

Ebenezer Afonja

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Data Analyst and Automation Engineer – AI and Digitization Department

EXPERIENCE

Data Analyst & Automation Engineer | Dangote Cement plc.

Victoria Island, Lagos/Ibese, Ogun State.

October 2025 - Present

- Built and maintained Power BI dashboards for MIS reporting on production details and major equipment status, KPI monitoring, and monthly value realization tracking for AI and Digitization projects across 13 plants in Pan-Africa.
- Designed database structure for plant KPI and production data.
- Model validation in coordination with OEMs for an AI/ML predictive maintenance project across four Pan-African plants.
- Developing an anomaly detection algorithm in-house for Pan-African plants.
- Change Management: Driving the adoption of AI/Digital projects across Pan-Africa.
- Solving implementation challenges, fine-tuning ML strategies, and coordinating with OEMs for precommissioning and follow-ups.

Graduate Trainee | Dangote Cement plc.

Gboko, Benue State.

March 2024- October 2025

- Introduction to Cement Technology, ERP(SAP), and operations across the group.
- On-the-job rotations across support, technical support, and technical departments.
- On-the-job rotations across all manufacturing stages and sections, such as the mines, raw mill, storage and homogenization, coal mill, pyroprocessing and kiln, cement mill, and packing plant.
- Installed and maintained field instruments, including Temperature transmitters and switches, Pressure transmitters and switches, Flow control valves, Gas analysers (Siemens ULTRAMART, ABB A02020), cross-belt analyzers (Thermo Scientific), and XRF machines (Thermo Scientific).
- Calibrated Weighing Systems, including Weighbridges, Weighfeeders, and Belt Weighers.
- Maintained and troubleshoot process control actuators and systems, DCS and PLC (Siemens S7-300), SCADA (Siemens CEMAT and FLS) maintenance, troubleshooting, Code modification, and Update, Plant Server.

Instrumentation Engineer (NYSC) | Dangote Cement plc.

Obajana, Kogi State.

August 2022 - July 2023

- Assisted in maintaining and commissioning VFDs: ABB ACS Series Drives, SIEMENS SINAMICS SERIES, SIEMENS MICROMASTER SERIES.
- Assisted in maintaining soft starter drives, including ABB PSBT and SIEMENS SIRIUS SOFT DRIVES

Student Intern (S.I.W.E.S) | Digitouch Electronics.

Ibadan, Oyo State.

November 2020 - April 2021

- Designed, analyzed, simulated, and implemented electronics circuits and power supply boards for projects, including inverter systems, Quadcopter drones, and automated irrigation systems prototypes
- Assisted in prototyping of projects such as Traffic light control design and SMS-controlled LED display signs
- Designed and printed PCBs using Express PCB.
- Programmed microcontrollers and microprocessors, including Arduino, ATMEGA 328, and ATMEGA8 with AVR Studio.
- Assisted in the design, fabrication, 3D Printing, and installation of solar inverter systems.

KEY PROJECTS AND SOLUTIONS

- **Real-time Plant Status and KPI Report for Management** (*Power BI + SQL*): Development of a management dashboard for accessible real-time plant status and KPI display achieved by creating a database using MSSQL, writing 5-minute averaged data from the plant server to the MIS server, then to the database for Power BI dashboards. Web and mobile versions were made available alongside necessary alerts and a subscription for automated reporting.
- **Alarm Analysis Dashboard**(*Power BI*): Created a dashboard for high-level plant alarm analysis to answer questions on alarm status, frequency, and distribution across major equipment.
- **Failure Prediction** (*Python - Pandas, Matplotlib, Seaborn, Sci-kit learn, Numpy + Statistics + Machine Learning*): Anomaly detection for the cement mill classifier motor-current, to detect outlier current data and errors. Correlation Encoder Model algorithms were used to detect anomalies.

EDUCATION:

- Bachelor of Engineering, Electrical and Electronics Engineering
4.63/5.0 (First Class Hons.)
Kebbi State University of Science and Technology, Aliero, Nigeria | 2017 – 2022

CERTIFICATES:

- Dangote Cement Plc: Graduate Trainee Program Completion (2024/25)
- GIL Automations: VFD Operations and Troubleshooting. (2025)
- Kennedia Consulting Limited: Finance for Non-finance Managers (2025)
- NLP Limited: Passion, Productivity and Personal Effectiveness (2024)
- Nigeria Society of Engineers: Graduate Member (Since 2023)

AWARDS:

- Exemplary, NYSC Kogi State
- Exemplary Leadership and Exceptional Performance - Dangote Cement Plc

SKILLS:

- Data Tools: Python, SQL, Power BI, Excel/Google Sheets, Microsoft Fabric.
- Analysis & Visualization: Data Analysis, DAX, Power Query, Data Cleaning
- Soft Skills: Leadership, Communication, Problem-Solving

REFEREES:

Available upon request