Onyero Walter Ofuzim

Engineer & Researcher | Data, AI/ML, Control Systems

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Professional Summary

Multidisciplinary engineer and researcher at the intersection of **data engineering, machine learning, and control systems**. Skilled in designing AI-assisted and model-driven solutions for energy, networks, and enterprise data platforms. Experienced in developing scalable data pipelines, applying system identification and optimization, and delivering impactful, cost-effective solutions across both research and industry environments.

Core Skills

Programming	Python (pandas, PySpark, NumPy, SciPy), SQL (MySQL, Snowflake, BigQuery), JavaScript/TypeScript, Java, MATLAB, R
Data & Cloud	Apache Spark, Delta Lake, Databricks, dbt, Airflow/Prefect, Snowflake, AWS (S3, Glue, Lambda, IAM), Azure (ADF, Databricks), GCP (BigQuery)
Machine Learning	TensorFlow, PyTorch, Scikit-learn, Deep Learning, NLP, Computer Vision, Model Evaluation
Control Systems	System Identification, Control Theory, Optimization, Battery Modeling
Infrastructure	Docker, Kubernetes, Terraform (IaC), Linux, GitHub Actions (CI/CD)
Analytics	Power BI, Excel, A/B Testing, Data Visualization
Practices	Data Modeling (3NF, Dimensional), ELT/ETL Design, Orchestration, Documentation, Cost Optimization

Licenses & Certifications

2025 Snowflake Data Engineering Professional Certificate
2025 Mastering Azure Databricks for Data Engineers Specialization
2025 DeepLearning.AI (AWS) Data Engineering Professional Certificate
2024 Machine Learning — Stanford Online
2022 Modern Robotics Specialization — Northwestern University
2022 Self-Driving Cars Specialisation — University of Toronto
2022 Developing and Validating Control Systems for Connected & Automated Vehicles — IEEE

Education

2025 **M.Sc., Electrical & Software Engineering**, *Schulich School of Engineering, University of Calgary*
Focus: Advanced Control/System Identification, AI (ML/DL), Battery Modeling

2021 **B.Eng., Electrical/Electronic Engineering**, *University of Benin, Nigeria*
Focus: Control Systems, Software Engineering

Honors & Awards

2024 Dept. of Electrical & Software Engineering Funding — University of Calgary
2024 International Graduate Tuition Award — University of Calgary

2024 Sri Lanka Imanust Graduate Scholarship Engineering Award — UCalgary

2017 Federal Government of Nigeria Scholarship

2016 Jim Ovia Undergraduate Scholarship — University of Benin

2016 Delta State Bursary & Scholarship — Delta State Government

Experience

Jan. 2024 – Present **Graduate Research/Teaching Assistant**, *University of Calgary — DICE Program*, Calgary, AB, Canada

- Researched on AI-assisted battery management systems within the Digital Innovation in Clean Energy (DICE) program, contributing to projects aligned with Alberta Innovates' goals for energy efficiency and sustainability.
- Developed and applied methods in system identification, control systems, and AI/ML to support advanced energy storage modeling and optimization.
- Served as a Teaching Assistant for multiple courses, including ENEL 469 (Analog Electronic Circuits), ENEL 680 (Applied Optimization for Sustainable Design), ENSF 300 (Software Engineering Practices for Data Management), ENCM 369 (Computer Organization), and ENEL 441 (Control Systems I).

Aug. 2022 – Nov. 2023 **Lead Technology Specialist / Network Support Analyst**, *MTN — NPQA (Network Performance Quality Assurance)*, Lagos, Nigeria

- Progressed from Intern to Lead Analyst within NPQA, leading a team to implement advanced data-driven approaches for network performance optimization.
- Developed Python scripts and automated workflows that streamlined monitoring and fault management, reducing manual effort and improving incident response time.
- Configured SNMP settings and performed proactive troubleshooting using Linux, Bash, and StableNet, ensuring minimal downtime and maximum network efficiency.
- Conducted advanced data analysis and KPI reporting using Python, Excel, and Power BI, providing insights that supported strategic decision-making and contributed to a $\sim$15% reduction in network downtime (estimated $500K annual savings).
- Collaborated cross-functionally with engineering and operations teams to integrate innovative software solutions, enhance fault detection, and drive continuous network performance improvements.

Jan. 2020 – Aug. 2021 **Graduate Research Assistant**, *University of Benin — Dept. of Electrical/Electronic Engineering*, Benin, Nigeria

- Conducted research in embedded systems and IoT technologies, focusing on developing efficient battery monitoring and management solutions for enhanced energy sustainability.
- Designed and prototyped an IoT-enabled remote battery monitoring and control device, enabling improved energy efficiency and demonstrating potential to reduce local energy costs by up to 30%.
- Published findings in *Design and Construction of a Remote Battery Monitoring and Control Device Using the Internet of Things (IoT)* [ResearchGate].

Nov. 2019 – May 2020 **Network Operations/Support Engineering Intern**, *MTN — NSMC*, Lagos, Nigeria

- Gained cross-departmental exposure in NSMC, collaborating with TX/IP MPLS, Data & Internet Services, and NSS units to support end-to-end network operations.
- Monitored network performance using SNMP and other monitoring tools, contributing to proactive fault detection and improved service reliability.
- Assisted in incident management and escalation processes, participating in root-cause analysis and ensuring timely problem resolution.
- Supported reporting and analytics by preparing daily, weekly, and monthly performance dashboards in Excel, providing data-driven insights for operations teams.

Aug. 2019 – Nov. 2019 **Automation/Electrical Engineer Intern**, *Nigerian Bottling Company (Coca-Cola HBC)*, Lagos, Nigeria

- Assisted the Automation/Electrical Department in maintaining and troubleshooting electrical and electronic systems, ensuring reliable plant operations.
- Performed daily machine inspections and quality control checks to identify faults and prevent unexpected downtime.
- Assembled, tested, and repaired malfunctioning machinery under supervision, contributing to improved equipment reliability.
- Created work orders and compiled plant performance reports using Excel, streamlining documentation and workflow efficiency.

Selected Projects

E-Commerce Recommender System	Production-ready recommender built with Python & Streamlit using batch/streaming pipelines. GitHub
Customer Churn Prediction	Machine learning pipeline for telecom churn modeling. GitHub
IoT Battery Monitoring Device	Research prototype for remote battery monitoring & control. ResearchGate
Fine-Tuned BERT Classifier	NLP text classification with TensorFlow. GitHub
Stock Monitor	Real-time stock analysis dashboard with Python. GitHub

Extracurricular Activities

J.P. Morgan Software Engineering Virtual Experience	Built live data visualization dashboards and resolved dev environment issues.
Siemens Mobility Project Management Simulation	Designed KPIs & dashboards for rail infrastructure projects.
Ford EV Engineering Simulation	Performed EV battery cost-benefit analysis and PID controller tuning.
Blackbird Australia Software Engineering Simulation	Contributed to cloud infrastructure design & A/B testing features.