

# Abuchi Onwuegbusi

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## Data Analyst

Highly analytical and detail-oriented professional with hands-on experience gathering and analyzing complex datasets to extract meaningful insights using statistical methods and data visualization tools.

### Statistical Analysis & Modeling

- Experienced in statistical analysis (hypothesis testing, regression, correlation) and developing predictive models with ML algorithms (regression, classification, clustering, and ensemble methods).

### Data Visualization

- Adept at creating interactive dashboards and reports with Tableau, as well as generating visualizations with Python libraries to illustrate data patterns, trends, and insights.

### Reporting & Presentation

- Expertise in preparing reports and presentations to communicate analytical findings and recommendations and translate them into actionable business strategies.

## Technical Skills

**Data Analysis Tools:** Python, SQL, Excel, Power Bi

**Data Analysis & Scientific Libraries:** Pandas, NumPy, SciPy

**Data Visualization Tools:** Tableau, Matplotlib, Seaborn

**Machine Learning & AI Frameworks:** Scikit-learn, Keras

**Natural Language Processing (NLP):** NLTK

**Web Scraping & Automation:** BeautifulSoup, Selenium, Scrapy

### Data-Driven Decision Making

- Skilled in applying analytical techniques to support strategic decision-making, optimize business processes, and improve operational efficiency.

### Cross-Functional Collaboration

- Capable of working with cross-functional teams to gather requirements, tailor analysis to specific needs, and ensure alignment with project objectives.

### Continuous Learning & Adaptability

- Dedicated to staying current with emerging trends, tools, and technologies, with a proven ability to quickly adapt to new methodologies to enhance analytical capabilities.

## Professional Experience

### HANODA INVESTMENTS LIMITED, NG

Mar 2023 to Oct 2024

#### Data Analyst - Remote

Conducted in-depth data analysis, delivering insights to drive strategic decision-making and improve business operations. Applied Python for data extraction, transformation, and analysis across multiple data sources, generating detailed reports on performance and market trends. Developed automated data pipelines, optimizing data collection and processing to increase efficiency and eliminate manual tasks. Assisted in empowering Small and Medium-Sized Enterprises (SMEs) in Nigeria through advanced data analytics and machine learning models. Collaborated with cross-functional and remote teams to gather business requirements and customize analyses for specific project objectives.

- Streamlined workflows through automation, significantly reducing manual effort and improving overall process efficiency.
- Employed text analytics and Keras to build robust solutions that enhanced operational performance and promoted a data-driven culture within the organization.
- Delivered high-impact presentations and reports communicating insights and recommendations to stakeholders/executive leadership.

#### Data Scientist (Intern) - Remote,

Jan 2022 to Mar 2023

Developed and deployed machine learning models to solve complex business challenges using algorithms such as regression, classification, and clustering. Executed comprehensive data cleaning and preprocessing tasks, addressing missing data, detecting outliers, and performing feature engineering to ensure dataset readiness for analysis. Leveraged Python, along with libraries like Pandas, NumPy, and Scikit-learn, for data manipulation, analysis, and model evaluation. Performed exploratory data analysis (EDA) to identify patterns, correlations, and anomalies, guiding subsequent model development and analysis. Engaged with cross-functional teams to identify data requirements, delivering customized analyses and actionable insights aligned with project objectives.

- Implemented predictive models that addressed business problems, resulting in enhanced decision-making and operational efficiency.
- Contributed to improved data science processes by actively participating in team discussions and brainstorming sessions, fostering innovation and collaboration across projects.

Monitored surveillance data to provide actionable insights and enhancing security operations. Utilized various surveillance tools and systems to track and review real-time video feeds, identifying potential security threats and patterns. Developed automated processes for reviewing and storing surveillance footage, improving operational efficiency and reducing manual review times. Played a key role in enhancing the security framework of the business, ensuring safer environments through proactive threat detection. Collaborated with security teams and management to customize surveillance systems and reporting processes to meet specific security objectives and operational needs.

- Monitored and managed over 30 CCTV cameras in a large retail environment to detect suspicious behavior and potential security risks.
- Promptly report any unusual behavior, safety risks, or security breaches to security personnel or management.
- Maintained and ensured the functionality of all surveillance equipment, reducing system downtime by 15%.
- Communicate effectively with security officers and other team members to ensure swift response to identified threats.

## **Key Projects**

### **Medical Cost Prediction: Machine Learning**

**Jun 2024**

- Developed and optimized a machine learning model using Python to predict medical costs, achieving 90% accuracy through advanced algorithms and rigorous validation techniques.
- Processed and analyzed extensive datasets, while providing actionable insights that enhanced budgeting and financial planning in healthcare organizations.

### **Toxic Comment Detection: Neural Network Model**

**Jun 2024**

- Created a neural network model using Python and deep learning frameworks like TensorFlow and Keras to detect toxic comments with 97% accuracy, applying advanced text processing techniques and SMOTE for dataset balancing.
- Collected and preprocessed a Jigsaw and YouTube comment dataset, utilizing feature selection methods and evaluation metrics to enhance model performance and reliability.

### **Taxi Trip Fare Prediction: Geospatial Analysis**

**Jun 2024**

- Built a machine learning model using Python to predict taxi trip fares with high accuracy, employing advanced algorithms and feature engineering techniques on a comprehensive dataset of green taxi trips.
- Conducted geospatial analysis to uncover patterns in taxi trip distribution, optimized model performance through hyperparameter tuning and cross-validation, and visualized correlations using Heatmaps.

### **Tesla Stock Price Prediction: Machine Learning**

**Apr 2024**

- Developed an advanced stock price prediction model for Tesla using Python and machine learning algorithms, achieving a mean absolute error of 3.9 through rigorous cross-validation and feature engineering.
- Created detailed reports and presentations on model performance, including visualizations of correlations between stock price and key indicators, supporting strategic investment decisions.

### **Customer Behavior: RFM Analysis**

**Apr 2024**

- Performed customer behavior analysis using Python and RFM segmentation to gain insights into customer value and engagement, categorizing customers into actionable segments and enhancing targeting precision.
- Created visualizations of RFM scores and heatmaps, developed a scoring system for customer ranking, and applied statistical analysis and predictive models to optimize marketing strategies and forecast customer lifetime value.

## **Education**

### **MSc Data Science**

**York St. John University, London**

**Feb 2025 to Feb 2026**

### **B.Eng in Electrical and Electronics Engineering**

**Alex Ekwueme Federal University Ndufu-Alike Ikwo, NG**

**Jan 2016 to May 2021**