Alex Waweru
Data Scientist

PROFESSIONAL PROFILE

Detail-oriented and analytical Data Scientist with over 5 years of experience in leveraging data-driven insights and building predictive model using programming languages such as R. Proficient in a variety of other data analytics techniques and tools (including Python, SPSS, SQL, Power BI, and Tableau), and experienced in interpreting and analyzing large datasets to develop insightful reports and visualizations.

Recently graduated with a degree in Bachelor of Science in Applied Statistics with Computing. Demonstrated expertise in utilizing statistical analysis and data visualization methods to effectively communicate trends, patterns, and predictions. Capable of executing exceptional data extraction, analysis, and build models, through the utilization of algorithms and data mining methodologies to provide insightful information. Excellent communicator with the ability to translate complex data sets into understandable and actionable business insights for non-technical stakeholders.

CAREER SUMMARY

FREELANCE - Remote
Data Scientist/ Data Analyst, August 2020 – Current

- *Development of Web Applications*: Actively collaborated with a team of data scientists and web developers in creating a web application. Focused on fine-tuning Large Language Models (LLMs) and developing sophisticated algorithms to transcribe videos to text and detect contradictions in text documents using Python.

- *Advanced Data Processing and Algorithm Development*: Demonstrated expertise in developing algorithms and machine learning models for AI data manipulation. Utilized Python and GitHub for version control, ensuring efficient project management and collaboration.

- *Data Extraction and Analysis Expertise*: Skilled in web scraping techniques using Python and R, efficiently extracting and analyzing data from various sources. Conducted comprehensive geospatial analysis using ArcGIS and financial analysis using R, showcasing

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LinkedIn

Github

Portfolio

EDUCATION

B.S. Applied Statistics with Computing
Moi University (2018-2023)
Thesis: *Predicting Air Quality using VAR Model*

Certified Public Accounts (CPA)
Completed part 1, section I

Kenya Certificate of Secondary Education
Githiga Boys High School,
Grade: B

CERTIFICATIONS

- R Language
- SPSS (Statistical Package for Social Science)
- Power Purchase Agreements (PPAs)

- *Data Storytelling and Visualization*: Proficient in transforming complex data into compelling narratives using visualization tools such as Power BI and Tableau. This skill has been instrumental in delivering insightful data-driven stories for a wide range of audiences.

- *Project Diversity and Technical Proficiency*: Engaged in a variety of projects including mini-projects in Excel, showcasing adaptability across different platforms and tools. Excelled in leveraging general AI techniques for data manipulation, further enhancing the effectiveness of machine learning models.

- Staying updated on industry trends, new technologies, and advancements in data science to enhance skills and methodologies.

- Applying analytical and problem-solving skills to address complex business challenges using data-driven approaches.

KENYA ELECTRICITY GENERATING COMPANY PLC (KenGen) - Nairobi, Kenya
Applied Statistician/ Data Scientist Intern, July 2024 – December 2024

- *Revenue Performance Analysis*: Conducted in-depth analysis of KenGen's revenue streams using Excel to assess performance trends and financial health. Later advanced to using statistical tools such R.

- *Economic Data Analysis*: Analyzed key economic indicators such as exchange rates and inflation using Excel and R to provide insights on their impact on energy pricing and revenue.

- *Energy Dispatch Analysis*: Performed analysis on energy dispatch operations using Excel to monitor energy distribution and performance tracking.

- *Dashboard Creation*: Built dynamic dashboards using Power BI to visualize key metrics and enhance decision-making processes.

- *Algorithm Development*: Developed algorithms in R and Python to automate energy dispatch, revenue analysis, and data processing workflows, enhancing operational efficiency. Additionally, created a web scraping and notification system for legal section.

- *Database Management:* Contributed to building a robust data management system using MySQL for improved data organization and access.

TECHNICAL (IT) SKILLS

- Microsoft Excel
- R programming
- Python
- MySQL/SQL
- Power BI
- Tableau
- GitHub

EXPERTISE

- Statistical Analysis
- Time series Analysis
- Data Preparation/ Manipulation
- Web scrapping
- Data Visualization
- Big data
- Machine learning
- Deep learning
- Large Language Models (LLM)
- Database Management Systems
- Data Engineering
- Algorithm Engineering

SOFT SKILLS

- Innovative
- Service-focused
- Complex problem solver
- Critical thinking
- Organization
- Efficient
- Team player
- Observation
- Decision making
- Communication

HOBBIES

- Football
- Research
- Analytical programming

- *Web Development:* Designed and implemented a user-friendly web application using Dash to automate tasks and provide an interactive dashboard for data visualization and insights.

- *Tariff Model Development:* Developing tariff models for pricing strategies, focusing on load factor and energy demand. Gaining expertise in financial concepts like PMT for loan calculations and accrued interest. Involved in updating cash books, Balance Sheets (BS) and Profit & Loss (P&L) statements.

AICE – Nairobi, Kenya
Data Scientist/ AI Trainer March 2024 – May 2024

- *Expertise in Python and Data Analysis Tools*: Demonstrated proficiency in teaching Python programming, with a focus on data structures, control flow, and advanced features such as lambda functions and decorators. Trained participants in data manipulation and visualization using pandas, NumPy, Matplotlib, and Seaborn.

- *Practical Application and Project Guidance*: Directed hands-on sessions with real datasets, guiding learners through exploratory data analysis, model building, and validation. Supervised project work, fostering practical application of concepts in AI and machine learning, including ensemble methods and neural network models.

- *Version Control and Database Management*: Educated learners on version control using Git and database management fundamentals, including SQL operations and Python-Database connectivity, emphasizing the importance of these skills in collaborative and scalable data science projects.

- *Model Deployment and Maintenance*: Guided learners on strategies for deploying machine learning models. Emphasized the importance of model monitoring and maintenance, teaching best practices to ensure model performance and reliability over time.

- *Soft Skills and Career Development Coaching*: Integrated soft skills training and career development into the curriculum, covering communication, problem-solving, and job search strategies. Facilitated final project presentations, offering critical feedback and encouraging reflection on the learning journey.

- *Advanced Machine Learning Techniques*: Taught advanced machine learning concepts such as ensemble methods, deep learning, and natural language processing. Provided practical examples and case studies to illustrate the application of these advanced techniques in solving real-world problems.

LANGUAGES

- English
- Kiswahili

REFERENCE

Patrick G. Kinyua
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KenGen
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Relationship: Former Supervisor

IEBC – Kiambu, Kenya
Electoral Clerk, August 2022 – August 2022

- Assisting in setting up and preparing the polling station before the start of voting**.**
- Verifying and assist voters with the registration process
- Providing assistance to voters using electronic voting machines or other technology**.**
- Assisting in the closing procedures of the polling station, including the secure sealing of ballot boxes.
- Maintaining accurate records of voter turnout and any issues that may arise during the voting process.
- Collaborating with other election officials and staff to ensure the overall success of the election process.

SAMCHI TELECOMMUNICATION - Nairobi, Kenya
Data Analyst, May 2022 - Jul 2022 (3 months)

- Recording every sale made on a daily basis in an Excel
- Merging internal report with Safaricom reports, analyzing the data and compiling a report.
- Identify and resolve discrepancies in revenue streams, ensuring that financial transactions are correctly recorded.
- Collaborate with cross-functional teams to address issues and implement solutions this includes the sales team.
- Creating an algorithm using R that merged the data and compiled a report. This reduced the workload by 80% and increased accuracy by 100%.
- Also assisted in data reconciliation in the accounts department.

DATIM, Remote
Data Analysis, June 2020 – November 2020

- Data entry
- Analyzing data within DATIM to extract insights, identify trends, and provide recommendations.
- Creating reports and visualizations to communicate findings to stakeholders.
- Utilizing DATIM data to assess the impact of HIV/AIDS programs.
- Developing algorithms with R programming to run analysis.