ADENIYI ADEBOWALE

Software & Data Engineer

Niyi.py@gmail.com | LinkedIn.com/in/neyfrosh | Github.com/niyiroyce | medium.com/@niyi.py

---

PROFESSIONAL SUMMARY

Software & Data Engineer with 4+ years of experience designing scalable backend systems and data pipelines across fintech, crypto, and logistics. Skilled in Python, cloud-native architectures, and distributed systems. Focused on turning complex data into actionable insights through dashboards, APIs, and analytical tools. Published technical writer on topics including Markov Chains, SQL performance, and Monte Carlo simulations. Works at the intersection of backend engineering and data strategy to improve business outcomes and guide technical direction.

TECHNICAL SKILLS

Languages: Python, JavaScript/TypeScript, Java, SQL, R, C#, MATLAB

Frontend: React, Svelte, HTML/CSS, Tailwind CSS

Backend: Node.js, Express.js, Django, REST APIs

Databases: PostgreSQL, MongoDB, Snowflake

Cloud & DevOps: AWS (Redshift), Azure, Docker, Kubernetes, Apache Airflow

Data Tools: Tableau, Power BI, SPSS, Hadoop

Development: Git, Linux, CI/CD, Agile/Scrum, TDD, Unit Testing (Pytest)

PROFESSIONAL EXPERIENCE

SOFTWARE ENGINEER

Algorithmic Science • Remote • Aug 2025 – Present

- Engineered a multi-threaded TCP server in Python, slashing file search latency by 80% across datasets of 200K+ rows.
- Delivered a line-level full-text search feature with custom algorithms, enhancing precision by 98%.

- Benchmarked 5+ search strategies, generating reports to steer optimization decisions.

- Enforced secure data transmission using SSL with PSK and self-signed certificates, ensuring full encryption compliance.

- Orchestrated deployment workflows using a Linux daemon with systemd and CLI tooling, reducing manual steps by 60%.

- Introduced a hot-reloading file watcher, reducing stale index errors by 90%.

- Simulated 1,000+ concurrent users with a custom load-testing suite to validate server resilience.

- Achieved 90%+ unit test coverage with Pytest to ensure feature stability and prevent regressions.

FULL STACK DEVELOPER

SellFastPayFast • Remote, Qatar • Feb 2025 – Jul 2025

- Engineered a crypto trading platform using TypeScript, Tailwind, and Node.js for over 5,000 users.

- Integrated real-time crypto data via CoinGecko API, increasing user engagement by 25%.

- Structured MongoDB collections for users, eBooks, and transaction logs, accelerating queries by 35%.

- Rolled out interactive eBook onboarding, raising user completion rates by 40%.

- Incorporated live chat support using Twilio, halving average response times by 50%.

- Enhanced UI responsiveness during peak load using caching and request throttling.

- Participated in Agile sprints and CI/CD workflows, enabling bi-weekly feature deployments.

DATA ENGINEER

AdQuizzer • Remote • Aug 2023 – Sep 2024

- Constructed an NLP pipeline with LSTM and RNN models to analyze sentiment, boosting insight by 45%.

- Managed ETL workflows to ingest and clean multi-source financial data, halving report preparation time.

- Streamlined dashboard creation in SQL and R, slashing manual reporting effort by 80%.

- Tuned database schemas through indexing and normalization, trimming query latency by 40%.

- Delivered executive-facing Tableau dashboards, expediting strategic decisions by 25%.

- Illustrated system architecture with UML diagrams, streamlining knowledge transfer across 3+ teams.

IT SPECIALIST

TOLADOL Logistics • Nigeria • Jan 2021 – Mar 2023

- Automated email reporting system using Python SMTP, reducing manual administrative tasks by 30%

- Fortified security infrastructure with Cloudflare DNS and SSL implementation

- Maintained custom HRM system built with Python and PostgreSQL for 100+ employees

- Conducted operational cost analysis identifying 10% savings in logistics processes

- Developed asset tracking and scheduling automation tools

KEY PROJECTS

ALGORITHMIC TRADING ENGINE *(Python, scikit-learn, Pandas)*

- Implemented a portfolio optimizer using Kelly Criterion and Monte Carlo simulations.

- Ensured sub-second response times and 98% uptime through asynchronous APIs and caching.

- Published an article explaining the underlying theory and Python implementation Read on Medium.com/@niyi.py

DISTRIBUTED FILE SEARCH ENGINE *(Python, PostgreSQL)*

- Designed scalable full-text search system for terabyte-scale datasets with custom indexing

- Outperformed baseline OS search tools by 10x through data structure optimization.

- Containerized and load-tested the service with Docker, supporting 1,000+ concurrent sessions.

TECHNICAL WRITING & PUBLICATIONS

Authored 10+ technical articles simplifying complex data engineering and statistical concepts.

[Monte Carlo Simulation through the lens of Markov chain](#)

[Understanding Async Tasks and Queues in Python](#)

[Securing APIs Using JSON Web Token (JWT)](#)

[Beginner's Guide to Git and Github](#)

EDUCATION

Bachelor of Science in Engineering

University of Lagos, Nigeria • **Graduated:** Jan 2025

Relevant Coursework: Data Structures & Algorithms, Statistics & Probability, Database Systems, Software Engineering

---

CERTIFICATIONS

Google Analytics Certified - Skillshop

Agile Development - Coursera

Risk Analysis in Engineering - AICHE

LEADERSHIP & ACTIVITIES

VARSITY SCOUT | University of Lagos

Feb 2021 – Jan 2023

- Organized 12+ campus outreach events reaching 5,000+ students
- Led team of 5 volunteers, improving event attendance by 30% through data-driven planning
- Coordinated inter-university collaborations increasing program visibility

ENGINEERING CAREER EXPO VOLUNTEER | University of Lagos

2022

- Managed logistics for career fair with 500+ attendees and 25+ participating companies
- Developed Python-based registration system reducing check-in wait times by 40%

- Supervised team of 8 volunteers ensuring smooth event operations