ESI TAWIAH ABBEY

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DATA SCIENTIST/ANALYST SUMMARY

- Dedicated and results-driven Data Scientist with 2+ years' experience analysing complex datasets, driving significant revenue growth, enhancing operational efficiency, and delivering cost savings across the industries I have worked in.
- Generated a remarkable 20% surge in market share within the initial quarter by extensively analysing the Nigerian auto market for a prominent Chinese firm.
- Proficient in statistical analysis, data visualisation, and programming languages such as Python and SQL.
- Committed to harnessing the power of Data and Machine Learning to drive positive change within any organisation.

SKILLS

Programming: Python (Base, Pandas, NumPy, Matplotlib, Scikit-Learn), SQL

Machine Learning: Linear Regression, Logistic Regression, Decision Trees, Random Forest, KNN, k-means, PCA, Association Rule Learning, Causal Impact Analysis

Other: Statistics, GitHub, MS Excel, Tableau, Jupyter Notebook, Computer vision, Exceptional attention to detail, robust analytical and problem-solving prowess, outstanding communication skills (both written and verbal), high adaptability to changing situations.

EXPERIENCE

09/2023 – Present
DATA SCIENTIST/ANALYST CONSULTANT, 10ALYTICS

- Achieved a 20% market share increase within the initial quarter by extensively analysing the Nigerian auto market for a leading Chinese firm. Utilising **Python** and **Pandas** for data preparation, accurate insights were generated. These insights played a direct role in shaping strategic decisions, including the successful launch of targeted new vehicle models that catered to market demands. As a result, not only did the company's market share grow, but its competitive position and growth trajectory were also solidified. The utilisation of **Matplotlib** and **Seaborn** aided in creating informative visualisations to support the findings.

- Increased employee satisfaction by 15% by leading a project to build **Tableau** dashboards for a client in the HR industry. The dashboards also resulted in a 20% increase in diversity through identifying trends and insights in their workforce.

09/2023 – Present
MEDICAL DATA SCIENTIST/ANALYST, MOUNTAIN VIEW COMMUNITY HOSPITAL

- Achieved a 10% reduction in consultation times, leading to improved doctor-to-patient ratios and a 20% increase in patient satisfaction. This was achieved through the meticulous compilation and organisation of healthcare data using **Excel**, effectively increasing data accessibility and retrieval efficiency.

- Attained a 15% decrease in hospital readmissions and a 12% rise in treatment success rates by conducting thorough healthcare data analysis. Leveraged analytical expertise and employed tools like **SQL** and **Excel** to extract valuable insights. These insights informed strategic healthcare delivery decisions, leading to the implementation of personalised treatment plans, targeted interventions, and streamlined follow-up protocols. These measures significantly enhanced patient outcomes and fostered a data-driven approach to healthcare management.

WORK SAMPLES

- **Heart Disease Prediction**

  Achieved a remarkable accuracy, precision, recall, and ROC score of 88.52%, 87.88%, 90.62%, and 88.42% respectively in developing a robust machine learning model to predict heart disease likelihood. Employed **Python** and **Seaborn** for comprehensive analysis and comparison of multiple algorithms. The SGD Classifier model emerged as the best-performing among the options, significantly enhancing heart disease prediction accuracy.

- **"You Are What You Eat" Customer Segmentation**

  Conducted in-depth customer segmentation using **k-means clustering** on grocery transaction data to split out customers into distinct "shopper types". I leveraged **Python** and its data manipulation libraries, such as **Pandas**, for data pre-processing. The k-means algorithm, integrated through **Scikit-Learn**, facilitated the clustering process. This resulted in three clusters with varying proportions: Cluster 0 (73.6% of customers), Cluster 2 (14.6% of customers), and Cluster 1 (11.8% of customers). Drawing insights from each cluster, the client can finely tailor promotions and discounts that specifically align with the preferences of individual customers. Although the analysis achieved valuable results, exploring finer sub-category segmentation, and incorporating additional customer metrics, such as distance to store and gender, can provide a more comprehensive view of customer behaviour, enabling a well-rounded and detailed customer segmentation.

EDUCATION

M.SC PUBLIC HEALTH, UNIVERSITY OF CHESTER, UK (Grade - 2:1)

BACHELOR OF MEDICINE, BACHELOR OF SURGERY, VOLGOGRAD STATE MEDICAL UNIVERSITY, RUSSIA (Grade - 2:1)

COURSES AND CERTS

DATA SCIENCE PROFESSIONAL CERTIFICATION, DATA SCIENCE INFINITY

MASTER DATA SCIENTIST CERTIFICATION, 10ALYTICS

Actionable learnings:

- SQL data extraction and manipulation.
- Python for data analysis, manipulation, and visualisation.
- Data preparation for ML: handling missing values, encoding, scaling, selection, validation.
- Machine Learning: regression, classification, clustering, association rule learning.
- Utilising computer vision: hand, face, and eye detection.