Amanuel Assefa

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Professional Summary

Backend Engineer with 3 years experience in building production-grade microservices for top 40 cryptocurrency exchange (ranked by **CoinMarketCap**), processing 100K+ daily transactions. Experienced in event-driven architectures, real-time systems, and payment infrastructure. Led cross-functional initiatives with 10+ global payment providers, delivering fault-tolerant systems with 99.9%+ uptime and mentoring junior developers.

Education

Korea Advanced Institute of Science and Technology (KAIST)   Aug 2017 – Feb 2022
B.S. in Electrical Engineering, Minor in Computer Science   *Daejeon, South Korea*

Experience

DNSEver Inc. / Probit Global Exchange   Sep 2022 – Present
Backend Engineer   *Seoul, South Korea*

- **Payment Platform Leadership**: Architected BuyCrypto platform using **Node.js**/**NestJS**, collaborating with cross-functional teams and 10+ global payment providers to process 10,000+ monthly transactions with 99.8% success rate.
- **Microservices & Automation**: Built fault-tolerant worker system with automated crypto transfers, reducing manual processing by 85% through **MSA** architecture. Implemented comprehensive **Jest** unit testing (90%+ coverage) and **CI/CD** pipelines for zero-downtime deployments.
- **Notification**: Built scalable notification service using **NestJS** and **gRPC**, handling 50K+ daily messages via **Redis**-based queue system with 99.9%+ delivery rate, collaborating with application client teams for seamless integration.
- **Real-time Infrastructure**: Created real-time pub/sub infrastructure using **Redis** for live candlestick charts and developed high-performance **WebSocket** services, supporting 10K+ concurrent users with sub-100ms latency and streaming 500+ messages/second.
- **Testing & DevOps**: Implemented comprehensive **Jest** unit testing achieving 90%+ code coverage across microservices. Implemented **CI/CD** pipeline setup with automated deployments on **GitLab** to **AWS** cloud infrastructure, collaborating with DevOps team for zero-downtime releases using **Docker**/**Kubernetes** and monitoring via **Grafana** and **Datadog**.

Personal Projects

TON Binary Options Pool Smart Contract   Jul 2025 – Present
FunC, TypeScript, Node.js, TON

- Built comprehensive **Node.js** backend API using ton-core and func-js libraries for contract interaction, automated testing pipelines, and local development environment setup.
- Implemented event-driven monitoring system for testnet contract state tracking and automated settlement processing with error handling and retry mechanisms.

Technical Skills

- **Languages:** JavaScript, TypeScript, Python, C, Scala, Verilog
- **Backend:** Node.js, NestJS, PostgreSQL, Redis, gRPC, REST APIs, WebSockets
- **Infrastructure:** Docker, Kubernetes, AWS, CI/CD (Gitlab), Grafana, Datadog
- **Testing & Quality:** Jest, Unit Testing, Integration Testing, TDD practices
- **Databases:** PostgreSQL, Redis (Pub/Sub, Caching, Queues)

Languages & Status

- **English:** Fluent — **Korean:** Basic
- **Work Authorization:** F-2-7 visa (no sponsorship required)