Benjamin Imo Uka

Data Scientist | AI & Data Engineering (DRL, NLP & Anomaly Detection)

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QUALIFICATION SUMMARY

Dynamic and solutions-oriented Data Scientist and AI Engineer with robust experience in machine learning, data engineering, MLOps, and cloud-native analytics. Proficient in designing scalable pipelines, deploying production-grade ML systems, and leveraging cutting-edge AI technologies including GNNs, Transformers, RL, and LLMs. Strong background in statistical modeling, big data processing, real-time systems, and decision intelligence.

TECHNICAL SKILLS

- **Machine Learning & AI**
  - Time Series (TFT, Prophet), Graph Neural Networks (Graphormer, DGL)
  - Deep Reinforcement Learning (PPO, A2C, DDPG)
  - Anomaly Detection: Fraud Detection, Cybersecurity Threat Modeling
  - NLP: LLM, RAG
  - Quantum Machine Learning (Basic)
  - AutoML (Autogluon, H2O.ai, Pycaret)
- **Programming & Data Tools**
  - Languages: Python, SQL, Pyspark, Spark SQL
  - Libraries: Stable-Baselines3, Numpy, Pandas, Gymnasium, scikit-learn, TensorFlow, PyTorch, Hugging Face, RLlib
  - Data Visualization: Matplotlib, Seaborn, Plotly, Streamlit, Power BI, Looker, Ydata
- **Data Engineering and Cloud**
  - Big Data: Delta Live Table, Spark Structured Streaming, ETL Pipeline, Airflow, Delta Lake, Apache Beam, AutoLoader
  - Cloud Platforms: DataBricks, GCP (BigQuery, Dataflow), Azure Databricks
  - Data Warehousing: Snowflake, Delta Lake, Google BigQuery, Databricks
  - MLOps: CI/CD Pipelines, Flask, MLflow(Databricks), Docker

PROFESSIONAL EXPERIENCE

- **Data Scientist | Miracle Health Recruitment, UK- (Remote - Nov 2024 –Feb 2025)**
  - Worked with team to ensure seamless integration of data-driven solutions across operations.
- **Junior Data Scientist | Baknance Technology (Remote - Feb 2023- April 2024)**
  - Developed a RAG-based chatbot using LLMs (Hugging Face, OpenAI), improving customer support efficiency by 40%.
  - Built a fraud detection system with Graph Neural Networks (GNNs) and Deep RL, reducing false positives by 50%.
  - Led NLP models for financial sentiment analysis, cutting credit default risks by 30%.
  - Deployed predictive financial models for business forecasting optimization.

PROJECT

Finance

- Stock Market Analysis Tool: Built a financial system using void anti-symmetric pattern detection (Live Demo: https://timetion.streamlit.app/)
- Portfolio Optimization System: Designed a DRL-based solution for asset allocation.
- Fraud Detection Engine: Combined GNNs, Transformers, and RL for real-time anomaly detection in e-commerce.
- Designed and implemented an all-in-one system for financial risk models using time series analysis and sentiments from market data, improving risk
- prediction accuracy by 30%. (Live Demo: https://ben-stock-deep-learning.streamlit.app/)
- Created a sixfold model for profitable financial market trading, featuring ensemble method, time series, DL, QNN, DRL, etc.

AI/NLP Consultancy & Chatbot Development

- Built and deployed chatbots like benGPT and other advanced conversational LLM models leveraging Hugging Face and OpenAI, achieving real-time customer engagement across multiple platforms.
- Built a multimodal healthcare diagnostic tool using NLP to analyze patient data and give medical recommendations, improving disease prediction accuracy by 35%. (Live Demo: https://benhealthcare.streamlit.app/)

Anomaly Detection

- Built a state of the art Fraud Detection and Risk Modeling system using DRL, GNN and transformer models
- Designed real time fraud detection system for E-Commerce and healthcare claims.
- Set up AI driven cyber security threat detection using Network Traffic, user behavior and threat intelligence feeds.

Predictive & Optimization Systems

- Carbon Emission Policy Optimizer: DRL model for global CO2 reduction strategies (Demo: https://ben-co2optimization.streamlit.app/)
- IoT Predictive Maintenance: RL-driven failure prediction for industrial devices.
- ML modeling: Built a real-time machine learning and data analytics tool, for anomaly detection, clustering, regression and classification improving prediction's accuracy by 25% and leading to a 20% improvement in decision-making efficiency. (Live Demo: https://benjitable-ds.streamlit.app/)

Robotics

- Robot Control Models: Trained agents in custom environments using PPO and SAC.
- Game-Playing AI: Developed multi-agent reinforcement learning systems.

EDUCATION

- Bachelor in Accountancy — Imo State University, Nigeria (2016)
- National Diploma in Accountancy — Imo State Polytechnic,Nigeria (2012)

CERTIFICATION

- Neural Networks (SIMPLI-LEARN)
- Deep Reinforcement Learning (Hugging Face) - In progress

ADDITIONAL DETAILS

- YouTube Channel: 'Black Data Science' – Tutorials on AI, ML, and data engineering.
- Open Source: Active contributor to AI/ML projects on GitHub.