Roman Shneer

Staff Backend Engineer | Node.js, Python, Distributed Systems | System Design

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SUMMARY

Staff Backend Engineer with 10+ years building SaaS for 1M+ users and 1000+ e-commerce sites. Stack: Node.js (Fastify), Python, Microservices, Distributed Systems, high-load pipelines. Proven: 10k+ req/sec, 2x acceleration via Parquet/Athena, 99.9% uptime. Daily CI/CD with GitHub Actions. Open source architecture showcase InvoiceApprovalFlow - event-driven system with Dapr, Envoy, K8s, MongoDB Replica Set, Redis pub/sub, local Llama 3, OTel/Zipkin, Saga. See open source section below.

CORE SKILLS

Backend: Node.js (Fastify, Express), Python (Flask), TypeScript, REST APIs, Microservices, Event-Driven Architecture, DDD, SOLID

High-Load and Data: 10k+ req/sec, RabbitMQ, SQS, Parquet, Athena, HiveQL, Artillery load testing, Performance Tuning

Cloud and Infra: AWS (EC2, SQS, Lambda, S3, DynamoDB), Docker, Kubernetes (k3d/minikube, manifests), Dapr (State, Pub/Sub, Actor Placement, Scheduler), Envoy Proxy

Observability: GitHub Actions (daily), Jenkins, Grafana, Prometheus, OpenTelemetry + Zipkin, Clinic.js

Databases: MongoDB Replica Set, PostgreSQL, MySQL, Redis pub/sub, DynamoDB, ChromaDB

Python and AI: Python, LlamaIndex, LangChain, Ollama Llama 3 (local, 100% private), OpenAI API

PROFESSIONAL EXPERIENCE

Staff Backend Engineer | Shneer.dev - B2B SaaS Platform for AEC/BIM | Jul 2024 - Present Leading backend for high-availability B2B SaaS platform and enterprise Entertainment client (remote, 2+ years). Architected complex event-driven reference systems (see InvoiceApprovalFlow on GitHub) as showcase of distributed design.

- Architected and scaled high-availability B2B SaaS platform for enterprise AEC clients from scratch, implementing event-driven cloud patterns (showcased in open-source *InvoiceApprovalFlow*).
- Delivered production-grade **Node.js (Fastify) / MongoDB / Redis & Python** backend delivering 99.9% uptime, backed by automated GitHub Actions CI/CD pipelines.
- **Engineered and published commercial Autodesk Revit Plugin (.NET/C#)** on the official Autodesk App Store integrating BIM data import, secure cloud file synchronization via AWS S3 Presigned URLs, and automated subscription/licensing lifecycle.

Senior Backend Engineer (R and D) | Barilliance.com - eCommerce Personalization SaaS | Dec 2015 - Jul 2024 (8.5 years)

Core backend engineer for personalization engine powering 1000+ e-commerce sites.

- **Architected high-throughput & resilient event pipeline** handling 10k+ req/sec: Implemented edge protection via **Envoy Proxy** (Rate Limiting/DDoS) and central distributed event bus using **Dapr Pub/Sub & Redis Streams**. Engineered fail-safe mechanisms with **Circuit Breaker**, **SQS Fallback**, and **DLQ with manual redrive** to guarantee zero data loss.
- **Managed distributed tasks & session lifecycles**: Utilized **Dapr Scheduler** and AWS EventBridge for reliable cron-driven jobs, integrated with DynamoDB TTL + Streams & AWS Lambda for automated expired session processing.
- **Designed multi-tier Rules Engine architecture**: Decoupled rule execution into **Real-Time, Near-Real-Time, and Batch executors** based on strict latency SLAs; built an interactive Node.js/React drag-and-drop configuration dashboard and real-time statistics UI.
- **Optimized Big Data & Analytics Pipeline**: Streamlined high-volume data engineering by

aggregating session states via MySQL (Master/Slave) into **S3 Staging** and converting raw telemetry into **S3 Parquet (Data Lake)** queried via **AWS Athena/HiveQL** (Python), achieving a 2x boost in analytical processing speed.

• **Streamlined automated CI/CD & Delivery**: Maintained daily deployment cycles using **GitHub Actions**, Docker containerization, and automated testing suites.

• **Built multi-channel notification dispatcher**: Backed by SQS and Redis (Cache/State), orchestrating personalized cross-platform delivery across Web/In-App banners, Email, FB Ads API, and FTP exports.

Full-Stack Developer | TrolllIsrael (Travis Tours) | Tourism SaaS | 2012 - 2015

• Designed booking platform from scratch (5+ external APIs SOAP/REST, PayPal), 500+ concurrent bookings

OPEN SOURCE - ARCHITECTURE SHOWCASE

InvoiceApprovalFlow - Event-driven invoice approval | Open Source | github.com/roman-shneer/InvoiceApprovalFlow

Personal open source project, 316 commits, MIT License, 9 ADR records. Complete technical design and microservice topology to demonstrate distributed systems expertise.

• 4 microservices (ingestion, governance, payment, management) - Node.js Express + Vue 3 admin, event-driven via Dapr Pub/Sub, leader election via Dapr state store compare-and-set, Saga for payment compensation • Envoy Proxy at edge, Dapr components for State (approval-state, mongo-invoices, policies, fx-rates, budgets), Secrets, Middleware. K8s manifests - api-gateway, apps, configmap, dapr-config with mTLS/tracing, placement, scheduler, final bundles

• 100% private local Ollama Llama 3 for compliance, deterministic rules for ledger. OTel 100% sampling to Zipkin, Jest E2E journeys, Artillery performance tests

• Developed utilizing AI-assisted development tools (Cursor, Claude, local Ollama Llama 3) for architecture planning, code generation, and automated testing.

CERTIFICATIONS

• Python Development Specialization (Data Analysis, Automation, Web) - Microsoft / Coursera (2025)

• Foundational C# with Microsoft - Coursera (2026)