Kartik Jha

Senior Backend Software Engineer - Distributed Systems & Platform Engineering

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Professional Summary

7+ years of backend software engineering experience building always-on, low-latency, highconcurrency systems that scale for millions of users. Expert in Java, Go, and Node.js with deep expertise in microservices architecture, cloud platforms (AWS), and distributed systems. Proven track record delivering **production-grade services** with **99.9% uptime** across enterprise software, fintech, and media streaming platforms. Specialized in system performance optimization, event-driven architectures, and platform engineering.

Core Technical Expertise

Java, Go, JavaScript, TypeScript, Python, Ruby Languages:

Backend Frameworks: Spring Boot, Node.js, Express, Django

Microservices: Service-oriented architecture, API gateways, distributed systems

Cloud & Infrastructure: AWS (Kubernetes, Lambda, EC2), Docker, Jenkins, GitOps

Databases: PostgreSQL, MongoDB, MySQL, Redis (distributed caching)

Event Systems: Kafka, RabbitMQ, WebSockets (real-time messaging)

API Design: REST, gRPC, HTTP/HTTPS, service mesh architecture

DevOps: CI/CD pipelines, automated testing, production monitoring

Professional Experience

May 2025 - Present **Technical Lead**

Wissen Technologies (Diligent Enterprise Platform)

Leading backend engineering for enterprise automation platform serving 10,000+ concurrent users

- Microservices Transformation: Architected migration from Rails monolith to Node.js microservices, achieving 20% faster deployments and 15% infrastructure cost reduction through optimized service decomposition
- High-Concurrency APIs: Designed and implemented REST APIs handling 2,000+ concurrent robot executions with sub-100ms response times using advanced caching and database optimization techniques
- Event-Driven Architecture: Built distributed task management system with Kafka-based event processing, reducing system coupling and enabling horizontal scaling across multiple service instances
- Production Reliability: Implemented comprehensive monitoring, automated recovery mechanisms, and circuit breakers achieving 99.9% system uptime with zero-downtime deployments

Senior Software Engineer

February 2025 - July 2025 (Freelancer)

puffles.io (Cryptocurrency Platform)

Backend Platform Engineering for high-traffic NFT marketplace

- Kubernetes Infrastructure: Migrated serverless architecture to self-managed Kubernetes cluster, scaling from 100 to 2,000 concurrent users while improving cost efficiency and system control
- **Performance Engineering:** Optimized Node.js backend achieving **10x concurrency improvement** through connection pooling, caching strategies, and database query optimization
- Load Testing Framework: Developed comprehensive testing infrastructure enabling systematic performance validation and capacity planning for production scaling

Senior Software Engineer

July 2023 - September 2024 (Freelancer)

Viewlift (Media Streaming Platform)

Real-time Systems & Payment Infrastructure for millions of users

- WebSocket Server (Go): Built high-performance real-time communication system supporting 5,000+ concurrent sessions with <50ms message latency for collaborative features
- **gRPC Migration:** Modernized payment APIs from TypeScript to Go with gRPC, reducing request latency by **25**% and improving system throughput for billing operations
- Kubernetes Optimization: Rewrote subscription services for cloud-native deployment, achieving 40% reduction in compute costs and improved auto-scaling capabilities

Senior Software Engineer

September 2021 - April 2023

BrowserStack (Developer Platform)

Platform Engineering for global developer infrastructure serving millions of tests daily

- **Kubernetes Migration:** Led app signing service migration to AWS Kubernetes, reducing deployment times from **45 to 20 minutes** and improving system reliability
- Distributed Caching (Java): Implemented SQLite-based caching layer reducing device state retrieval by 30%, optimizing performance for global device farm infrastructure
- Automated Recovery (Java): Developed monitoring and self-healing systems using Java and Groovy, reducing
 manual intervention by 50% and ensuring 24/7 service availability

Software Engineer

September 2020 - August 2021

Smallcase Technologies (Investment Platform)

Event-Driven Financial Systems handling high-frequency trading

- Kafka Event System: Architected event ingestion pipeline processing 1M+ daily events with <100ms latency for real-time portfolio updates and order processing
- **Distributed Concurrency (Redis):** Implemented optimistic locking for AutoSIP orders using Redis, reducing failed transactions by **80**% while maintaining ACID properties
- Financial Algorithms: Built order matching and reconciliation system with leaky bucket algorithm, improving accuracy by 25% in high-frequency scenarios

Software Engineer

January 2019 - September 2020

Disney+ Hotstar (Video Streaming)

Video Platform Backend serving 400M+ users during peak events

- Content Pipeline: Developed scalable VOD ingestion system reducing encoding latency from 5 to 3.5 minutes , optimizing content delivery for millions of concurrent streams
- Spring Boot Cache (Java): Built high-performance image tagging cache with REST APIs, decreasing
 personalized content retrieval by 40% through intelligent caching
- **Workflow Optimization:** Enhanced ingestion APIs reducing processing failures by **25**% through improved error handling and retry mechanisms

Software Engineer

August 2017 - January 2019

Roboticwares (Logistics Platform)

Early-career backend development for supply chain management systems

- **Shipment Tracking:** Built real-time tracking system with React frontend and Node.js/Ruby backend, processing thousands of shipment updates daily
- API Integration (Java/Spring Boot): Implemented Leaflet mapping service cache reducing external API calls by
 15% and operational costs

Education

Bachelor of Technology, Computer Science

DIT University - Dehradun, Uttarakhand

May 2017 GPA: 71.6%

Notable Open Source Projects

Load Test Utility

NPM CLI tool for comprehensive API performance testing with database metrics and JSON configuration support

Code Quiver

Open-source utility library with modules for competitive programming in Java and JavaScript

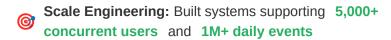
Chrome AI Extension

Innovative prototype using browser-native Gemini Nano for intelligent content summarization

Color Sticks

2D game engine focusing on performance optimization and color-based mechanics (Work in Progress)

Technical Leadership & Impact



System Reliability: Achieved 99.9% uptime through comprehensive monitoring and automated recovery

Team Productivity: Led architectural migrations reducing deployment times by **50%+** and improving developer velocity



Performance Optimization: Consistently delivered **25-40% latency improvements** across production systems



Cost Efficiency: Delivered **15-30% infrastructure savings** through optimization and right-sizing



Technology Modernization: Successfully migrated legacy systems to modern microservices architectures