**DESMOND ONAM**

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**MACHINE LEARNING DATA ENGINEER**

**Machine Learning | Statistical Modeling | Project Management**

**PROFESSIONAL SUMMARY**

**Innovative, technically-astute Machine Learning Engineer** with a stellar career history in application design, predictive modelling, data mining, and machine learning algorithms. Highly experienced in writing, debugging, and understanding large codes and deep learning algorithms, as well as building complex neural networks through various programming languages. Possess an unbridled passion for machine learning with comprehensive knowledge of machine learning concepts and other related technologies. Extensive expertise and high proficiency with structures, semi-structured and unstructured data, using a broad range of data science programming languages and big data tools, including R, Python, Spark, SQL, Scikit Learn, and Hadoop Map Reduce. Adept at using pandas, NumPy, Seaborn, SciPy, matplotlib, sci-kit-learn, and NLTK in Python to develop various machine learning algorithms.

* **Awarded “Best Machine Learning Data Engineering and web3 Tutor”** at 10 Academy for delivering outstanding data engineering, web3 and machine learning courses to students.
* **Attained 90%+ client satisfaction** by developing customized data science training programs for clients across various industries.
* **Featured in the Africas Voices Foundation** as a creative and awarded for better solutions in creating automated analysis that eased the data analytics work.

**COMPETENCIES**

Machine Learning & Optimization | Data Engineering | Software Development & Engineering | Data Visualization | Scripting | Data Pipelines | ETL Processes | Data Collection & Web Scraping | Statistics & Model Analysis | Web Development | Parallelism| Database Management | Computer Vision | Natural Language Processing | Deep Learning | Data Testing | Communication | Team Leadership | Organization | Time Management | Relationship Building

**WORK EXPERIENCE**

**OMDENA | Palo Alto, CA Sep 2022 - Present**

**Junior Machine Learning Engineer - Seasonal - Remote.**

**Technologies Used: DagsHub | Python | GeoPandas | Airflow | Docker | MLFlow | AWS | pytest | dbt**

* **Solved complex real-world problems** by applying machine learning libraries and algorithms, using statistical modelling techniques, and writing programming codes.
* **Designed machine learning systems** and self-running artificial intelligence solutions through 100% working codes and testing models.
* **Improved data quality and insight reports** using data tagger and data wrangler; developed machine learning pipelines and trained models with end-to-end Bayesian segmentation.
* **Contributed to solving community challenges** by developing, simulating, testing, and improving various machine-learning algorithms.

**SNVA Edutech LLC | Maryland, MD Sep 2022 – Dec 2022**

**Data Science Trainer - Full Time, contract - Remote**

**Technologies Used**: Data science| Artificial Intelligence | Machine Learning | Deep Learning | NLP |Python | PyTorch | AWS | Redshift | pandas | Keras | tensor flow | sci-kit learn | ETL pipeline

* **Equipped students with solid data ethics knowledge** through comprehensive training programs on ethical issues surrounding machine learning and data science.
* **Enhanced automated data processing machine performance** by analyzing, testing, and debugging **several** lines of code.
* **Received positive accolades** from the community for developing open-source data science projects that solved real-world problems.
* **Delivered a data visualization course** that helped students develop skills in creating compelling and informative visualizations to communicate data insights effectively.

**10 ACADEMY | Santa Clara, California Apr 2022 – Aug 2022**

**Machine Learning Data Engineer Consultant/Tutor - Full time, contract**

**Technologies Used**: Python | streamlit | Apache airflow | Apache Kafka | Pytorch | Apache superset | AWS | Redshift | pandas | Keras | tensor flow | sci-kit learn | ETL pipeline | react

* **Trained 37+ junior data engineers** in building datasets that underpin machine learning models and designing a real-time data pipeline that fastened semi-structured data processing.
* **Instituted a project-based learning approach** among machine learning and data engineering trainees by enabling them to ingest data from multiple third-party APIs on real-world projects. Supervised, graded students' projects and provided individual detailed feedback to students.
* **Built top talented, tech-savvy data engineers** through comprehensive and data-driven technological training that equipped them with machine learning, data engineering, and web3 skills for job readiness.
* **Liaised with data engineers** to expand and optimize data and pipeline architecture; taught students how to make well-reasoned business decisions fueled by new data.

**AFRICAN VOICES FOUNDATION | Nairobi, Kenya Nov 2021 – Mar 2022**

**Research Analyst- Data Engineer - Apprenticeship.**

**Technologies Used**: Python | Kafka | Airflow | Docker | superset | MLFlow | AWS | pytest | dbt | RShiny

* **Engineered a data pipeline** that ingested data from multiple sources using Google Analytics APIs.
* **Minimized data retrieval and upload time by 50%** by automating ETL processes that eased the data wrangling process.
* **Designed and maintained scalable**, insightful data tables, which acted as the primary input for analysis models, reports, and dashboards
* **Created superior functionality across data systems** by automating testing of pipelines and scheduling tasks to validate the organization’s assumptions about data and write logic to prevent issues from working downstream.

**FREELANCE PROGRAMMER | Nairobi, Kenya July 2018 – Present**

**Technologies Used**: Python | RShiny | Java | JavaScript | Django | Dart | MongoDB | SQL

* Developed a Django e-commerce website for Frevis Hotel, implementing secure payment gateways and a user-friendly interface to facilitate online bookings and reservations. [Skills: Django, Python, HTML, CSS, JavaScript]
* Created the Archigreen website, a platform for showcasing architectural designs and providing information on sustainable building practices, utilizing HTML, CSS, and JavaScript. [Skills: HTML, CSS, JavaScript]
* Designed and developed a delivery application using Java and Android Studio, enabling seamless order placement, tracking, and delivery management for a local logistics company. [Skills: Java, Android Studio]
* Developed a Flutter application for data collection, allowing users to gather and store data in real time, improving efficiency and accuracy in data collection processes. [Skills: Flutter, Dart]
* Conducted data analysis in R, leveraging RShiny to create interactive dashboards and visualizations for clients, facilitating data-driven decision-making and providing actionable insights. [Skills: R, RStudio, Data Analysis, Data Visualization]
* Collaborated with Fortune Academy to design and develop their website, showcasing educational programs and services, implementing responsive design and optimizing user experience. [Skills: HTML, CSS, JavaScript, Responsive Design]
* Performed data analysis and created dashboards using Streamlit, delivering comprehensive visual representations of complex data sets, and aiding stakeholders in interpreting and understanding data trends. [Skills: Streamlit, Python, Data Analysis, Data Visualization]

**Achievements:**

* Successfully delivered high-quality websites, applications, and data analysis solutions to diverse clients, meeting their specific requirements and exceeding their expectations.
* Implemented efficient and scalable solutions, ensuring optimal performance and user experience for all developed projects.
* Received positive feedback from clients for delivering projects within agreed timelines, maintaining clear communication, and providing ongoing support and updates.
* Demonstrated strong problem-solving skills by identifying and resolving technical issues, optimizing code performance, and implementing innovative solutions.
* Effectively collaborated with clients, understanding their needs and translating them into functional and visually appealing software applications and websites.
* Continuously stay updated with industry trends and emerging technologies, incorporating them into projects to deliver cutting-edge solutions.

**SELECTED MACHINE LEARNING PROJECTS**

* **SmartAd A/B testing** - Used A/B testing to test if the company’s ads resulted in a significant lift in brand awareness.
* **Breast Cancer Casualty** – Determined breast cancer causes via data analysis, modelling, and visualisation using causal graphs.
* **Sales Prediction -** Used time-series analysis, this project predicted a company’s sales for two weeks. Created an ML model for this prediction and trained it through time series analysis.
* **Twitter Sentimental Analysis -** This project was meant to create a word cloud to help identify the highly talked of words on Twitter.
* **AgriTech Package** - This project created a package for Data scientists to analyze soil data in the yielding of maize crops.
* **Telecommunication Analysis** - A company analysis of the performance based on the applications that are being used most and the company’s survival in the future.

**EDUCATION & CERTIFICATIONS**

**Machine Learning with Python** | Start-Tech Academy | 2023

**Data Science Micro degree |** Udemy | 2022

**Machine Learning Engineering/ Data Engineering |** 10 Academy | 2021

**Bachelor of Science in Mathematics and Computer Science |** Jomo Kenyatta University of Agriculture and Technology | 2021

**Statistics Fundamental and Its Application** | Udemy | 2021

**Complete Data Science Course |** Udemy | 2020

**TECHNICAL SKILLS**

**Machine Learning**: TensorFlow, Scikitlearn, Pytorch, Flask, AWS.

**Statistics and Model analysis** - A/B testing, model development, Causal graphs, Bayesian Analysis.

**Parallelism**: Docker, Kubernetes.

**Pipeline Tools**: Apache Kafka, Building, Monitoring and Scheduling Airflow, Spark, DBT, ETL and EDA.

**Data pipelines and ETL** - MongoDB, airflow, Apache Spark, AWS, DVC, DBT, SQL, Data Collection, Web Scraping.

**Scripting** - Bash, Powershell, ssh.

**Deep Learning**: CNN, RNN, Keras.

**Databases**: Postgres, MySQL, BigQuery, Redshift, MongoDB, SQL, NoSQL.

**MlOps and CI/CD**: Hyper-opts, MlFlow, AWS, GCP, Azure, Jenkins, GitHub and TravisCI.

**Software Engineering** - Java, Javascript, Python (Django), Dart, React Native.

**Web Development** - HTML, CSS, Javascript, Node.js, Django, React Native.

**Visualisation:** Jupyter, Tableau, Power BI, Streamlit, R shiny, apache superset.

**Computer Vision**: PyTorch and OpenCV, Lidar.

**Natural Language Processing**: NLTK, spacy, TensorFlow.

**LEADERSHIP & ORGANISATIONS**

**Chairman, University SDA Society** | Jomo Kenyatta University | 2020 – 2022

As Chairman of the Seventh-Day Adventist Church Society at Jomo Kenyatta University of Agriculture and Technology, I demonstrated exceptional leadership skills by overseeing a diverse student body of over 2000 individuals. I successfully managed and coordinated the activities of more than 20 departments, ensuring effective collaboration and organizational efficiency. Additionally, I adeptly chaired business and board meetings, fostering a positive and inclusive environment for decision-making and strategic planning.

**Deacon** | Jomo Kenyatta University of Agriculture and Technology | 2018 – 2019

**Environmental Health and Sanitation Captain** | Homabay High School | 2015 – 2016

**VOLUNTEER**

AI Machine Learning Engineer | AICE Africa | February 2021 – June 2021

Database Administrator | Jomo Kenyatta University of Agriculture and Technology | May 2019 - June 2019