SAURABH NAYAK

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PROFESSIONAL SUMMARY

Senior Software Engineer and Technical Architect with 8+ years of experience designing, building, and scaling high-impact distributed systems for industry leaders including TikTok, Microsoft, and Amazon. Deep expertise in system architecture, distributed systems design, and technical leadership. Proven track record of driving technical strategy, influencing architectural decisions, and delivering measurable business impact through innovative engineering solutions. Specialized in e-commerce platforms, cloud infrastructure, and real-time data processing at scale.

EXPERIENCE

TikTok | Senior Software Engineer

April 2023 - Present | San Jose, CA

Cross-Border E-Commerce Platform

- • Architected cross-border e-commerce platform redesign, defining technical strategy and system design for international merchant onboarding across 15+ countries
- • Led design and implementation of high-performance Go-based RPC backend serving 80%+ of active daily users with sub-100ms P99 latency
- • Drove technical decisions for microservices architecture using ElasticSearch, Redis, and distributed caching, improving system throughput by 3x
- • Delivered $20M+ GMV and 2M+ sales transactions in first year through optimized merchant onboarding flow
- • Provided technical mentorship to 5+ engineers on distributed systems design patterns and Go best practices

Technical Stack: Go, Microservices, RPC, ElasticSearch, Redis, Distributed Systems

Microsoft | Senior Software Engineer

July 2021 - April 2023 | Redmond, WA

Cloud Cost Management Service

- • Architected Azure Cost Management service expansion to 8 new regions with automated resource provisioning using ARM templates and Infrastructure as Code
- • Improved service reliability from 98.85% to 99.56% SLA by identifying and resolving critical performance bottlenecks through distributed tracing and profiling
- • Designed scalable event-driven architecture using Azure Service Bus and Redis for real-time cost analytics serving Fortune 500 customers
- • Led technical design reviews and influenced architectural decisions across Azure Cost Management team

Technical Stack: Azure, C#, ARM Templates, Service Bus, Redis, Kusto, Distributed Systems

Amazon Inc. | Software Engineer II

July 2017 - July 2021 | Seattle, WA

DynamoDB Global Tables Expansion

- Led technical design for DynamoDB Global Tables expansion to 4 new AWS regions, improving data locality and reducing cross-region latency by 40%

E-Commerce Personalization & Search

- Architected Hero Product recommendation system using Spark on EMR, processing 10M+ daily events and achieving 4.2% revenue lift through A/B testing
- Designed and implemented Guided Search assistant with ML-powered product recommendations, improving customer conversion by 15%
- Enhanced Shoe Similarity widget by integrating machine learning models for accurate product recommendations

Technical Stack: AWS, DynamoDB, Spark, EMR, Machine Learning, A/B Testing, Distributed Systems

TECHNICAL EXPERTISE

System Architecture & Design

Distributed Systems • Microservices Architecture • Event-Driven Architecture • System Design • Performance Optimization • Scalability

Technical Leadership

Technical Mentorship • Design Reviews • Architecture Decisions • Cross-team Collaboration • Technical Strategy

Programming Languages

Go • Python • Java • C# • SQL • JavaScript

Cloud & Infrastructure

AWS • Azure • Infrastructure as Code • Docker • Kubernetes

Data Systems

DynamoDB • PostgreSQL • Redis • ElasticSearch • Spark • Real-time Analytics

Engineering Practices

A/B Testing • Monitoring & Observability • CI/CD • Performance Profiling • Distributed Tracing

EDUCATION

Texas A&M; University, College Station, Texas

Master of Engineering in Computer Engineering | August 2015 - May 2017

Indian Institute of Technology, Hyderabad, India

Bachelor of Technology in Electrical Engineering | August 2009 - May 2013

KEY ACHIEVEMENTS

- **$20M+ GMV Generated:** Led technical architecture for merchant onboarding platform at TikTok
- **99.56% Service Reliability:** Improved Azure Cost Management service uptime through systematic optimization
- **80%+ Daily User Coverage:** Architected scalable Go-based RPC backend with sub-100ms latency
- **3x Throughput Improvement:** Drove microservices architecture redesign with distributed caching
- **40% Latency Reduction:** Led DynamoDB Global Tables expansion architecture
- **4.2% Revenue Increase:** Architected ML-powered recommendation system processing 10M+ daily events