

BASSEY GOODLUCK GABRIEL

Senior Backend Engineer | Systems Engineer | Node.js, TypeScript, Rust, Solidity
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PROFESSIONAL SUMMARY

Senior backend and systems engineer with 6+ years of production experience across fintech, Web3 protocols, and privacy software. Specialises in correctness-critical distributed systems: deterministic Rust services, low-latency order matching, event-driven architecture, wallet-based identity and access control, and Node.js/TypeScript API layers under real traffic. Benchmarks systems to locate actual bottlenecks rather than assumed ones, and selects runtimes and deployment models from measured evidence rather than convention. Six years of fully remote delivery with distributed engineering teams in New Zealand, Romania, and the United States.

SELECTED ACHIEVEMENTS

- Benchmarked a deterministic Rust order-matching engine at approximately 790,000 orders/sec in-process (1,000 orders in ~1.24 ms median), establishing that the engine core was not the system bottleneck and re-prioritising optimisation work toward serialization, event emission, and persistence.
- Measured a 12-13x reduction in resident memory by rebuilding a high-traffic marketplace backend in Rust/Axum (3.4 MB idle / 6.9 MB peak) against an equivalent Node.js/Express service (40.7 MB idle / 90.8 MB peak) under identical load testing.
- Reduced annual AWS spend by over \$12,000 through infrastructure audit, decommissioning of unused resources, and S3 lifecycle and expiration policies.

CORE SKILLS

Expert: Node.js, TypeScript, JavaScript, REST API design, API development, Solidity, React.js

Proficient: Rust, Axum, Tokio, PostgreSQL, MongoDB, Redis, gRPC, GraphQL, WebSockets, Docker, Amazon Web Services (AWS), Fastify, Express.js, Next.js, Hardhat, Foundry, Ethers.js, Web3.js, Wagmi, Viem, JSON Web Tokens (JWT), OAuth 2.0, Role-Based Access Control (RBAC), CI/CD, Git

Familiar: Apache Kafka, Google Cloud Platform (GCP), Amazon EC2, Amazon S3, Electron, Chrome Extensions, Remix.run, Prisma, Redux, sqlx, Meilisearch

Exposure: Go (Golang) - language fundamentals; built HTTP services

Domains: Distributed systems, Event-driven architecture, Message queues and pub/sub, Microservices, Low-latency and high-throughput systems, Performance benchmarking, Memory profiling, Load testing, API security, Authentication and authorization, Smart contract development (ERC-20, ERC-721, NFT marketplaces, DAO governance), On-chain settlement, Wallet infrastructure, LLM and RAG application development, Cloud cost optimization, System design, Architecture design, Cross-functional collaboration

PROFESSIONAL EXPERIENCE

Principal Engineer - Independent Consulting and Product Development

Remote | January 2026 - Present

Designing, building, benchmarking, and operating production systems end to end across AI infrastructure, marketplaces, and decentralised finance. Five systems shipped; four currently serving paying businesses in production.

- **Hybrid DEX - architecture:** Architected a hybrid decentralised exchange: a deterministic Rust order-matching engine exposed over gRPC, with a Node.js API layer handling authentication, risk checks, and settlement orchestration. Kept authentication and risk outside the engine so the core holds correctness and throughput invariants; state is snapshotted for crash recovery, settlement is verified on-chain, and market data streams in real time over WebSockets.
- **Hybrid DEX - benchmarking:** Benchmarked the core matching path at approximately 790,000 orders/sec in-process (1,000 orders in ~1.24 ms median; single-threaded, single market, all-crossing workload). Established that end-to-end capacity (~1,000 TPS) was bounded by gRPC serialization, event emission, and persistence rather than by the matching engine itself.
- **Hybrid DEX - prioritisation:** Redirected optimisation effort onto the measured bottlenecks instead of the assumed one, avoiding further tuning of an already non-limiting component.

Technologies: Rust, gRPC, Node.js, Fastify, Redis, PostgreSQL, Solidity, React.js

- **Rust marketplace platform (in development):** Rebuilt a high-traffic classifieds marketplace backend in Rust/Axum after diagnosing memory pressure in Node.js services that degraded above approximately 5,000 page visits/day. Benchmarked functionally equivalent minimal Axum and Express servers under identical ApacheBench load (100,000 requests per round, resident set size read from the operating system rather than in-process reporting): Rust held 3.4 MB idle / 6.9 MB peak against Node.js at 40.7 MB idle / 90.8 MB peak, roughly 12-13x lower resident memory, with V8 arenas never releasing after burst while Rust settled immediately.
- **Deployment architecture:** Determined that an Axum service holding a persistent sqlx connection pool, Redis pool, and long-lived WebSocket connections was structurally mismatched to a stateless, short-lived serverless function model, and migrated backend deployment to a long-lived-process host while retaining the serverless platform for the React/Vite frontend. Runtime and platform selected from measurement, not convention.
- **Paltext AI:** Built an AI customer-support platform that ingests a business's own knowledge sources (documentation, blog posts, social content, marketing material) and autonomously resolves customer enquiries at scale. Live with 4 businesses in production across three integration surfaces: Discord servers, Telegram communities, and an embeddable website widget. Owned the ingestion pipeline, retrieval layer, multi-channel integration, and backend services.
- **Maakeit:** Built a creator-founder marketplace that de-risks influencer marketing by vetting creators and matching them by niche, so marketing spend maps to conversion rather than raw reach. Live with 50+ vetted creators and 5 founder-side businesses. Owned matching logic, creator vetting workflow, and the full backend.
- **Web3Id:** Built a production-grade Web3 identity and access management system bridging wallet-based identity to traditional Web2 authorization. Where most Web3 applications stop at wallet connection, this system adds roles, granular permissions, session management, audit logging, and revocation. Wallet signature verification implemented in Rust.

Technologies: *Rust, Solidity, Node.js, Fastify, JWT, MongoDB, React.js*

Senior Backend Engineer - MASQ

New Zealand (Remote) | November 2023 - December 2025

- Led design and implementation of the MASQ Privacy Browser serving 1,000+ users, owning architecture decisions across correctness, reliability, and data integrity in a privacy-critical desktop product.
- Architected reusable internal packages and shared state systems adopted across the engineering team, improving development velocity by 70%. Set the patterns other engineers built against and reviewed their integrations.
- Drove a cloud cost-ownership initiative: audited AWS infrastructure, decommissioned unused resources, and established S3 lifecycle and expiration policies, reducing annual AWS spend by over \$12,000.
- Built and maintained backend services and desktop client integration across Rust, Node.js, and Electron, including Chrome Extension surfaces and webhook-driven event flows.

Technologies: *Rust, Node.js, Electron, Chrome Extensions, AWS, Docker, MongoDB, Redis, REST, Webhooks, Web3.js, Hardhat, Git*

Fullstack Software Engineer - O1Node

Romania (Remote) | June 2023 - October 2023

- Led development of the Missions dApp, enabling thousands of users to participate in on-chain tasks, contributing to a 40% increase in user engagement and a 15% lift in retention within the first month of launch.
- Built scalable, semantically structured fullstack applications with React.js, Next.js, and TypeScript, improving page performance and maintainability and cutting frontend-related defects by 25% while shortening iteration cycles.

Technologies: *Node.js, TypeScript, Next.js, Remix.run, PostgreSQL, Prisma, Solidity, REST, GraphQL, Redux, Hardhat, Web3.js, Wagmi, Viem, CI/CD*

Software Engineer - Altura

Boston, USA (Remote) | March 2023 - May 2023

- Contributed to a new Smart NFT system built in TypeScript, React, and Node.js, resulting in a 25% increase in sales.
- Developed and maintained internal tooling in TypeScript and MongoDB, improving team productivity and operational efficiency by 30%.

Technologies: *JavaScript, Node.js, Express.js, React.js, Redux, MongoDB, Solidity*

Fullstack Engineer - Monkeydoo NFT

Remote | November 2021 - December 2022

- Built and shipped end-to-end Web3 products on the Ethereum Classic network, owning the full stack from smart contract through to production frontend.

- Wrote, tested, and deployed NFT marketplace smart contracts and DAO governance contracts in Solidity, including access control, ownership patterns, and on-chain governance logic.
- Built Node.js backend services and React.js frontends integrated via Web3.js and Ethers.js for JSON-RPC communication with the chain, covering wallet connection, transaction lifecycle handling, event indexing, and on-chain state synchronisation.

Technologies: *Solidity, Node.js, React.js, Web3.js, Ethers.js, JSON-RPC, EVM, Ethereum Classic, Hardhat*

Fullstack Engineer - Evolved NFT

Remote | December 2020 - November 2021

- Delivered complete Web3 applications from smart contract to user interface across multiple NFT product launches.
- Designed and deployed ERC-20 token contracts and ERC-721 NFT contracts, handling minting logic, supply mechanics, and token standards compliance.
- Built supporting Node.js backend services and React.js frontends, integrating contract state and transaction flows via Web3.js and Ethers.js JSON-RPC calls.

Technologies: *Solidity, Node.js, React.js, Web3.js, Ethers.js, JSON-RPC, EVM*

Frontend Engineer - Payvest

Fintech | Hybrid | February 2020 - December 2020

- Built and shipped the customer-facing Payvest application interface in JavaScript and React.js, delivering the primary product surface used by the company's end users.
- Translated financial product requirements into responsive, maintainable UI components within a regulated fintech context.

Technologies: *JavaScript, React.js*

EDUCATION

B.Tech, Computer Science - University of Port Harcourt | September 2014 - October 2019
CGPA 3.96 / 5.00