

# SHOLA AYENI

## SOFTWARE ENGINEER

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### SUMMARY OF QUALIFICATIONS

- Distributed Systems Architect with expertise in designing and implementing production-grade microservices platforms processing 10,000+ events/second with sub-5ms latency and 99.9% uptime.
- Proven experience building high-throughput, low-latency trading systems serving 100+ concurrent users across 1000+ active deployments with \$10M+ trading volume processed.
- Expert in performance optimization - achieved 200x speed improvements through DB-to-LRU migration (10s → <50ms).
- Proficient in full-stack development using modern technologies: TypeScript/Node.js, Next.js 14, React, Express, MongoDB, PostgreSQL, Redis, Docker, and real-time WebSocket systems.
- Strong DevOps automation expertise - built zero-touch VPS provisioning system (signup → production in 15-25 minutes) using Hivelocity API, Cloudflare DNS, Kong Gateway, and automated Docker deployment.
- Extensive blockchain/Web3 experience - integrated Seaport 1.6 protocol, implemented EIP-712 signing, built multi-marketplace APIs (OpenSea, Blur, MagicEden), and created AES-256-GCM wallet encryption systems.
- Skilled in real-time event-driven architectures with WebSocket streaming, GraphQL subscriptions, BullMQ job queues, circuit breakers, and comprehensive monitoring/observability systems.
- Experience working remotely, where I worked on production-ready apps with distributed international teams using Agile methodology.

### TECHNICAL SKILLS

#### Languages & Frameworks:

HTML, CSS (TailwindCss), JavaScript / TypeScript (React / Nextjs), Nodejs (ExpressJs), Python (Django and Flask)

#### Distributed Systems & Performance:

BullMQ (Job Queues), WebSocket (Real-time Streaming), LRU Caching, Circuit Breakers, Event-Driven Architecture, Microservices, GraphQL Transport WebSocket, O(1) Routing Algorithms

#### DevOps & Infrastructure:

Docker, Nginx (Reverse Proxy, SSL), PM2, CI/CD Pipelines, Hivelocity Bare Metal API, Cloudflare API, Kong Gateway UFW Firewall, systemd Services, Linux System Optimization (Kernel Tuning, Swap Management)

#### Monitoring & Observability:

Performance Profiling, Memory Leak Detection, Latency Tracking, Health Check Systems, Circuit Breaker Monitoring, Crash Analysis Tools

### RELEVANT EXPERIENCE

Lead Developer

Remote | Contract

#### NFTTOOLS

Nov 2022 - Present

- Sole architect and developer of a distributed, production-grade NFT trading SaaS platform comprising 6 microservices, serving 1000+ users with \$10M+ trading volume and 50K+ API calls/minute.
- Architected and built a 5-microservice distributed system from the ground up:
  - ★ WebSocket Proxy with triple high-availability and O(1) routing
  - ★ Trading Engine (65K LoC, 65+ endpoints, 14 services)
  - ★ Real-time Dashboard
  - ★ VPS Automation
  - ★ Infrastructure Setup - achieving <5ms event processing latency and 300ms end-to-end counterbid execution

- Designed and implemented Triple Subscription High Availability WebSocket system with 3 simultaneous connections to OpenSea OS2, global deduplication cache (60s TTL), per-client deduplication (10-min TTL), and O(1) reverse index routing using 4-map architecture - achieving zero message loss during connection failures and 10,000+ events/second sustained throughput
- Built real-time event streaming proxy (4,547 LoC) with GraphQL Transport WebSocket protocol, FNV-1a hashing for deduplication, instant event forwarding with <5ms latency, and comprehensive monitoring endpoints - supporting 1000+ concurrent clients with 50 subscriptions each
- Implemented intelligent job queue system using BullMQ with three-tier priority scheduling, dynamic worker allocation, exponential backoff retry logic, and comprehensive job health monitoring - processing millions of jobs daily
- Built delightful and functional Next.js 14 dashboard with, Zustand state management (5 stores), WebSocket integration, and real-time bid statistics - featuring bulk operations (start/stop/delete/export), CSV/JSON import (50MB limit), and optimistic UI updates with rollback on failure
- Implemented AES-256-GCM wallet encryption with zero-persistence policy (keys exist only in memory), automatic re-authentication after server restart, and secure key derivation using scrypt - protecting user private keys across 100+ concurrent wallets
- Monitored and managed production systems, proactively identifying and resolving issues to ensure high availability and optimal performance.
- Engineered zero-touch VPS provisioning system that, provisions bare-metal VPS via Hivelocity API, configures Cloudflare DNS records (`{username}.nfttools.io`), creates Kong Gateway API keys with rate limiting, executes remote SSH installation (20-min timeout), performs health verification, and emails credentials - **\*\*fully automated from signup to production in 15-25 minutes\*\***
- Documented systems and processes, improving collaboration and facilitating knowledge transfer.

Software Engineer

Remote | Contract

#### **Zippie**

Mar 2022 - Oct 2022

- Wrote automated test cases to ensure the application was bug-free before going to production, resulting in a 50% reduction in customer complaints.
- Designed and built APIs for internal and external use.
- Developed and maintained the user interface for Zippiescan.
- Participated in code reviews and ensured that code adheres to the development team's standards, leading to improved code quality and reduced maintenance costs.
- Documented the organization's systems and processes thoroughly, improving team collaboration and facilitating knowledge transfer for future projects.
- Successfully integrated frontend applications with the blockchain, enabling seamless and secure transactions and improving the overall user experience, resulting in increased adoption and usage of the organization's blockchain-based systems.

Backend Developer

Remote | Contract

#### **Gains Associates**

Jun 2021 - Mar 2022

- Maintained and improved the admin panel and customer-facing web platform.
- Designed and developed the server architecture.
- Successfully identified and fixed bugs before they reached production, leading to a 20% increase in customer satisfaction.
- Wrote functional requirement documents, specifications, and technical documentation.
- Designed REST API and database schema.
- Built smart contracts and backend web services that interact with various blockchain technologies.

Cofounder and Lead Software Developer

#### **Logisfy**

Jun 2020 - May 2021

- Maintained and improved customer-facing
- Efficiently identified and resolved bugs in the system, ensuring seamless operation and reducing downtime.
- Conducted comprehensive UI testing and optimized performance, leading to a better user experience and increased satisfaction.

- Defined and effectively communicate technical and design requirements, contributing to the successful delivery of projects on time and within budget.
- Designed and implemented scalable and secure backend and Azure infrastructure, improving the overall performance and reliability of the system.

Technical Team Lead

Remote | Contract

**Bloom Institute of Technology**

Mar 2020 - Aug 2020

- Delivered one-on-one feedback and code review on a daily basis.
- Led a team of 7 students through a project workflow that emulates a real work environment using the agile methodology across multiple time zones.
- Mentored 7 students on how to solve programming problems effectively.
- Reviewed student code and gave detailed feedback on areas of improvement.
- Led daily standup meetings to build camaraderie, facilitate sharing of ideas and work progress, and provide guidance for that week's study material.
- I provided quick feedback and resolution of all curriculum issues through Slack help channel or code review.

## EDUCATION

**Bloom Institute of Technology**

Remote

Full Stack Web Development & Computer Science

Jul 2019 - Aug 2020

*Bloom Institute of Technology is a 7+ month Computer Science & Software Engineering Academy that provides an immersive hands-on curriculum focusing on web development.*