Joshua Agbroko

Lagos, Nigeria joshuaagbroko7@gmail.com +2347056563106 in/joshua-agbroko-x joshuaagbroko.github.io

SUMMARY

Quantitative researcher specializing in AI-enhanced algorithmic trading systems. Expert in machine learning model development, systematic strategy backtesting, and MT5 automation. Proven track record building production-ready trading systems with rigorous validation through walk-forward analysis and Monte Carlo simulation. Combining deep quantitative expertise with practical software engineering to deliver robust, scalable solutions.

EXPERIENCE

Quantitative Researcher

Private Equity Research Firm (via Upwork) **February 2025 - April 2025**

- Developed predictive analytics engine for athlete stock price forecasting using machine learning and sports performance data.
- Built data pipeline integrating 5+ data sources (performance stats, social media sentiment, market data) processing 10,000+ athlete records.
- Implemented ensemble ML models (XGBoost, Random Forest) achieving 72% directional accuracy in price movement prediction.

PROJECT

Automated MT5 Trading Bot (USDCHF)

joshuaagbroko.github.io/projects/mt5-trading-bot.html • June 2025 - September 2025

- Developed production-ready MT5 Expert Advisor with ML-enhanced entry signals, achieving 2.1 profit factor and 18% max drawdown in out-of-sample testing over 3-year period.
- Implemented custom strategy logic (trend + volatility filters).
- Backtested and forward tested with positive Sharpe Ratio.

AI Trading Signal Generator

joshuaagbroko.github.io/projects/ai-signal-generator.html • March 2025 - August 2025

- Created real-time ML signal system processing 50+ features with 68% prediction accuracy on unseen data.
- Analyzes technical patterns and generates buy signals and deployed a Streamlit dashboard for 24/7 monitoring.
- Delivered over 80% returns vs 28% on buy-and-hold.

Advanced Multi-factor Stock Investing Backtest

github.com/joshuaagbroko/factor-investing-backtest • February 2025 - May 2025

- Developed a quantitative backtesting system to evaluate multi-factor investment strategies (Momentum, Size, Value) with monthly rebalancing.
- **Achieved a simulated 127.16% annualized return with a Sharpe Ratio of 8.88** by optimizing factor weights based on historical Sharpe ratios.
- Quantified the outperformance of Sharpe-optimized weighting, which delivered a 78% higher return than equal weighting.

EDUCATION

Bachelor of Science in Computer Science

University of Benin • Benin City, Edo • 2025

CERTIFICATIONS

Deep Reinforcement Learning

Hugging Face • 2024

- Gained proficiency by coding Deep RL agents from scratch using libraries like PyTorch and TensorFlow, and training in various environments.

SKILLS

Programming Languages:
Python, R, SQL

Tools & Platforms:
MetaTrader 5, Jupyter, Visual Studio Code, VectorBT, pandas, numpy, RStudio, Streamlit, REST APIs, QuantConnect

Quantitative Finance:
Algorithmic Trading, Backtesting, Risk Management, Portfolio Optimization, Statistical Arbitrage, Factor Investing