Jayanth Kethineni

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SUMMARY

Backend Software Engineer specializing in low-latency, distributed systems. Experienced in building real-time, event-driven backends with strong consistency, cache-first hot paths, and failure-resilient architectures at scale.

WORK EXPERIENCE

Software Engineering Intern - Backend & Data Systems India
CRED *May 2023 - December 2023*

- Designed and shipped Java + Spring Boot services supporting internal data platforms used by multiple teams.
- Built and optimized large-scale data processing pipelines (10M+ records), significantly improving analytics turnaround time and reducing manual intervention.
- Improved backend performance by ~40% through SQL query optimization, indexing, and efficient data access patterns.
- Collaborated with senior backend engineers on design reviews, sprint execution, and production deployments, delivering production-ready code.

PROJECT EXPERIENCE

Real-Time Transaction Processing System (Java | Spring Boot | PostgreSQL | Kafka | Docker)

- Built a financial-grade transaction processing system handling 1K+ TPS with sub-50ms p99 latency, enforcing idempotency and strong consistency to prevent double-spends.
- Designed an event-driven architecture using Kafka + Outbox Pattern, achieving 100% reliable state-to-event consistency under retries, crashes, and duplicate message delivery.
- Implemented concurrent balance updates and validation logic with zero data corruption during load tests involving hundreds of parallel requests.
- Created an immutable audit ledger capturing 100% of transaction decisions, enabling deterministic replay, failure investigation, and compliance-ready traceability.

Scalable Analytics & Reporting Backend (Java | Spring Boot | PostgreSQL | Redis | Docker)

- Built a production-grade analytics backend handling large datasets using cursor-based pagination, Redis query-result caching, and async job processing.
- Achieved sub-500ms latency for uncached analytics queries and sub-20ms latency for cached queries by isolating OLAP workloads from OLTP systems.
- Implemented asynchronous job execution for long-running analytics queries, eliminating API timeouts and improving dashboard reliability.
- Designed cache TTL and eviction strategies to reduce database load while balancing data freshness and infrastructure cost.

Real-Time Trust & Risk Scoring Platform (Java |Spring Boot | Redis | PostgreSQL | Docker)

- Designed and owned a real-time trust and risk scoring backend with cache-first hot paths and auditable decision trails.
- Designed an event-driven ingestion pipeline with Kafka to decouple trust signal processing from API latency and handle burst traffic reliably.
- Implemented append-only PostgreSQL audit logging capturing rule evaluations, latency, and cache hit/miss to support explainability and investigations.
- Applied resilience patterns including rate limiting, circuit breakers, and bulkheads to isolate failures and protect low-latency scoring paths

TECHNICAL SKILLS

Languages & Backend: Java, Spring Boot, REST APIs, Kafka, Redis
Databases & Tools: PostgreSQL, MySQL, Git, Postman, Linux
Cloud & Systems: AWS (EC2, RDS, S3), Docker, CI/CD, Distributed Systems

EDUCATION

University of Central Missouri Jan 2024 - Dec 2025
Master of Science in Computer Science