Nathan Ollerenshaw

Staff-level backend and platform engineer with extensive experience designing distributed systems, modernizing legacy architectures, and delivering revenue-generating technical initiatives. Proven ability to identify product opportunities, align stakeholders, and execute end-to-end solutions that create measurable business impact. Deep background in Go, Python, AWS, event-driven systems, data pipelines, and scalable service architecture.

San Francisco Bay Area | Authorized to work in the US (Green Card holder) | matjam@stupendous.net

Core Strengths

- Revenue-aligned technical strategy
- Distributed systems architecture
- Event-driven and microservices design
- Cloud-native infrastructure (AWS)
- Data publishing and integration platforms
- Cross-functional technical leadership
- System modernization and platform evolution
- Mentorship and engineering standards

Current Role

Staff Software Engineer, NerdWallet *(September 2018 – present)*

- Engineering Team Lead for the Product Platform team, maintaining the product data APIs that serve all NerdWallet user experiences across Python, Go, and React/Node.js/TypeScript applications.
- Identified a revenue opportunity through internal stakeholder discussions and led the design and implementation of an automated product data publishing platform, delivering ahead of holiday code freeze and generating over $1M in initial revenue with an established recurring income stream.
- Among the technical leaders championing AI adoption at NerdWallet, helping drive developer adoption of AI tools across the engineering organization. Contributed to the transition to an AI-assisted development workflow using Cursor and Claude, carefully balancing increased engineering output with the quality standards required for production systems.
- Led implementation and ongoing maintenance of core Go frameworks integrating Go applications within the NerdWallet software stack on AWS ECS and Kubernetes.
- Rewrote the Data Ingestion Service from Python to Go, replacing hard-coded rules with a declarative YAML configuration system using reusable functions, significantly reducing debugging complexity and enabling faster rule iteration.
- Led significant refactoring of existing Python applications, greatly reducing complexity and external dependencies, resulting in massively improved build and deploy times.
- Championed and modeled improvements to standard Python project development practices, adopting uv for faster builds, ruff for linting, and modern frameworks such as FastAPI.
- Early adopter of the standardized EKS platform, assisting teams with migrations, providing feedback on Helm configuration, and collaborating with the team to refine an AI-based review agent for Helm changes.
- Onboarded the WunderGraph Cosmo and GraphQL platforms into the team after inheriting them from other teams, successfully integrating them into support processes.
- Maintained high availability for team-owned systems with a focus on maintainability and long-term platform sustainability.

- Led capacity planning for NerdWallet's Superbowl ad campaign, ensuring Product Platform systems could handle the anticipated traffic surge. Successfully scaled infrastructure and monitored systems during the event with no incidents or performance degradation.
- Drove critical Core Web Vitals performance analysis and shipped multiple fixes across applications as part of a cross-functional team.
- Prototyped migration path from custom infrastructure deployment tooling to GitHub Actions CI with Terraform and AWS CDK, reducing reliance on proprietary tools.
- Supported multiple teams with Go application optimization, identifying performance bottlenecks and shipping fixes to shared Go packages.
- Provided technical leadership on pivoting the technology stack to align with the new STT model.

Technical Skills

Programming Languages

Polyglot software engineer comfortable across multiple languages and paradigms.

- **Go:** Using Go since its 1.0 release in 2012, with extensive production experience developing and maintaining microservices. Deep experience integrating Go services with AWS (ECS, EKS, DynamoDB, Secrets Manager, S3), PostgreSQL, Redis, and OpenSearch.
- **Python:** Extensive production experience across web services (Flask, FastAPI, Gunicorn, Uvicorn), async programming (gevent, asyncio), data layers (SQLAlchemy, psycopg2, Pydantic), and complex data processing including PDF generation and parsing.
- **C:** Experienced C programmer with production systems involving databases, SOAP/REST APIs, sockets programming, and threading.
- **C++/Java:** Professional experience with both; follows modern C++ developments and uses it for personal projects.
- **SQL:** Comfortable writing moderately complex queries across Oracle, MySQL, and PostgreSQL. Strong understanding of database optimization, indexing, and query planning across multiple database products. Leverages AI tooling for advanced query generation.
- **Full Stack Web Development:** Solid architectural understanding of JavaScript, TypeScript, and modern frameworks (React, SvelteKit). Effective at directing and reviewing AI-assisted frontend development rather than day-to-day hands-on coding in these languages.
- Cursory bare metal programming experience with **x86_64**, **68k**, and **6502** assembly. Some **FPGA** programming. Interest in **Rust**.

Infrastructure & Cloud

- **AWS:** ECS, EKS, DynamoDB, CDK, and core AWS services. GitHub Actions CI/CD with Terraform and AWS CDK for infrastructure deployment.
- **Containers & Orchestration:** Docker, Kubernetes (EKS), Helm.
- **Platforms:** GraphQL (WunderGraph Cosmo federation platform).
- **Configuration Management:** Puppet, Ansible, MaaS.
- **Web Infrastructure:** NGINX, Apache, HAProxy, Tomcat, Squid.
- **Operating Systems:** Linux (Ubuntu, RHEL/CentOS), FreeBSD, Solaris.

Data & Messaging

- **Databases:** Oracle, MySQL, PostgreSQL — clustering, optimization, and administration.
- **Caching & Search:** Redis, OpenSearch.
- **Messaging:** RabbitMQ, OpenMQ, ZeroMQ.

Networking & Security

- Expert-level understanding of DNS.
- IPv6 deployment experience.
- Network routing, switching, and load balancing (Cisco).
- PCI-DSS 3.0 compliance audit experience.

Earlier Career

Senior Solutions Engineer, Cloudmark/Proofpoint *(2015 – 2018)* — Deployed anti-abuse platforms at major ISPs across Canada and the US. Prototyped cloud-based email security offerings on AWS.

SVP Engineering, BNC Holdings *(2013 – 2014)* — Managed the Systems Engineering team at a Japan-based startup, responsible for IT systems and production web platform.

Senior Technical Specialist, Telstra BigPond *(2007 – 2013)* — Developed core authentication and accounting systems in C/C++ for Australia's largest ISP. Deployed the anti-abuse platform and prototyped early OpenStack implementations.

Systems Engineer, ValueCommerce *(2003 - 2006)* — Supported infrastructure handling hundreds of millions of daily requests for Japan's leading affiliate marketing provider (50%+ market share). Led major network infrastructure upgrades.

Systems Specialist, Lineone/Tiscali *(2000 – 2002)* — ISP operations for one of the UK's top 5 ISPs (600,000+ customers). Led email platform migration after Tiscali acquisition.

Systems Administrator, Modem Media *(1998 – 2000)* — Managed all IT systems for the London office including new office build-out. Built foundational Unix, database, and networking expertise.