CALVINE DASILVER MUGUNDA

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🪪 PROFESSIONAL SUMMARY

Data Scientist and Software Developer with 2+ years of experience building end-to-end ML solutions and scalable data applications. Expert in developing production-ready models, cloud-native architectures, and intelligent software systems that drive business value. Proven track record of improving model accuracy by 15%, reducing processing time by 25%, and implementing MLOps practices.

Key Strengths: Full-stack data science development, cloud-native ML solutions, software engineering best practices, and translating algorithms into business impact.

💼 PROFESSIONAL EXPERIENCE

Data Analyst & Data Engineer, DATASEAL SOFTWARE   08/2024 – 02/2025
                                                                      Nairobi, Kenya

Data Modeling & Architecture:
- Designed conceptual, logical, and physical data models using Erwin, improving data integrity and scalability for enterprise applications by 15%
- Built Python-based data validation scripts and automated quality checks, reducing manual validation time by 30%
- Developed reusable data modeling frameworks using OOP principles, enhancing code maintainability and development speed by 25%

ETL Engineering & Software Development:
- Engineered scalable ETL pipelines integrating diverse data sources (APIs, CSV, databases) using Python and AWS Glue, reducing reporting latency by 20%.
- Built custom Python modules for data transformation and processing, creating reusable components that improved team productivity by 35%.

Database Optimization & Performance:
- Optimized complex SQL queries and collaborated with DBAs on indexing strategies, improving query execution speed by 10%
- Created Python utilities for database monitoring and performance tracking, enabling proactive optimization
- Designed and implemented stored procedures and functions, streamlining data processing workflows

Analytics & Visualization Development:
- Built interactive Tableau dashboards and developed custom Python visualizations using Matplotlib and Seaborn
- Created automated reporting systems using Python scripts, generating insights that improved resource allocation by 20%
- Developed data APIs using Flask for dashboard connectivity, enabling real-time data access for business users

Collaborative Problem-Solving:
- Partnered with cross-functional teams to translate technical requirements into scalable data solutions
- Mentored junior analysts on SQL optimization and Python best practices

Tools & Technologies: Python, SQL (Oracle, PostgreSQL), Erwin, AWS Glue, Tableau, Git, Flask, Pandas, NumPy

🧠 CORE SKILLS & COMPETENCIES

Machine Learning & AI Development
- **ML Algorithms:** Random Forest, XGBoost, Neural Networks, NLP, Computer Vision, Time Series Forecasting
- **Deep Learning:** TensorFlow, PyTorch, CNN, RNN, LSTM for complex pattern recognition
- **MLOps:** Model versioning, A/B testing, automated retraining, performance monitoring, deployment pipelines
- **Feature Engineering:** Advanced data preprocessing, dimensionality reduction, statistical feature selection

Cloud & Big Data Technologies
- **Cloud Platforms:** AWS (Glue, Lambda, S3, EC2, RDS), Azure, GCP with infrastructure as code
- **Big Data:** Apache Spark, Hadoop, distributed computing, real-time stream processing
- **Data Engineering:** ETL/ELT pipeline design, data warehousing, data lakes, Apache Airflow

DevOps & Collaboration
- **DevOps:** CI/CD pipelines, automated testing, containerization, cloud deployment strategies
- **Agile Development:** Scrum methodologies, cross-functional collaboration, technical leadership
- **Communication:** Technical documentation, stakeholder presentations, code reviews, mentoring

Software Development & Engineering
- **Programming:** Python (advanced), SQL, JavaScript, R, Git version control, Docker containerization
- **Web Development:** FastAPI, Flask, Streamlit, REST API design, microservices architecture
- **Database Design:** Data modeling, query optimization, NoSQL (MongoDB), relational databases (PostgreSQL, MySQL)
- **Software Architecture:** OOP, design patterns, SOLID principles, test-driven development

Business Intelligence & Data Products
- **Visualization:** Tableau, Power BI, Python (Matplotlib, Plotly, Seaborn), D3.js
- **Analytics:** Statistical modeling, hypothesis testing, customer segmentation, recommendation systems
- **Product Development:** Data-driven product features, user analytics, conversion optimization

Collaborative Problem-Solving
Adept at bridging technical and business needs through cross-functional teamwork, data science workflow optimization, strategic decision-making, Agile methodologies, and stakeholder communication.

🎓 EDUCATION

Data Science Certification, Moringa School ⬀ | 02/2024 – 11/2024
- Focus: Machine Learning, Big Data Analytics, Python Programming | Nairobi, Kenya

Bachelor of Science in Statistics, Egerton University ⬀ | 09/2015 – 12/2020
- Relevant Coursework: Advanced Statistics, Data Mining, Probability | Nakuru, Kenya

KCSE: Mean Grade A-, Ringa Boys High School | 01/2011 – 11/2014
Oyugis, Kenya

Generative AI Certification, Moringa School | 06/2025 – 07/2025
Focus: Large Language Models, AI Applications, Prompt Engineering | Nairobi, Kenya

Software Engineering Certificate, PLP Academy ⬀ | 07/2025 – Present
Focus: Full-Stack Development, Software Architecture, System Design | Nairobi, Kenya

📂 SELECTED PROJECTS

Predictive Analysis for Tanzania Water Wells ↗
- Engineered an end-to-end ML solution using Random Forest and feature engineering techniques, achieving 85% prediction accuracy for water well functionality
- Developed a web application with interactive dashboards, enabling NGOs to optimize resource deployment across 10+ underserved communities
- Implemented automated data preprocessing pipelines, reducing analysis time by 20% and improving decision-making efficiency
- **Impact:** Guided $2M+ in targeted funding decisions, improving resource utilization by 18% in high-risk regions

AI-Driven Applicant Selection Tool for LSETF PLP Nigeria Hackathon ↗
- Developed an intelligent recruitment system using machine learning algorithms and NLP techniques to automate candidate screening and ranking
- Built end-to-end solution with Python, implementing feature extraction from resumes and application data to predict candidate suitability
- Created interactive web interface using Streamlit/Flask for HR teams to efficiently review and select top candidates
- Engineered data preprocessing pipelines to handle diverse application formats (PDF, text, structured data), improving screening efficiency by 40%
- **Impact:** Streamlined recruitment process for Lagos State Employment Trust Fund, reducing manual screening time by 60% and improving candidate match quality

☆ VOLUNTEER EXPERIENCE

President, Math Club
Led a team in organizing monthly problem-solving contests and math outreach events. Built leadership, teamwork, and event coordination skills while motivating peers to engage with STEM subjects.

Media & Analytics Assistant - Church Volunteer Team
Assisted in managing livestreams, editing sermon clips, and tracking online engagement through analytics. Worked closely with media and pastoral teams, enhancing cross-functional communication, reliability, and adaptability under pressure.

⚬⚬ References

Nikita Njoroge, *Technical Mentor,* Moringa School
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