

# Esther Mukite Kituyi

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LinkedIn | GitHub | Portfolio

## Professional Summary

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Electrical Engineer and Data Science and Engineering Fellow focused on the intersection of power systems and predictive intelligence. Expertise in developing anomaly detection systems for smart grids and optimizing infrastructure for the green energy transition. Skilled in Python, SQL, and IoT integration.

## Technical Skills

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- **Engineering:** Power Systems, Smart Grid Technology, Electrical Design, IoT Systems.
- **Data Intelligence:** Python (NumPy, Pandas, Scikit-Learn), SQL, Predictive Risk Modeling.
- **Database & Pipelines:** PostgreSQL, pgAdmin, Medallion Architecture Logic.
- **Development Tools:** PyCharm, Google Colab, VS Code, Git, Microsoft Excel (Expert).
- **Visualization:** Power BI, Tableau.
- **Competencies:** Quantitative Analysis, System Validation, Cross-functional Team Leadership.

## Analytical Engineering Experience

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**Women Techsters Fellowship (Tech4Dev)** | *Data Science & Engineering Fellow* Sep 2024 – Present

*Remote*

- Engineered a Smart Grid Anomaly Detection system using Python to identify technical faults and energy theft signatures in unstructured sensor data.
- Implemented Medallion Architecture to streamline data pipelines from raw ingestion to executive-level visualization.
- Analyzed consumption patterns to optimize load balancing and improve grid reliability.

**CCI Kenya (AT&T Campaign)** | *Technical Support Specialist* Jul 2024 – Dec 2025

*Nairobi, Kenya*

- Interpreted technical system data and error logs to provide actionable solutions for global infrastructure clients.
- Streamlined troubleshooting workflows by identifying recurring system patterns, reducing average resolution time.
- Collaborated with cross-functional technical teams to maintain high service-level standards for international brands.

**Centre for Transport and Road Engineering (CeTRE)** | *R&D Intern* Feb 2023 – May 2023

*Nyeri, Kenya*

- Assisted in data collection for e-mobility research to support green energy transition initiatives.
- Supported the analysis of energy demand patterns related to electric vehicle charging infrastructure.

## Education

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**Dedan Kimathi University of Technology (DeKUT)** | *Nyeri, Kenya*  
Bachelor of Science in Electrical and Electronics Engineering

2019 – 2024

## Selected Projects

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**IoT Smart Metering System:** Designed a GSM-enabled prototype for real-time utility monitoring, focusing on data collection for energy optimization.