AWUAH JIM ISAAC

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EDUCATION

University of Ghana– Legon, Accra, Ghana **Major:** Computer Science and Statistics
Graduated Aug. 2026

Relevant Coursework: Object-Oriented Programming and Data Structures, Intro to Design and Programming for Web, Intermediate Design and Programming for Web, Introduction to Data Science, Database Systems, Statistical Inference..

WORK EXPERIENCE

Only Quality Data | Data analyst Intern **Sep. 2024 - Nov 2024**

- Utilized advanced Excel functions, including Pivot Tables and Power Query, to automate data processing and improve reporting efficiency by 15%, while reducing processing time by 25%.
- Applied statistical analysis and data mining techniques using Python to interpret complex datasets, delivering actionable insights that informed strategic decisions and improved business outcomes by 20%.
- Designed and developed interactive dashboards in Power BI using DAX for advanced calculations and visualizations, enabling clear communication of key metrics and supporting data-driven decision-making.

SKILLS AND PROFICIENCIES

- **Programming Languages**: Python, JavaScript
- **Databases**: PostgreSQL, MySQL
- **Data Science & Machine Learning**: Pandas, NumPy, Scikit-Learn, XGBoost, Tensorflow, Matplotlib, Seaborn
- **Web Development**: HTML, CSS, Django, Flask, FastAPI , BeautifulSoup
- **Business Intelligence & Data Visualization**: Excel, Power BI

PROJECTS

Bangalore House Prediction | Pandas, Numpy , Matplotlib, Scikit-learn, Flask, Html ,CSS, Javascript Github Link

- Developed a robust XGBoost regression model for predicting home prices, achieving an impressive **92% accuracy**, significantly outperforming baseline models such as Random Forest, Linear Regression, and LightGBM.
- Optimized model performance through GridSearchCV, fine-tuning hyperparameters like learning rate, max depth, and subsampling rate to enhance predictive accuracy.
- Applied comprehensive data preprocessing techniques, including feature engineering, outlier removal, and one-hot encoding, to prepare the dataset and improve model interpretability.
- Built and integrated a fully responsive frontend using HTML, CSS, and JavaScript, enabling seamless user interaction with real-time home price predictions via a Flask API.
- Conducted data visualization using Pandas and Matplotlib to provide actionable insights into the housing market dynamics, price trends, and feature importance.

Vegetable Market Analysis | Pandas, Seaborn, Matplotlib GitHub Link

- Conducted comprehensive data analysis on vegetable price trends, uncovering the impact of seasonality, quality, and external factors (such as disasters) on pricing, helping businesses make informed supply chain decisions.
- Developed data visualizations including heatmaps, revealing seasonal price fluctuations and providing actionable insights that allowed businesses to reduce costs by **10-15%** during low-demand periods.
- Analyzed price variations between fresh, average, and scrap vegetables, highlighting a **20-30% price surge** in scrap vegetables during scarcity, enabling businesses to optimize pricing strategies.
- Investigated disaster-induced price hikes of **40-50%**, offering insights that informed risk management practices and prepared businesses for price volatility in the event of future disasters.
- Delivered clear insights on price volatility and supply trends, facilitating improved stock management, better risk mitigation strategies, and enhanced decision-making for stakeholders.

Supermarket Analysis | Pandas, Seaborn,Matplotlib [Github link]

- Leveraged Jupyter Notebook to conduct comprehensive data cleaning, visualization, and analysis, uncovering key sales trends and customer behaviors across three cities, enhancing decision-making processes.
- Analyzed over **1,000** rows of supermarket sales data, identifying the top 5 highest and lowest-performing sales dates, providing insights for refining promotional strategies and optimizing marketing campaigns.
- Quantified city-specific sales performance, revealing that Naypyitaw's "Food and Beverages" category outperformed others by **20%**, allowing for more targeted and effective marketing initiatives.
- Identified day-of-week sales patterns, revealing a **15%** increase in sales on Saturdays in Yangon and notable midweek surges in Naypyitaw and Mandalay, informing scheduling and promotional efforts.
- Analyzed customer payment preferences, highlighting credit card usage as the preferred method for food and beverage purchases in Mandalay, helping streamline checkout operations and improve customer satisfaction.
- Correlated gross income with product sales, demonstrating that high-volume items contributed up to **30%** more revenue, supporting optimized stock management and inventory decisions.
- Delivered actionable insights into product pricing, promotions, and customer purchasing habits, driving data-driven business decisions that enhanced operational efficiency and increased profitability.

Competitions

Accra Mobility Prediction Hackathon
***Zindi Africa* | Ranked 23rd out of 87 participants (Top 26%)** [hackathon certificate]
November 2024

- Participated in the Accra Mobility Prediction Hackathon, where the goal was to determine the average traffic speed in Accra at different times of the day.
- Leveraged machine learning techniques like XGBoost, Lightgbm, Linear regression, Neural network and ensemble method to predict traffic speeds based on historical data.
- Collaborated with a team to provide actionable traffic insights and predictions, achieving a ranking in the top 26% of participants.
- Utilized Python and libraries like Pandas, Scikit-Learn, and Matplotlib for data preprocessing, feature engineering, and visualization.