feb 2023- April 2023

- Worked on the E-Agric project: built a web platform for agricultural data collection.
- Handled backend integration, database management, and ML deployment.

## **Educational Background**

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### **BSc. Business Information Technology (Minor: Communication Skills)**

#### **Dedan Kimathi University of Technology (DKUT)**

- Graduated: 2024
- Second Class Honours(Lower division)

### **Kenya Certificate of Secondary Education (KCSE)**

#### **Kangubiri Girls High School 2017-2021 |**

- Grade: B–

### **Kenya Certificate of Primary Education (KCPE)**

#### **Consolata Primary School 2013-2016 |**

- Marks: 365 / 500

## Projects

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### [▢ Stress Detection System](#)

**Tech Stack:** Python, NLP, BERT, LSTM, Flask, Streamlit

- Built an AI system to analyze **social media texts** and detect stress levels using **deep learning models**
- Preprocessed large datasets using NLP tools to train models effectively.
- Currently integrating AI-generated voice to respond with emotional support based on model predictions.

### [▢ Academic Performance Prediction Portal](#)

**Tech Stack:** Next.js, Flask, SQL, Python, Scikit-learn

- Designed and deployed a university portal to predict student academic risk and performance trends.
- Automated reporting tools with **Python and Pandas**, cutting reporting time by 40%.
- Included real-time dashboards and ML-driven early intervention alerts for students.

### [▢ AI-Driven Economic Forecasting System](#)

- Built forecasting models to support public financial management for the **SKIES Program (World Bank & Ministry of Finance)**.
- Used **Power BI** for dynamic fiscal dashboards.
- Analyzed policy documents to extract actionable economic insights.

### [▢ Fraud Detection System \(Project-based\)](#)

**Tech Stack:** Python, Scikit-learn, XGBoost, SQL

- Built a classification model to detect fraudulent financial transactions using **imbalanced datasets** and **anomaly detection techniques**.
- Applied feature engineering and model tuning for improved recall and precision on fraud cases.
- Integrated dashboard reports for stakeholders to monitor high-risk transaction patterns.

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### Certifications:

- AWS -AI Practitioner
  - Cisco – Introduction to Data Science
  - Cisco – Modern AI
  - IBM – Exploring Emerging Technologies
  - IBM – Working in a Digital World (Professional Skills)
  - Computer Packages and Applications (Certificate)
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## **Volunteering & Leadership**

- **Leader**, CSOK Club (Data Science division)
  - **Organizing Secretary**, Idea to Business Club
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## **Soft Skills:**

- Excellent Communication (Verbal & Written)
  - Problem Solving & Critical Thinking
  - Adaptability & Flexibility
  - Leadership & Team Collaboration
  - Analytical Reasoning
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## **Referees**

- **Prof. Bernard Ikua, PhD**

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- **Prof. Eng. Jean B. Byiringiro PhD**

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