VINAY BADHAN

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SUMMARY

Senior Software Engineer with deep experience in distributed systems, backend infrastructure, and cost-efficient scalability. Led architecture and implementation of large-scale cloud platforms at HackerRank, enabling $10\times$ growth in global concurrency while reducing infrastructure spend by 55–60%. Currently building AI-powered automation and RAG-based code generation systems at Medable that reduced clinical trial launch time from months to days. Strong background in system design, high-availability services, data pipelines, and operational excellence.

SKILLS

Languages	Python, Ruby, Go, JavaScript, TypeScript, SQL, Java
Systems	Distributed systems, high-availability services, scalability, system design
Backend	Node.js, Rails, REST, GraphQL, WebSockets, gRPC
Data	PostgreSQL, MySQL, Apache Hudi, Spark, pgvector, Neo4j
AI/ML	RAG pipelines, LLM agents, embeddings, Knowledge pool
Infra	AWS, GCP, Docker, CI/CD, Terraform, ELK

EXPERIENCE

Tech Lead (IC-focused) / Engineering Manager   2023 – Present
Medable Inc.

- Leading development of an AI-driven study automation platform, reducing clinical trial launch time from 6 months to under a week.
- Designed and implemented LLM-based code generation and RAG systems with versioned embeddings, async validation, and rollback-safe workflow generation, reducing manual customisations by **95%**.
- Improved per-study profit margins by **130%** through system automation and operational cost reduction.
- Led and mentored a team of **6** world-class engineers; owned architecture, delivery, and production reliability.

Tech Lead   2018 – 2023
HackerRank

- Architected cloud-based IDE and assessment platforms supporting **$10\times$** traffic growth and global concurrency.
- Built a custom HTTP + WebSocket routing engine to optimize real-time code execution and collaboration.
- Reduced infrastructure costs by **55–60%** via container optimization, autoscaling, and workload re-architecture.
- Led backend systems for candidate evaluation, scoring pipelines, and analytics at scale which provides skills insights for candidates and processes **20M** records daily.
- Progressed from intern to Tech lead through consistent technical ownership and impact.

SYSTEMS DESIGN & TECHNICAL LEADERSHIP

- Owned end-to-end architecture of distributed backend systems, from design and implementation to production reliability, scaling, and cost optimization.
- Designed high-availability services with autoscaling, fault tolerance, and observability to support global traffic and real-time workloads.
- Led system design and technical decision-making across teams, balancing correctness, performance, and long-term maintainability.
- Drove operational excellence through CI/CD, monitoring, and incident response, improving system reliability at scale.

EDUCATION

Bachelor of Engineering — Computer Science (SGSITS, Indore)