

Harris Onyenwe

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Computer Science graduate building data-driven full-stack applications in Python, TypeScript, and Java including an end-to-end NHS data pipeline (20K+ rows) and quantitative fintech dashboards.

SKILLS & TOOLS

- **Languages:** Python, TypeScript, JavaScript, Java, SQL, HTML/CSS
- **Frameworks & Libraries:** Next.js, React, FastAPI, Spring Boot, Spring Security, Spring Data JPA, Hibernate, Thymeleaf, Bootstrap, TailwindCSS, pandas, NumPy, dbt, vectorbt, VADER/NLTK, Recharts, JUnit
- **Databases:** PostgreSQL, MySQL, Supabase, SQLite
- **Tools & Practices:** Git, Docker, Linux, REST APIs, ETL & data pipelines, Agile, Unit & Integration Testing

PERSONAL PROJECTS

PulseBoard – NHS A&E Performance Dashboard | [GitHub](#)

- Tech Stack: Python, PostgreSQL, dbt, Next.js, TypeScript, Recharts, pandas
- Built an end-to-end data pipeline ingesting 97 NHS England A&E CSVs (2015–2026, 20,590 rows, 281 trusts) — a two-level web scraper, idempotent loader, and dbt transformation layer producing a clean analytics mart with 4 automated data quality tests.
- Solved three incompatible CSV schemas across NHS data eras with column alias mapping (~50 header variants), era detection logic, and a regex CASE expression in dbt to normalise two date formats — failures surface as test results, not silent bad data.
- Designed a staging → marts dbt model layer using window functions (RANK, AVG OVER PARTITION BY), a custom safe_divide macro, and performance band classification to produce trust-level KPIs across 97 months of data.

StockLens – Stock & Cryptocurrency Tracker | [GitHub](#)

- Tech Stack: Python, PostgreSQL, Supabase, Next.js 14, TypeScript, Recharts, pandas, VADER
- Built an end-to-end quantitative pipeline for 97 US-listed stocks across 4 sectors — fetching price history via yfinance, computing 30-day annualized volatility, and persisting daily snapshots to Supabase with idempotent re-runs.
- Engineered a sentiment-and-risk scoring engine: dual-source sentiment (StockTwits + News API via VADER) feeding a profile-adaptive algorithm with configurable risk weightings, recomputed client-side so raw signals are stored only once.
- Implemented Row-Level Security across the PostgreSQL schema and a real-time price hook (useRealtimePrice) with 60-second Finnhub refresh and graceful fallback under API rate limits.

AlgoTrader - Trading Strategy Backtester | [GitHub](#)

- Tech Stack: FastAPI, Next.js, React, pandas, vectorbt, Alpha Vantage API, Recharts, Axios
- Built a full-stack algorithmic trading backtester (FastAPI + Next.js/React) running vectorized backtests with vectorbt and pandas over Alpha Vantage market data.
- Visualized performance metrics like Sharpe ratio and drawdown with Recharts for user-configurable strategies such as RSI.

EXPERIENCE

Jaktol Day Centres – Data Operations Assistant | June 2025 – Sep 2025

- Accurately inputted and maintained highly sensitive records for 50+ service users—including medical history, dietary requirements, and emergency contacts—ensuring strict adherence to data confidentiality standards.

Java Developer (IBM SkillsBuild Project) | Jan 2025 – May 2025

- In an agile team, developed a full-stack gamified web application for IBM using Java and Spring Boot to drive student engagement.
- Engineered the monolithic architecture featuring Spring Security for user authentication, Spring Data JPA/Hibernate for the MySQL data layer, and a responsive UI with Thymeleaf and Bootstrap.
- Developed comprehensive unit and integration tests in JUnit for a collaborative software project, achieving 75% code coverage across key backend modules and identifying multiple regressions prior to the final release.

Rabobank – Work Experience Placement | June 2023

- Supported the Compliance team in reviewing flagged transactions against AML criteria, escalating cases for further investigation and gaining practical grounding in financial-crime controls.

EDUCATION

University of Leicester — Computer Science BSc, First Class Honours | A-Levels: ABB

RELEVANT MODULES

Algorithms & Data Structures, Databases, Data Analytics, C++ Programming, Operating Systems and Networking, Software Engineering Group Project, Project Management, Intro to OOP, Computer Architecture, Mobile and Web Applications.