Emmanuel Sabuni | Software and Data Engineer

Lusaka,Zm | sabuni0101@hotmail.com | +260978549730 | Linkedin Github Instagram | sabuniemmanuelc.com

Professional Summary

Innovative Software and Data Engineer with expertise in data analysis, predictive modeling, and machine learning. Proficient in designing and implementing data-driven solutions using tools like Python, R, and SQL to solve complex problems in finance, healthcare, and education sectors. Skilled in developing scalable software and delivering actionable insights through advanced data visualization techniques. Adept at collaborating with multidisciplinary teams to enhance operational efficiency and deliver innovative solutions.

Skills

- **Data Analysis & Visualization:** Python (Pandas, NumPy, Matplotlib), R, Tableau, Power BI, Excel.
- **Machine Learning:** Scikit-learn, TensorFlow, Keras, PyTorch; predictive analytics and clustering.
- **Software Development:** HTML, CSS, JavaScript, React, PHP; cross-platform mobile app development.
- **Statistical & Financial Analysis:** Regression analysis, hypothesis testing, portfolio optimization.
- **Database Management:** SQL, database design, and optimization.
- **Project Management:** Agile methodologies; managing end-to-end data science and software projects.
- **Teaching & Mentorship:** Delivering academic and technical training in AI, ML, and software development.

Experience

British Airways Data Science Job Simulation

Forage - April 2024

- Completed a simulation focusing on how data science is a critical component of British Airways success
- Scraped and analyzed customer review data to uncover findings
- Built a predictive model to understand factors that influence buying behavior

Data Analyst (Part-time)

Boxify Tech, 2022 – Present

- Applied machine learning frameworks (TensorFlow, Scikit-learn, PyTorch) to analyze complex datasets in finance, healthcare, and education.
- Designed and implemented predictive models, improving decision-making processes by over 20%.
- Automated data collection workflows, reducing data processing time by approximately 30%.

Zonal Census Coordinator (Project)

Zambia Statistics Agency, 07/2022 – 10/2022

- Managed census activities across two zones, ensuring adherence to strict data collection standards.
- Delivered IT support and training to over 300 field staff, improving operational workflows.
- Successfully coordinated logistics and reporting, contributing to accurate national data collection.

Data Entry Clerk (Project)

Examination Council of Zambia, 06/2022 – 07/2022

- Digitized large datasets with CS-Pro, achieving 99% data accuracy.
- Implemented quality control measures, reducing data errors by 20%.

Tutor (Part-time)

ZCAS University, 07/2019 – 12/2022

- Lectured on introduction to Artificial Intelligence, Machine Learning, and introduction to programming.
- Mentored over 20 students, guiding them through research projects and practical applications.
- Developed innovative teaching materials, boosting student satisfaction scores by 15%.

Software Developer

Secbluewave Inc, 02/2017 – 04/2019

- Developed over 20 cross-platform mobile applications for iOS and Android, enhancing user experience.
- Delivered software solutions using PHP, React, and JavaScript, meeting 98% of project deadlines.
- Designed and optimized server-side code, reducing system downtime by 25%.

Research and Projects

- **Dynamic Portfolio Allocation** (MSc Research Project): Leveraged Deep Reinforcement Learning for risk-aware optimization in portfolio management.
- **Housing Price Prediction**: Developed a model using Python to predict property prices based on location and size, achieving 90% accuracy.
- **Air Quality Prediction**: Created an ARMA time-series model to forecast particulate matter levels in Nairobi. Tuned model hyperparameters for accuracy and retrieved data from a MongoDB database.
- **Earthquake Damage Assessment**: Designed logistic regression and decision tree models to predict building damage after earthquakes in Nepal, enhancing prediction accuracy through hyperparameter tuning.
- **Bankruptcy Prediction**: Built random forest and gradient boosting models to identify companies at risk of bankruptcy. Addressed data imbalance using resampling techniques and evaluated models with precision-recall metrics.
- **Customer Segmentation**: Implemented k-means clustering to segment US consumers into distinct groups, optimizing feature selection and developing a Dash web application for visualization.
- **A/B Testing for Enrollment Campaigns**: Conducted chi-square tests to evaluate the impact of email campaigns on program enrollment at WorldQuant University, building an interactive web application for results visualization.
- **Volatility Forecasting**: Developed a GARCH model to predict asset price volatility in India, leveraging data from web APIs and serving real-time predictions through a custom web API

Education

MSc Financial Engineering

World Quant University, New Orleans LA, USA,   05/2024

BSc Computer Science

Copperbelt University, Kitwe, CB, ZM,   11/2017

GSCE Grade 12 Certificate

Kantanshi High School, Mufulira, CB, ZM,   11/2006

Certifications

- AWS Solutions Architect Associate, Amazon Web Services
- Oracle Cloud Infrastructure Foundations Certified Associate, Oracle University
- HCIA – Security, Huawei
- Python Basics for Data Science, IBM
- Applied Data Science I & II (with Honors), WorldQuant University.

Achievements

- Honored for completing **Applied Data Science** certifications.
- Played a critical role in the success of Zambia's **2022 Census Program**, ensuring precise data collection and reporting.

Interests

- Exploring AI and Machine Learning trends.
- Architectural design and bonsai gardening.
- Classical music and travel.

Referees

1. Ms. Sitali Sepo
   Technical Advisor, GIZ, Gaborone
   E: sepositali@gmail.com
   M: +267 75 175 283
2. Mrs. Zita Lifelo Daka
   Lecturer- Computer Science Department
   Copperbelt University
   P.O Box 21692, Kitwe
   M: +260 967 625 413
   E: zitalife@gmail.com
3. Mr. Lwele Emmanuel
   Lecturer - ZCAS University

   M: +260 9766 22306
   E: lweleemmanuel@yahoo.com
4. Mr. Kaulu Collins
   Director – Business Development
   Gulani Technologies Limited, Kitwe
   M: +260965555030