

VINOD KUMAR G

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SUMMARY

Lead Software Developer with 6+ years of hands-on experience turning complex product and engineering challenges into scalable, production-ready systems. I work across full-stack engineering, distributed systems, APIs, databases, cloud architecture, and AI-enabled applications, owning problems from technical direction and architecture through implementation, deployment, and production.

Designed architectures to support **100M+ requests/day** and operated services handling **1M+ requests/day**, while reducing critical API latency to **under 100ms** and engineering systems capable of processing **6M+** records. Known for making practical architecture and scalability trade-offs, solving difficult production problems, and staying hands-on in the code while helping teams deliver reliable, maintainable systems. Strong experience in technical leadership, system design, distributed systems, microservices, multi-tenant platforms, performance engineering, cloud infrastructure, production reliability, and AI/LLM-enabled solutions.

SKILLS

Technical Leadership & Architecture: Technical Leadership, System Design, Software Architecture, Distributed Systems, Microservices, Multi-Tenant Architecture, Event-Driven Systems, API Design, Performance Engineering, Fault Tolerance, Horizontal Scaling, Production Troubleshooting, Engineering Standards, Problem Solving, Teamwork

Architecture & Systems: Microservices, Multi-Tenant Architecture, Workflow Automations, Real-Time Streaming (WebSockets, SSE), Caching, Fault Tolerance

Backend: Node.js, TypeScript, Express.js, Go, ORMs (Sequelize), GraphQL, REST APIs, fiber (go), BullMQ worker, CRON Jobs, Express.js, axios, JSON, DOM Manipulation,

Frontend: React.js, Next.js, Redux, Context API, Material UI, Tailwind CSS, Ant Design, Responsive Design, Accessibility

Databases: PostgreSQL, MySQL, ClickHouse, Redis, MongoDB, Pinecone, Dragonfly, SQL, Database Optimization, Database Design

AI & Platform: LangChain, LangGraph, RAG, Vector Search, AI Agents, OpenAI, LLM Integration

Cloud, Delivery & Engineering: GCP, AWS, Docker, Kubernetes, CI/CD, Git, Monitoring, Logging, Automated Testing, Agile Development

Real-Time & Distributed Processing: WebSockets, Server-Sent Events (SSE), Caching, Asynchronous Processing, Workflow Automation

EXPERIENCE

Lead Software Developer

MedImpact Healthcare Systems

August 2023 - Present, Dubai, UAE

- **Technical Leadership & Incident Response:** Lead a cross-functional squad spanning Development, QA, and DevOps, serving as a primary bridge between business and engineering. First responder for critical production incidents, performing root cause analysis, restoring services, and driving permanent corrective actions.
- **PBM Clinical-Only Solution Ownership:** Owned end-to-end delivery of a PBM Clinical-Only Solution across 5 enterprise clients, taking features from requirements analysis and solution design through development, testing, release, and production deployment-reducing delivery cycles from weeks/months to as little as 1 day.
- **High-Scale Backend Engineering:** Engineered high-performance Node.js services supporting 1M+ requests/day and 99.98% uptime, optimizing database access, caching, asynchronous processing, and API execution for high-volume production workloads.
- **Distributed Systems Architecture:** Designed scalable distributed system architectures capable of supporting 100M+ requests/day using horizontal scaling, workload partitioning, caching, asynchronous processing, and fault-tolerant service design.
- **API & System Optimization:** Optimized critical APIs from multi-second response times to sub-100ms latency, delivering 90%+ performance improvement through execution-flow optimization, database query tuning, caching, and cloud VM resource right-sizing.
- **Config-Driven Multi-Tenant Live UI Platform:** Designed and built a configuration-driven, multi-tenant Live UI platform from scratch using Next.js, React, TypeScript, and Node.js-enabling teams to switch between client environments and create new pages in under 5 minutes instead of months.
- **High-Volume Data Export System:** Built a data export/download system capable of reliably processing and downloading 6M+ records without application crashes, while eliminating database egress requirements and reducing cloud infrastructure costs by approximately 40%.
- **POC Processing Automation:** Developed an asynchronous POC processing platform using BullMQ/Redis for Excel-based datasets, API configuration, payload templates, authentication, and live validation-reducing manual processing effort from approximately 600 hours to 6-12 hours (98% reduction).
- **Real-Time Streaming Uls:** Transitioned architecture from HTTP polling to WebSockets for live data feeds, integrating React state management and optimizing Node.js handlers, reducing server load by 40%.

Software Engineer

ToXSL Technologies

May 2022 – July 2023, Chandigarh, India

- Migrated application architecture from HTTP polling to WebSockets for real-time data feeds, reducing server load by 40% while improving live application responsiveness.
- Redesigned backend services and PostgreSQL data models using Sequelize, introduced Redis caching, and decomposed heavy REST endpoints, reducing API response time from 3 seconds to under 200ms.
- Diagnosed and resolved React rendering and backend database connection-pool issues, eliminating out-of-memory crashes and improving production application stability and reliability.

Software Developer

Illuminz

June 2020 – May 2022, Mohali, India

- Developed reusable full-stack application architecture using React, Express, MySQL, and pre-configured JWT authentication, accelerating application bootstrapping by 30%.
- Established a centralized frontend component library using Material UI and styled-components with shared design tokens, improving UI consistency and reducing styling defects by 50%.
- Refactored complex SQL JOIN queries using targeted indexing and application-level caching, reducing database query time by 75% for complex filters.

EDUCATION

Bachelor of Liberal Studies (B.L.S.), Management Information Systems (MIS)

University of Maine at Presque Isle (UMPI) • Presque Isle, Maine, USA • 3.83
