

# JANE IFEOMA UGWU

## QA Automation Engineer (Python | API | Playwright | AI Validation)

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## PROFESSIONAL SUMMARY

QA Automation Engineer with hands-on experience in manual testing, API automation, UI automation, backend data validation, and AI system testing.

I build structured test frameworks that protect business-critical systems from failure, especially transaction-heavy fintech applications.

Strong in risk-based testing, clean test design, CI/CD pipelines, SQL validation, and automation stability.

Focused on preventing production issues before they affect users.

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## CORE SKILLS

### Manual & Quality Strategy

- SDLC & STLC
- Risk-Based Testing (Impact vs Likelihood)
- Test Planning & Quality Strategy
- Boundary Value Analysis (BVA)
- Equivalence Partitioning
- Decision Tables
- Traceability Matrix
- Defect Lifecycle (Severity vs Priority)
- Smoke, Regression & UAT Testing

### API Automation

- Python
- Pytest

- Requests
- JSON Schema Validation
- Fixtures & Parametrization
- Data-Driven Testing
- Token-Based Authentication
- REST API Testing

## UI Automation

- Playwright (Python)
- Page Object Model (POM)
- Cross-browser Testing
- Parallel Execution
- Flaky Test Stabilization
- Network Interception
- Screenshot & HTML Reporting

## Backend & Database

- PostgreSQL
- SQL (Joins, Aggregates, Data Integrity)
- Transaction Validation
- Data Reconciliation Checks

## DevOps & CI/CD

- Git & GitHub
- GitHub Actions
- Docker
- Environment Configuration (.env)
- Containerized Test Execution

## Performance & Security

- Locust
- k6
- OWASP ZAP
- Basic SQL Injection Detection
- Token & Session Inspection

## AI / LLM Validation

- LLM Output Evaluation
- Hallucination Detection
- Prompt Testing

- RAG Validation
  - Cosine Similarity Scoring
  - Edge Case Analysis for AI Systems
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## PROFESSIONAL EXPERIENCE

### QA Engineer

*Nigerian Air Force | 2023 – 2026*

- Designed structured test cases using Boundary Value Analysis and Equivalence Partitioning.
  - Executed regression, smoke, and functional testing on internal systems.
  - Logged and tracked defects in Jira with clear steps, severity, and impact.
  - Participated in UAT sessions to validate business requirements.
  - Performed SQL queries to verify backend data accuracy and transaction consistency.
  - Worked closely with developers to reproduce and resolve critical issues.
  - Helped reduce recurring production defects through improved test coverage.
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### Quality Assurance Analyst (AI Systems)

ALUSOFT Tech | Contract | 2024 – 2025

- Evaluated AI-generated responses for factual accuracy and safety.
  - Identified hallucination patterns and documented edge cases.
  - Conducted structured prompt testing to measure response consistency.
  - Validated AI outputs against reference data using similarity scoring.
  - Reported unsafe outputs and improved dataset quality.
  - Supported reliability improvements in AI-driven systems.
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## TECHNICAL PROJECTS

### NexusPay – End-to-End Fintech QA Simulation

GitHub: [https://github.com/janeugwuicon/NEXUSPAY\\_OA\\_PROJECT](https://github.com/janeugwuicon/NEXUSPAY_OA_PROJECT)

- Built a complete quality framework for a simulated high-frequency fintech wallet.
- Created full quality strategy and structured test plan.

- Designed risk matrix for transaction failure analysis.
  - Wrote detailed test cases for onboarding, transfers, crypto swap, and AI features.
  - Built traceability matrix linking requirements to coverage.
  - Performed browser investigations using DevTools (Network, JWT, Storage).
  - Wrote SQL scripts to detect orphaned transactions and balance mismatches.
  - Documented performance and security observations.
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### **API Automation Framework (Python + Pytest)**

- Built reusable API client handling authentication and environment switching.
  - Automated CRUD operations with positive and negative scenarios.
  - Implemented JSON schema validation to detect breaking API changes.
  - Used fixtures and parametrization for scalable test design.
  - Integrated framework into GitHub Actions for automatic execution.
  - Containerized test suite using Docker for consistent CI runs.
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### **Playwright End-to-End Automation Suite**

- Automated critical user flows (Login → Search → Transfer → Checkout).
  - Applied Page Object Model for maintainable structure.
  - Reduced flaky failures using proper wait strategies.
  - Enabled parallel browser execution for faster feedback.
  - Configured CI workflow to capture failure screenshots and reports.
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### **AI Testing Lab**

- Built validation scripts for AI-generated financial responses.
  - Compared model outputs against ground truth references.
  - Implemented cosine similarity scoring to measure response accuracy.
  - Simulated RAG-based FAQ testing.
  - Documented prompt injection and hallucination risks.
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## **EDUCATION**

University of Ibadan  
Bachelor of Education (B.Ed.) – Educational Technology  
First Class Honours | 2025