Vipan Kumar

HANDS-ON SOFTWARE ARCHITECT & TECH LEAD | JAVA, NODE.JS, PYTHON, AWS, KAFKA, GENAI

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Brampton, Ontario, Canada (Greater Toronto Area) | Open Work Permit, no sponsorship required

PROFESSIONAL SUMMARY

Hands-on architect and tech lead who still ships production code, currently building and running a live video automation platform as sole engineer. 15 years of multi-tenant SaaS and event-driven systems on AWS, Azure and GCP, including regulated banking and financial-services platforms. Results: 10x Kafka throughput from personally fixing a JVM concurrency bottleneck in code, a 58% GPU fleet reduction, and scaling Lenskart from 300-500 to 8,000+ orders/day. Seeking Tech Lead, Lead Software Engineer, Staff Engineer, Principal Engineer or Software Architect roles.

TECHNICAL SKILLS

Core: Java, Spring Boot, Node.js, TypeScript, Python, Kafka, AWS, microservices, event-driven architecture

Cloud and DevOps: AWS (RDS, CloudWatch), Azure, GCP, Kubernetes, Docker, Terraform (infrastructure as code), CI/CD (GitHub Actions, Jenkins), SRE, FinOps

Architecture: System design, solution design, distributed systems, multi-tenant SaaS, high availability, scalability, REST, gRPC

Languages and data: NodeJS, JavaScript, FastAPI, Debezium CDC, PostgreSQL, MySQL, MongoDB, Redis

AI: Generative AI (GenAI) in production, LLM integration, RAG, Stable Diffusion, SDXL, GPU inference, Cursor, Claude Code

Security: SOC 2 Type 1, ISO 27001, RBAC/IAM, OWASP

EXPERIENCE

Principal Software Architect (Consultant/Retainer)

2026 - Present

Technical guidance on retainer for three clients; personally coded two of the three platforms.

- DroneCraft Rides, Video Automation Platform (Sep 2026 - Present): Billing about US$3,600/month (₹300,000) as sole architect and engineer for a rafting and bungee operator in Shivpuri, India, the exclusive licence holder, which sells the videos to all its partners. Pulls site camera and drone footage from Google Drive to S3, auto-trims clips by motion and loudness, then renders a landscape film and a portrait reel with ffmpeg, adding branded intros, transitions, watermarks and per-camera audio mixing. Stack: TypeScript, Node.js, Fastify, MongoDB, React, Python, FastAPI, SQLite job queue, ffmpeg, AWS (S3, SES, EC2).
- ZodiacBee.com, SEO Platform for North America (Aug 2026 - Present, part-time): Canadian client. Designed and built the full platform end to end on Python, FastAPI and AWS, and supported execution and delivery with the client team. Launched 15 Oct 2026; marketing started for North America.
- Active RFID Worker Safety System, Maruti Suzuki India (Jan 2026 - Present): Technical advisor; led the architecture of an active RFID system that locates workers horizontally and vertically, including which floor someone is stuck on, during fires and emergencies. Deployed March 2026; live in 4 Maruti Suzuki plants.

OnGrid

Mar 2025 - Jun 2026

Software Engineering Manager

Gurugram, India. Background-verification SaaS for regulated banking and financial-services clients. Led a team of 21. Stack: Java, Spring Boot, Kafka, Debezium CDC, MySQL, AWS (RDS, CloudWatch).

- Diagnosed and fixed a JVM concurrency bottleneck, increasing Kafka throughput 10x across 13 topics with no added infrastructure.
- Implemented 13 production database upgrades with zero unplanned downtime via controlled MySQL and Debezium CDC migrations.
- Optimized AWS infrastructure, cutting costs 22% and raising uptime to 99.95% through RDS rightsizing, CloudWatch observability and FinOps.
- Designed and measured an AI-assisted development pilot with 15 engineers, recovering 8.5 hours per engineer per week and leading to org-wide adoption.
- Improved release velocity 40% and cut production incidents 35% by introducing weekly releases, stronger CI/CD controls and clear production ownership.

Dresma

Feb 2022 - Feb 2025

Technical Architect & Lead Engineering Manager (Nov 2023 - Feb 2025); Senior Engineering Manager (Feb 2022 - Oct 2023)

HQ USA; engineering in Gurugram, India. GenAI e-commerce content SaaS serving the US, UK and Europe. Led a cross-functional team of 25-30. Stack: Node.js, React, Python, Java; AWS, GCP, Azure and private GPU partners.

- Architected the platform that still powers Dresma, which has since grown to US$2M ARR on the same infrastructure.

- Scaled DoMyShoot and batch tools to 50,000+ brands and 9M+ images (about 500,000 images/month) by architecting cloud-native, multi-tenant GenAI pipelines.
- Reduced GPU servers from 12 to 5 (about 58% fewer) for the same output by designing a tiered priority queue across multi-cloud GPU capacity and cloud credits.
- Implemented priority queues on limited GPUs, delivering first images in under 1 minute on the premium tier and 10-15 minutes on the standard tier against a 2-hour SLA.
- Built in-house image models by benchmarking open-source models (SAM, YOLO, CLIP, SDXL) and training custom models on synthetic data.

Gigforce

May 2021 - Feb 2022

Senior Software Architect / Founding Engineer

Gurugram, India. On-demand gig staffing platform; US$3M pre-Series A led by Endiya Partners (Sept 2021). Led a team of about 15. Stack: Node.js.

- Built a self-serve two-sided marketplace as first engineer, growing the gig workforce from 100 to 4,000-5,000 workers across India (40-50x).
- Built e-KYC, rostering, a matching engine and payouts for clients like Delhivery, Flipkart, BigBasket and Grab.

SignCatch Inc.

Sep 2019 - May 2021

Senior Software Architect

Inc. in California, USA; engineering in New Delhi. B2B retail-tech, POS and Retail Commerce-as-a-Service. Led a team of 25. Stack: Node.js, Python, Kubernetes; AWS and Azure.

- Enabled the supply chain for Walmart India's Kirana Development Program (KDP) as exclusive tech partner, onboarding 500 kirana stores in beta and connecting them to Walmart replenishment centres.
- Grew the platform to 700+ retail locations (about 200 merchants + 500 KDP stores) with a multi-tenant, multi-vertical POS.
- Migrated legacy systems to microservices and grew a hyperlocal Android app to 100,000+ organic downloads in 6 months.

Domino's India (Jubilant FoodWorks)

Aug 2018 - Sep 2019

Lead Software Scientist

Noida, India. Hands-on IC on a 10-person PHP to Java migration team.

- Moved a 1,200+ store network from offline to online POS, reducing store setup cost and speeding up new store launches.
- Designed the refund reconciliation engine for peak days of about US$420,000 in orders.

Koovs plc

Nov 2016 - Aug 2018

Technical Lead

London, UK (AIM-listed 2014), India operations. Team of 3 engineers. Stack: PHP, Java, Microsoft Navision ERP.

- Tripled warehouse capacity from 2,000 to 6,000 orders/day with the same workforce by rewriting the supply chain system and automating warehouse operations.

Lenskart (Valyoo Technologies)

Jun 2013 - Feb 2016

Senior Software Engineer, then Technology Lead (from Sept 2014)

Faridabad / Delhi NCR, India. Early 10-person tech team; Lenskart listed on NSE/BSE on 10 Nov 2025.

- Scaled the platform from 300-500 to 8,000+ orders/day (16-25x) with the same small team, keeping it stable and cost-efficient.
- Migrated from a Magento monolith to Java microservices with Redis, Kafka and MongoDB flattened tables, removing downtime caused by Magento re-indexing at scale.
- Initiated and led the tech for Home Eye Check-Up, growing it from 5 to 500 checkups/day over three years, and built its field-ops app as a responsive web app and then a PWA.
- Built Virtual Try-On as sole engineer using 2D JavaScript Canvas; customers typically used it about 5 times per session.

Earlier experience (2012-2016): Samsung R&D Institute (Tizen OS, WebKit2 / WebGL engine work), V5 Global Services (PHP to MEAN rebuild)

EDUCATION

Bachelor of Engineering (B.E.), Computer Engineering Thapar Institute of Engineering & Technology, Patiala, India — 2008-2011

Diploma in Computer Science Thapar Polytechnic — 2005-2008

CERTIFICATIONS

Leadership with AI ISB (Indian School of Business) Executive Education — 2025

Credential: https://www.credential.net/8fca11be-3d39-4c0f-8441-4ba1a1315897