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.

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.

Technical Skills

Languages: Python, Web Development (HTML, CSS, JavaScript, PHP)
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

Professional Experience

HANODA INVESTMENTS LIMITED, NG **Mar 2023 to Jul 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.

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.

Predicting Hate Speech: Machine Learning **Apr 2024**

- Formulated a machine learning model for hate speech detection using Python, incorporating NLP techniques and advanced feature extraction to achieve 89.55% accuracy and high sensitivity.
- Implemented data cleaning, augmentation, and real-time text processing strategies, producing detailed reports and visualizations to support effective detection and response to hate speech incidents.

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.

Other Projects

Spam Email Prediction: Machine Learning, Mar 2024
Movie Recommendation System, Mar 2024
Diabetes Prediction: Machine Learning, Mar 2024
Customer Segmentation Using Hierarchical Clustering, Mar 2024
House Prices Prediction: Advanced Regression, Feb 2024
Heart Attack Risk Analysis and Prediction, Feb 2024
Chicago Traffic Crashes EDA, Jan 2024

Education

B.Eng in Electrical and Electronics Engineering (Grade: 3.92/5.0)
Coursework Details: Introduction to Computer Science (B), Elementary Mathematics I (A), Elementary Mathematics II (A), Computer Programming I (B), Engineering Mathematics I (A), Descriptive Statistics (A), Information Technology in Engineering (A), Engineering Mathematics II (A), Engineering Mathematics III (B), Engineering Mathematics IV (B), Data Communication and Networks (B)
Alex Ekwueme Federal University Ndufu-Alike Ikwo, Ebonyi State, NG, Jan 2016 to May 2021