

Emmanuel Elijah

Middle Backend Engineer · Full-Stack · Web3

SUMMARY

- Backend engineer with expertise in NestJS, Node.js, and TypeScript, specializing in building secure, scalable REST APIs and auth systems
- Proven experience in Web3 integrations, smart contract auditing on Celo, and blockchain technologies including Solana, Farcaster SDK
- Skilled in container orchestration and infrastructure automation using Docker SDK, docker compose, and Caddy for zero-downtime deployments.
- Developed AI-powered platforms leveraging Google Gemini and Elasticsearch for real-time payment reconciliation and natural language query parsing into SQL.
- Strong focus on clean architecture, security best practices, and system design demonstrated through multiple end-to-end projects.

TECHNICAL SKILLS

Main Technical Skills	TypeScript, NestJS, Node.js, API, GitHub
AI Tools & Assistants	Gemini
Programming Languages	Go, JavaScript, Python, Solidity, TypeScript
AI & Machine Learning	AI
JavaScript Libraries and Tools	Ethers.js, React Hooks, TanStack Query, Vite
JavaScript Frameworks	NestJS, Next.js, Node.js, React
Security	Auth, RBAC, Security
Databases & Management Systems / ORM	AWS ElasticSearch, Elasticsearch, PostgreSQL, Query, SQL, SQLite, Supabase
UI Frameworks, Libraries, and Browsers	UI
Cloud Platforms, Services & Computing	Cloudinary, GCP, Vercel
Amazon Web Services	AWS ElasticSearch
Industry Domain Experience	Blockchain
SDK / API and Integrations	API, Google API, JWT, OAuth, Payment Gateways, Stripe
QA, Test Automation, Security	Authentication, Code Review



Blockchain and Decentralized Software	Celo, Ethers.js, Phantom, Solana, Web3
Deployment, CI/CD & Administration	CI/CD
Methodologies, Paradigms and Patterns	Clean Architecture, REST, System Design
Virtualization, Containers and Orchestration	Docker, Docker Compose
Version Control	GitHub
Mail / Network Protocols / Data transfer	IP Stack, JWT, Proxy, Resend, Routing, SSE
Web/App Servers, Middleware	MSCS (Microsoft Cluster Server)
Project Management & Administration	SMART
Other Technical Skills	Astro, Backend, Boot, Caddy, Integration & Transaction Signing, MSCS, Natural Language, PaaS, Parsing, Payment, repositories, Sandbox, SDK, TanStack Router, Wallets

WORK EXPERIENCE

Backend Engineer Intern (Rovr — Luxury Refurbished Car Marketplace)

Duration: Apr 2026 – Present

Summary:

- Rovr is a luxury refurbished car marketplace platform designed and architected from scratch, featuring authentication, listings, orders, and image management
- The platform aims to provide a seamless marketplace experience for luxury car buyers and sellers

Responsibilities:

- Designed and architected the full platform including auth, listings, orders, and image management.
- Built backend REST API using NestJS and TypeScript.
- Managed data persistence with Supabase and optimized image delivery with Cloudinary.
- Authored the full Product Requirements Document (PRD) and a 6-phase product roadmap guiding the build.

Technologies: NestJS, Next.js, TypeScript, Supabase, Cloudinary



Backend Engineer Intern (Shipyard (DeployKit) – Self-Hosted Deployment Pipeline)

Duration: Apr 2026 – May 2026

Summary:

- Shipyard is a mini Platform-as-a-Service (PaaS) that automates deployment pipelines by cloning, building, containerizing, routing, and serving applications from GitHub URLs
- It supports Node
- js, Go, and Python repositories without requiring Dockerfiles

Responsibilities:

- Built the deployment pipeline system from scratch with dynamic container orchestration.
- Implemented auto-detection of repository types using Railpack.
- Streamed real-time pipeline output to the UI using Server-Sent Events (SSE) without polling.
- Integrated Caddy's Admin API for zero-downtime reverse proxy routing.
- Persisted build logs in SQLite and enabled system boot with docker compose up.

Technologies: TypeScript, Node.js, React, Vite, TanStack Router, Docker SDK, Railpack, Caddy, SQLite, SSE

Backend Engineer Intern (PayLens – AI-Powered Payment Intelligence Platform)

Duration: Mar 2026 – Apr 2026

Summary:

- PayLens is an AI-powered payment intelligence platform designed for sandbox payment testing and reconciliation, submitted to the Google Cloud Rapid Agent Hackathon
- It features dual-agent AI capable of interpreting natural language commands and executing API calls autonomously

Responsibilities:

- Built dual Gemini agents specialized for Stripe and Paystack payment gateways.
- Implemented real-time transaction reconciliation with discrepancy detection and structured reporting.
- Integrated Elasticsearch for fast querying of transaction logs.
- Collaborated on full-stack development with a teammate.

Technologies: NestJS, Next.js, TypeScript, Google Gemini, Elasticsearch, Stripe, Paystack

Backend Engineer Intern - Kolo Protocol (Smart Contract Security Audit – Kolo Protocol (Celo))

Duration: Feb 2026 – Mar 2026

Summary: Conducted an independent security audit of three production smart contracts deployed on the Celo network for Kolo Protocol, focusing on identifying vulnerabilities and providing remediation guidance.

Responsibilities:

- Performed threat modelling, manual code review, and CEI pattern verification.
- Documented 14 findings across critical, medium, and low severity issues.



- Produced a comprehensive audit report detailing vulnerability impact, likelihood, and fix recommendations.

Technologies: Solidity, Celo, CEI Patterns, Manual Audit Methodology

Backend Engineer Intern - HNG Tech (Insigha Labs+ – Demographic Intelligence Platform)

Duration: Apr 2026 – Present

Summary:

- Insigha Labs+ is a secure demographic intelligence platform providing probabilistic demographic attributes with confidence scores for analytics pipelines, featuring a NestJS backend, React web portal, and Node
- js CLI tool

Responsibilities:

- Built backend services including a natural language query parser and Demographic API.
- Implemented GitHub OAuth with PKCE and stateless JWT authentication with dual-client strategy.
- Designed Role-Based Access Control (RBAC) using custom decorators and NestJS Reflector.
- Secured the system with global rate limiting, CSRF protection, and custom request logging middleware.

Technologies: NestJS, React, Node.js, PostgreSQL, JWT, OAuth 2.0, PKCE, RBAC, @nestjs/throttler

Freelance Full-Stack Developer - Independent (TomSkid – eSIM Platform)

Duration: Dec 2025 – Present

Summary: TomSkid is an eSIM platform featuring production authentication, email services, manual payment flow, and automated eSIM expiry tracking, delivered as a full-stack web product for clients in various industries.

Responsibilities:

- Developed end-to-end platform with Clerk authentication, Resend/Supabase SMTP email, and OPay manual payment flow.
- Implemented automated eSIM expiry tracking using Supabase Edge Functions and pg_cron.
- Delivered full project lifecycle from scoping and architecture to deployment and handoff.
- Acted as technical co-founder on select collaborations, including infrastructure planning and system architecture for an LMS platform.

Technologies: Clerk, Resend, Supabase, OPay, Supabase Edge Functions, pg_cron

Freelance Full-Stack Developer - Independent (Pacifica – Farcaster Mini App / Perpetual DEX (Solana))

Duration: Dec 2025 – Feb 2026

Summary: Pacifica is a Farcaster mini app for a Solana-based perpetual decentralized exchange (DEX) featuring a dual-wallet architecture and backend signing for secure trade



execution.

Responsibilities:

- Built Farcaster mini app with dual-wallet architecture (identity wallet and trading wallet).
- Implemented Pacifica Agent Key system for backend signing.
- Developed deposit flow with mobile deep linking and handled wallet signature verification and margin validation before trade execution.

Technologies: Next.js, TypeScript, Solana, Farcaster SDK, Phantom, Solflare

Freelance Full-Stack Developer - Independent (Wedding Gate Entry System)

Duration: Jan 2025

Summary: A digital guest verification system for a ~150-person wedding event, including an organiser portal, guest self-registration with auto-generated codes, and usher verification via protected links.

Responsibilities:

- Developed organiser portal and guest self-registration system.
- Implemented auto-generated codes for guest verification.
- Built usher verification system accessible via protected links.

Technologies: Next.js, TypeScript, Supabase

