



Daniel Mercer

Senior Backend Engineer

Distributed Systems | API Architecture | Data Engineering

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📍 San Francisco, CA

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PROFESSIONAL SUMMARY

Senior Backend Engineer with 9+ years of experience designing and scaling distributed systems. Expert in building high-throughput APIs, event-driven microservices, and real-time data pipelines. Proven track record of reducing system latency by 60% and infrastructure costs by 40% through architectural redesign. Strong advocate for observability-driven development and infrastructure-as-code.

TECHNICAL EXPERTISE

Languages

Go Python Rust Java TypeScript SQL

Runtimes & Frameworks

gRPC GraphQL Spring Boot FastAPI Node.js Actix

Data Stores

PostgreSQL Apache Kafka Redis Cassandra Elasticsearch S3

Infrastructure

Kubernetes Terraform Docker AWS Helm ArgoCD

Observability

Prometheus Grafana OpenTelemetry Jaeger Datadog PagerDuty

WORK EXPERIENCE

Staff Backend Engineer

📅 Mar 2023 – Present

Nexa Technologies

📍 San Francisco, CA

Led the redesign of Nexa's core transaction platform serving 4M+ requests per minute. Architected an event-sourcing pipeline with Kafka and Debezium that eliminated dual-write patterns and reduced data inconsistency incidents by 92%. Built a gRPC service mesh handling \$2B+ in monthly payment volume with 99.99% uptime. Mentored a team of 6 engineers and established code review and incident response playbooks.

Senior Backend Engineer

📅 Jun 2020 – Feb 2023

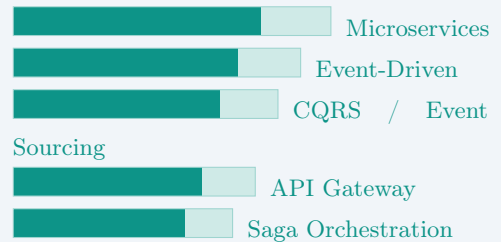
Synapse Analytics

📍 Seattle, WA

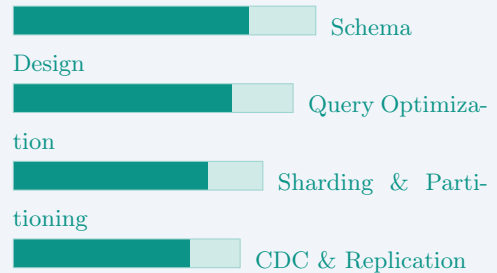
Designed and implemented a multi-tenant data ingestion platform processing 15 TB/day across 200+ enterprise customers. Built a query federation layer over Presto and Elasticsearch that unified SQL access across 8 data sources, cutting cross-team analytics latency from 45s to under 2s. Migrated 12

SYSTEM DESIGN PROFICIENCY

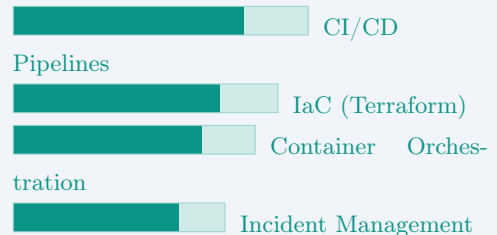
Architecture Patterns



Database Design



DevOps & SRE



KEY PROJECTS

Argus – Distributed Rate Limiter Go, Redis, gRPC

Open-source distributed rate limiting service with pluggable backends and consistent hashing.

Built for 500K+ RPS throughput with sub-millisecond p99 latency. Supports sliding window, token bucket, and leaky bucket algorithms. Adopted by 3 Fortune 500 engineering teams. 2.4K GitHub stars.

Thalos – Schema Registry

Rust,

monolith services to a Kubernetes-native microservice architecture, improving deployment frequency from biweekly to 30+ deploys per day.

Backend Engineer

📅 Aug 2018 – May 2020

Meridian Health

📍 Austin, TX

Developed FHIR-compliant interoperability APIs enabling secure health data exchange between 50+ hospital systems. Implemented a HIPAA-compliant audit logging service with tamper-proof storage, processing 3M+ audit events daily. Built real-time patient monitoring pipeline ingesting IoT device streams through MQTT, Kafka, and Spark Streaming with sub-second end-to-end latency.

PostgreSQL, Kafka

[Production-grade schema registry with Avro, Protobuf, and JSON Schema support.](#)

Provides schema evolution enforcement, compatibility checking, and automated code generation. Handles 50K+ schema validations per second. Used internally across 4 Nexa product teams.

VaultKeeper – Secrets Orchestrator

Python, AWS, Kubernetes

[Centralized secrets management with automatic rotation and audit trails.](#)

Integrates with HashiCorp Vault, AWS Secrets Manager, and Kubernetes Secrets. Reduced secret sprawl by 80% and eliminated hardcoded credentials across 200+ microservices.

EDUCATION

M.S. Computer Science

[Stanford University](#)

2016 – 2018

Thesis: *Consensus Protocols for Geo-Distributed Data Stores*

B.S. Computer Science

[UC Berkeley](#)

2012 – 2016

Minor in Mathematics. Dean's List (6 semesters).

CERTIFICATIONS

- **AWS Solutions Architect Professional**
2023
- **CKAD: Certified Kubernetes Application Developer**
2022
- **Confluent Certified Developer for Apache Kafka** 2021
- **HashiCorp Certified: Terraform Associate**
2022

OPEN SOURCE CONTRIBUTIONS

- **Kubernetes** – Contributor to apiserver and client-go. 14 merged PRs.
- **Apache Kafka** – KIP-987 co-author. Improved consumer group rebalancing.
- **OpenTelemetry** – Go SDK instrumentation for gRPC middleware.

LANGUAGES

English – Native **German** – Professional
Working

Spanish – Conversational

```
>_ $ ssh dmercer@backend-engineer -summary
```

> Systems thinker. Writes code that outlasts product roadmaps. Measures success in percentiles, not averages.

> Currently exploring: WebAssembly on the edge, CRDT-based state replication, and Rust async runtime internals.