ANSTO TAFARA CHIBAMU

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Data Scientist with 7+ years of experience in algorithmic trading, machine learning, financial and IoT analytics. Proven expertise in developing and optimizing models for equities, FX, Crypto and derivatives. Strong track record of implementing machine learning techniques, including LSTMs and convolutional networks, for data analysis and predictions. Advanced proficiency in Python, SQL, and AWS, with demonstrated success in driving data-driven decision-making in financial markets, risk management and various domains.

Experience

2023 – PRESENT

Data Scientist | Freelance - Hybrid | South Africa

- Develop and implement data-driven solutions for financial market analysis, optimizing operational processes and enhancing business performance.
- Lead end-to-end data analytics projects from requirements gathering to implementation, focusing on risk management and market analysis.
- Utilize Python, PowerBI, SQL, and BI tools to analyze complex datasets and provide strategic insights.
- Implement machine learning techniques to identify patterns and trends in retail data, improving decision-making processes.

JANUARY 2017 – NOVEMBER 2024

Quantitative Analyst | QuantConnect | Remote | Part-time

- Developed and backtested 200+ algorithmic trading strategies for equities, cryptocurrencies, and FX markets.
- Implemented machine learning, mean reversion, and statistical arbitrage techniques within multiple frameworks.
- Applied advanced Python programming for data analysis and quantitative model development.
- Conducted portfolio optimization to maximize returns while effectively managing risk.
- Designed equity market trading algorithms incorporating technical indicators and market trends.
- Analyzed high-frequency trading data to identify exploitable patterns and market inefficiencies.

MARCH 2022 – JULY 2023

Project Lead & Quantitative Analyst | Global Vertices | Dubai, UAE

- Led product development team overseeing validation and implementation of quantitative solutions for financial markets.
- Developed and backtested trading algorithms for cryptocurrencies in live trading environments.
- Applied data science techniques to enhance trading performance and risk management.
- Collaborated on cross-functional data science projects, resulting in improved operational efficiency.
- Completed advanced Data Science Bootcamp training, enhancing expertise in cutting-edge analytical methodologies.

SEPTEMBER 2021 – AUGUST 2023

Tutor: Oxford Algorithmic Trading Programme| GetSmarter | Remote

- Engagement Tutor and Assessor for Oxford's prestigious Algorithmic Trading certificate programme.
- Provided expert guidance on algorithmic trading principles, emphasizing integration of AI and machine learning.
- Assessed participants' comprehension of complex quantitative concepts and trading strategies.
- Mentored professionals in algorithmic trading, sharing real-world insights and best practices.

SEPTEMBER 2020 – SEPTEMBER 2021

Quantitative Researcher | Hedgina | USA (Remote)

- Conceptualized and developed innovative valuation strategies for trading across diverse asset classes.
- Backtested and implemented trading models in live environments.
- Conducted statistical analysis to enhance monetization systems for trading signals.
- Managed local and offshore team members on algorithmic trading projects.
- Led initiatives that significantly improved trading outcomes and profitability.

FEBRUARY 2019 – AUGUST 2020

Data Science Consultant and Co-Founder | QuanTech Africa Group Ltd. | Mauritius

- Co-founded data science consultancy specializing in advanced predictive models for complex business challenges.
- Designed data modeling processes empowering clients with data-driven solutions.
- Manipulated and analyzed large datasets to extract actionable insights and trends.
- Led data cleaning, aggregation, and organization efforts ensuring data integrity.
- Contributed to significant improvements in business decision-making processes.

Skills

Programming (Python, SQL, R, C#) • Data analytics • Machine learning & AI • Deep learning (CNNs, LSTMs) • Time series forecasting • Quantitative research • Backtesting strategies • Trading algorithm development • Model evaluation (AUC, F1, recall) • Signal generation • Portfolio optimization • Risk management • Data wrangling • SQL • OCR and document extraction • Fraud detection systems • API integration • Feature engineering • Anomaly detection • Git & GitHub • Jupyter Notebooks • Streamlit • FastAPI • TradingView scripting • MT4/MT5 automation • NLP techniques • PyTorch • TensorFlow • Scikit-learn • Docker • Real-time data processing • ETL pipelines • Market microstructure analysis • Excellent time management • Independent and team-oriented • Client-facing communication • Rapid prototyping • Big Data Analytics • IoT Analytics • MLOps • Cloud Infrastructure (AWS, Azure DevOps) • Predictive modeling

Education

2018 - 2019

Master of Science, Applied Statistics with Operations Research | University of Technology, Mauritius| Merit

2013 - 2017

Bachelor of Technology (Hons), Financial Engineering | Harare Institute of Technology| Zimbabwe | 2.1

Certifications

- Certificate in Credit Risk Modeling in Python, 365 Careers & Udemy, 2020
- Applied Data Science II: Machine Learning & Statistical Analysis (with honors), WorldQuant University, 2021
- Applied Data Science I: Scientific Computing & Python (with honors), WorldQuant University, 2020.
- ISO 9001:2015 Quality Management System Auditor, Udemy, 2024

SelectedProjects

- **Deep Learning Models for Short-Term Price Prediction**
  Built and evaluated LSTM and CNN architectures to predict 1 to 5-minute price movements in equities and BTC/ETH. Trained on multi-source time-series datasets with engineered indicators and attention to overfitting via dropout and early stopping.
- **Quant Strategy Backtesting Framework (Python & Backtrader)**
  Developed a modular framework to backtest and analyze systematic trading strategies across equities and crypto. Features include walk-forward validation, risk-adjusted performance metrics, and integration with TradingView for signal generation. Supports rapid experimentation and model iteration.
- **AI-Driven Market Microstructure Insights Tool**
  Created a Python-based tool to analyze Level 2 order book and high-frequency tick data in Crypto. Used LSTMs and signal processing techniques to identify short-term price inefficiencies and liquidity patterns. Designed for use in model calibration and alpha signal research.

References

- **Upon request**