

# FREDA ERINMWINGBOVO

## Data Analyst | Data Scientist

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[linkedin.com/in/freda-erinmwingbovo](https://linkedin.com/in/freda-erinmwingbovo) | [github.com/Freda-Erinmwingbovo](https://github.com/Freda-Erinmwingbovo) | Portfolio:

[freda-erinmwingbovo.github.io](https://freda-erinmwingbovo.github.io)

## PROFESSIONAL SUMMARY

Detail-oriented Data Analyst and Data Scientist with a strong foundation in Electrical and Electronics Engineering, combined with hands-on experience in structured field investigation and technical reporting. Actively building a professional portfolio in R, Python, SQL, Power BI, and Advanced Excel. Completed high-impact projects analyzing retail and e-commerce datasets exceeding 600,000 records, delivering actionable business intelligence. Skilled at translating complex findings into clear insights for non-technical stakeholders. Seeking remote Data Analyst or Data Scientist roles where data-driven decisions create measurable business impact. Immediately available globally.

## CORE COMPETENCIES

### Technical Skills

- R (tidyverse, ggplot2, caret, Quarto)
- Python (pandas, numpy, scikit-learn, matplotlib, mlxtend, statsmodels)
- SQL (querying, joins, aggregations, subqueries, window functions)
- BI (DAX, data modelling, interactive dashboards)
- Advanced Excel (pivot tables, Power Query, VLOOKUP/XLOOKUP, dynamic charts)

### Analytical Skills

- Customer Segmentation (RFM analysis, K-Means clustering)
- Churn Prediction & Classification
- Association Rule Mining (Apriori algorithm)
- Demand Forecasting (Holt-Winters Exponential Smoothing)
- Machine Learning (Random Forest, Decision Tree, SVM, Logistic Regression)
- Exploratory Data Analysis (EDA) & Feature Engineering
- Business Intelligence Reporting & Stakeholder Communication

### Tools & Platforms

- Quarto | R-Studio | Jupyter Notebook | GitHub | MySQL Workbench | Microsoft Office Suite

## PORTFOLIO PROJECTS

### Customer Purchasing Behaviour and Demographics | Blackwell Electronics

#### R | Machine Learning | Quarto

- Performed end-to-end customer analytics on 80,000+ transaction records using R.
- Developed and evaluated three ML models (Random Forest, Decision Tree, SVM) to predict purchase channel, age bracket, and region, achieving 93.2% accuracy on purchase channel prediction.
- Uncovered significant regional spending variations (North America, Europe, Asia) and provided actionable recommendations for inventory allocation and targeted marketing.
- Delivered findings in a professional, reproducible Quarto HTML report with full preprocessing (missing values, feature engineering) and cross-validation for model reliability.

### Business Intelligence and Revenue Optimization | NovaMart Global

#### Python | Machine Learning | Quarto

- Built comprehensive six-theme BI analysis on 524,878 transaction records from a UK-based online retailer operating in 38 countries.
  - Applied RFM segmentation via K-Means clustering (k=4), revealing that 717 Champion customers (16.5% of base) drive 65% of total revenue, highlighting critical concentration risk.
  - Constructed churn prediction models (Logistic Regression, Random Forest, Decision Tree) using engineered behavioural features (no target leakage), achieving ROC-AUC of 76.39%.
  - Generated 194 cross-sell association rules via Apriori algorithm, with lift values up to 27.2, ready for recommendation engine integration.
- Produced demand forecasts using Holt-Winters Exponential Smoothing; identified major pricing inconsistencies (e.g., top revenue product varying from GBP 4.00 to 32.04).

## PROFESSIONAL EXPERIENCE

### Investigation, Inspection and Maintenance Officer

#### Ibadan Electricity Distribution Company (IBEDC) | Nigeria

August 2019 – March 2022

- Conducted field investigations and physical inspections of electricity meters to identify energy theft, tampering, and billing anomalies across assigned districts.

- Authored detailed investigation reports with evidence, findings, and corrective recommendations, supporting revenue protection and loss reduction efforts.
- Collaborated with maintenance teams to prioritize and schedule fault resolution for high-risk cases using analytical prioritization.
- Maintained precise field documentation and escalated complex issues through formal channels, demonstrating strong attention to detail.

## Investigation and Inspection Officer (NYSC)

**Jos Electricity Distribution Company (JEDC) | National Youth Service Corps**

**2017 – 2018**

- Performed meter inspections and energy theft investigations throughout the Jos distribution network.
- Produced structured reports and supported loss reduction through accurate, timely documentation.
- Built foundational skills in evidence-based reporting, structured observation, and professional communication in field environments.

## EDUCATION

Bachelor of Engineering (B.Eng) – Electrical and Electronics Engineering

Ambrose Alli University, Ekpoma, Edo State, Nigeria

Graduated 2016

## CERTIFICATIONS

- Certificate in Data Analytics — In Progress (Expected 2026)  
NIIT, Abuja, Nigeria
- Diploma in Data Analytics — In Progress (Expected 2026)  
NIIT, Abuja, Nigeria

## ADDITIONAL INFORMATION

- **Availability:** Immediately available for remote roles worldwide.
- **Engineering Foundation:** B.Eng in Electrical and Electronics Engineering provides deep quantitative skills in systems thinking, signal analysis, and structured problem-solving, highly transferable to data analytics and machine learning applications.