Michael Tunwashe

Backend Engineer | Full-Stack Systems | API & Infrastructure Engineering

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Summary

Backend Engineer and Mathematics undergraduate at the University of Lagos, experienced in building API-driven applications, data platforms, and real-time services. Work across Python, TypeScript, Rust, and PostgreSQL, with an emphasis on reliable service architecture, data integrity, security, and maintainable systems. Technical Lead at LunixDV, contributing to engineering architecture, infrastructure, and collaborative software development. Interested in building reliable products, contributing to open-source software, and learning within internationally collaborative engineering teams.

Core Competencies

- Backend Engineering
- REST & WebSocket APIs
- Service Architecture
- System Design
- API Design & Authentication
- PostgreSQL / SQLAlchemy
- ETL & Data Pipelines
- Docker & Linux
- Python / FastAPI
- TypeScript / Bun / Node
- React & Frontend Integration
- Git & CI/CD

Experience

Technical Lead, LunixDV April 2026 – Present

- Lead backend architecture and technical delivery for AI and data-driven applications, contributing to engineering decisions spanning infrastructure design, implementation, and deployment.
- Design service architectures with emphasis on reliability, data integrity, concurrent execution, and fault-tolerant state management.
- Build and maintain APIs and data pipelines using FastAPI, PostgreSQL, and Docker, integrating quantitative models and real-time workloads into application services.
- Coordinate engineering work and contribute to collaborative development practices, technical documentation, and maintainable codebases.

LLM Evaluator, Turing December 2025 – February 2026

- Evaluated large language model outputs against structured technical and reasoning rubrics, conducting systematic failure-mode analysis.
- Developed repeatable analytical workflows for processing model outputs and applying consistent quality checks.
- Assessed edge cases, specification adherence, and implementation correctness, strengthening skills in structured debugging and technical evaluation.

Data Analyst Intern, HNG Tech August 2025 – November 2025

- Automated reporting workflows and data pipelines using Python and SQL, reducing recurring manual processing.
- Optimized analytical SQL queries and transformed unstructured datasets into structured reports and stakeholder dashboards.
- Improved data quality and reporting workflows for downstream consumers.

Projects

ZRAI — Zero-Retention AI Privacy Sidecar October 2026 – Present

- Building a local-first privacy proxy using a Rust core and TypeScript sanitization rules executed through embedded QuickJS.
- Implementing OpenAI- and Anthropic-compatible HTTP and Server-Sent Events (SSE) proxy routes with header scrubbing, filesystem, Git, and PII context sanitization, and upstream Zero Data Retention enforcement.
- Designing an in-memory processing pipeline without persistent logs, temporary files, or disk caches.
- Validating functionality through Rust unit and end-to-end tests, alongside Bun tests for the sanitization rule engine.

WXATA — WhatsApp Automation Platform April 2026 – Present

- Engineering an automation platform using Bun and TypeScript, supported by a real-time React dashboard.
- Implemented WebSocket communication, permission-controlled execution, and concurrent event processing.
- Designed stateful backend services with job lifecycle management, granular authorization, and real-time observability.

BRIS — Retail Intelligence Platform October 2025 – January 2026

- Built an end-to-end data platform using FastAPI, PostgreSQL, SQLAlchemy, and Docker, exposing structured analytical data through REST APIs.
- Developed ETL pipelines and database schemas optimized for analytical querying.
- Implemented synthetic data generation for resilience testing and containerized services for reproducible development and deployment environments.

Technical Skills

Languages: Python, SQL, TypeScript, JavaScript, Rust

Backend & APIs: FastAPI, PostgreSQL, SQLAlchemy, REST APIs, WebSocket APIs, Authentication and Authorization, Bun, Node.js

Frontend: React, TypeScript, Dashboard Development, API Integration

Infrastructure: Docker, Linux, Git, CI/CD, Service Deployment

Data & Systems: ETL Pipelines, Schema Design, Query Optimization, Statistical Computing, Algorithms and Data Structures

Engineering Practices: API Design, Concurrent Processing, State Management, Testing, Observability, Performance Optimization

Education

B.Sc. Mathematics University of Lagos 2024 – 2028

Relevant Coursework: Linear Algebra, Probability and Statistics, Differential Equations, Abstract Algebra