

# ADEMOLA BALOGUN

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Portfolio: <https://ai-3dportfolio.netlify.app/>

GitHub: <https://github.com/Demmynile/>

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As a highly motivated Data Professional with a strong foundation in AI and data-driven solutions, I specialize in translating complex data into actionable insights that drive strategic decisions. With hands-on experience in data visualization, statistical analysis, and predictive modeling, I excel at solving business problems through data analysis and reporting. Adept at leveraging tools like Python, SQL, Power BI, Tableau, and Cloud Service with CI/CD tools. I am passionate about using data to unlock growth opportunities and improve operational efficiency.

## Education

### Master of Science with Specialization in Artificial Intelligence and Data Science

**University Name:** University of Hull

*Graduated: [September 2024]*

Relevant Coursework: Machine Learning, Neural Networks, Data Mining, Natural Language Processing.

## Technical Skills

- **Programming Languages:** Python, R
- **Machine Learning Libraries:** TensorFlow, Keras, Scikit-Learn
- **Large Language Models:** OpenAI, Hugging Face, RAG, Vector Databases and Embeddings
- **Data Manipulation and Analysis:** Pandas, NumPy
- **Deep Learning:** Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs)
- **Tools and Frameworks:** Jupyter Notebooks, Git, Docker
- **Database Management:** SQL, MongoDB, Postgres

# Projects

## Recruitment Tracker

- **Situation:** The organization relied on manual data entry and static Excel reports, causing delays, inconsistencies, and inefficiencies in monthly reporting.
- **Task:** Automate the entire reporting workflow — from data collection to visualization and distribution — using Microsoft Power Platform tools.
- **Action:** **Structured Excel data** into formatted tables and created a **SharePoint List** for centralized consistent data storage. Built a **Power Automate flow** to sync Excel updates to SharePoint automatically, reducing manual effort. Designed an **interactive Power BI dashboard** with KPIs and trend analyses using DirectQuery for real-time insights. Create a second **Power Automate flow** to export and email monthly Power BI reports with embedded visuals and dashboard links.
- **Result:** Achieved a fully automated, end-to-end reporting system that improved accuracy, eliminated manual processes, and saved **over 8 hours monthly**, enabling **faster, data-driven decision-making**.

## Sales performance Analysis Dashboard

- **Situation:** The company lacked a clear, data-driven view of sales trends and customer behavior, leading to missed revenue opportunities and limited visibility into performance metrics.
- **Task:** Design and implement a **Tableau dashboard** to analyze and visualize sales performance, uncovering actionable insights to improve decision-making.
- **Action:** Collected, cleaned, and transformed large sales datasets using **Python** and **Pandas** to ensure data accuracy and consistency. Built a **dynamic Tableau dashboard** displaying KPIs, sales trends, and customer segmentation. Analyze sales data to identify key performance drivers and revenue growth opportunities.
- **Result:** Delivered real-time insights that enhanced sales strategy and reporting efficiency, contributing to a **15% increase in quarterly sales performance**.

[link to the dashboard](#)

## Crime Prediction Using Machine Learning in Hull City

- **Situation:** Rising burglary incidents in Hull City prompted a need for data-driven insights to support predictive policing and enhance public safety.
- **Task:** Develop a **machine learning-based crime prediction model** using historical and demographic data to identify burglary crime patterns and risk zones.
- **Action:** Collected and integrated **crime data (Jan 2022–Dec 2023)** from *data.police.uk*, along with **administrative boundaries** and *\*population datasets*. Cleaned and merged datasets using

**Pandas** and **NumPy** to form a unified analytical dataset. Conducted **exploratory data analysis (EDA)** using **Matplotlib** and **Seaborn**, including statistical, temporal, and spatial trend visualization. Analyzed correlations and spatial distributions to identify high-risk areas and potential predictive features.

- **Result:** Provided actionable insights into **burglary hotspots** and temporal crime trends, demonstrating the potential of **machine learning** and **data analytics** in supporting predictive policing and improving resource allocation within Hull City.

[link to my development](#)

## Customer Churn Prediction Analysis

- **Situation:** The company faced high customer turnover but lacked insights into the factors driving churn, impacting customer retention and revenue growth.
- **Task:** Build a **machine learning model** to predict customer churn and provide actionable insights to improve retention strategies.
- **Action:** Conducted **exploratory data analysis (EDA)** and **feature engineering** to identify behavioral and demographic factors influencing churn. Developed predictive models using **Logistic Regression** and **Decision Trees** in **Python**. Optimized model performance through **hyperparameter tuning** and **data balancing techniques**, achieving a **92% accuracy rate**. Visualized key insights through an **interactive dashboard** to guide data-driven customer retention strategies.
- **Result:** Enabled early identification of at-risk customers, improving retention planning, and supporting targeted marketing interventions to reduce churn.

## Experience

### Data Analyst | We are Stronger Charity, United Kingdom | [September 2024 – Till Date]

- Collect, clean, and analyze program and donor data to support evidence-based decision-making.
- Develop interactive **Power BI and Tableau dashboards** to visualize key performance metrics and trends.
- Conduct **data quality checks** and ensure accuracy, consistency, and completeness across all datasets.
- Generate **insightful reports** highlighting project outcomes, donor engagement, and operational efficiency.
- Collaborate with cross-functional teams to translate data findings into actionable strategies.
- Support the charity's impact measurement initiatives through **data-driven storytelling** and performance monitoring.

DevOps Engineer | Cuesoft Inc, United States | **[September 2023 – February 2024]**

- **Situation:** The organization needed a more efficient and reliable way to deploy and manage three open-source applications — Upstat, Expendit, and Storefront.
- **Task:** Improve the **CI/CD pipeline** and streamline software deployment to enhance reliability and scalability.
- **Action:** Implemented automation using **Go, Git, GitHub Actions, Terraform, and AWS**, integrating infrastructure as code and continuous delivery processes.
- **Result:** Achieved faster, more reliable deployments with improved collaboration between development and operations, enhancing **system scalability and uptime** across all applications.

Data Science Associate | Sterlingtech and Data Sciences, Lagos, Nigeria | **[April 2019 – August 2023]**

- Assisted in developing and deploying **machine learning models** for predictive analytics and business forecasting.
- Collaborated with **cross-functional teams** to analyze large datasets and generate actionable insights for decision-making.
- Performed **data cleaning, preprocessing, and exploratory data analysis (EDA)** using Python and SQL to ensure data integrity and relevance.
- Supported the **visualization of insights** through dashboards and reports to communicate trends and findings effectively.
- Contributed to improving analytical workflows, enhancing **data accuracy and operational efficiency** across projects.

## Certifications

- **IBM Data Science Professional Certification** *Coursera: IBM*
- **Deep Learning Specialization** *Coursera: IBM*

## Extracurricular Activities

- **Member, DSN (Data Science Nigeria) Participated** *in workshops, seminars, and hackathons related to AI and machine learning.*
- **Volunteer, Coding Club** *Assisted in organizing coding events and mentored fellow students in programming.*

## References

Available upon request.