

# Ganesh Sreekumar

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## Principal Programme Manager

Strategic Engineering Program Leader & Architectural Authority with extensive experience directing complex, end-to-end technology and infrastructure delivery initiatives across enterprise domains. Deep Kubernetes expertise spanning cluster architecture, Helm-based microservice delivery, operators, service mesh and API gateway patterns, and production deployment pipelines. Proven track record of bridging engineering, operations, and external partners to establish governance frameworks, manage master schedules, and de-risk critical-path deployments. Experienced in building delivery standards from scratch, standing up PMO frameworks, and managing multivendor/partner ecosystems for high-availability systems. Proven track record of leading multidisciplinary teams spanning UX, frontend, backend, QA, and platform engineering to deliver production-grade systems at scale. Strong background in backend engineering, DevOps, SRE, and cloud architecture, with hands-on experience in Python and Java for building resilient, observable, and secure services. Passionate about architectural excellence, mentoring engineers, and enabling teams to adopt modern AI, cloud, and platform engineering practices.

## WORK EXPERIENCE

### BRITISH TELECOMMUNICATIONS (BT)

02/2022 – Present

#### Senior Programme Manager – GenAI & Network Platforms

- Architected and led the development of GenAI-powered chatbot solutions for network product development, operations, and customer-facing use cases using Retrieval-Augmented Generation (RAG) and Model Context Protocol (MCP) patterns.
- Engineered the Kubernetes deployment strategy for the enterprise GenAI stack, directing the implementation of custom Helm charts, API gateway routing, service mesh traffic control, and automated CI/CD pipelines to guarantee enterprise-grade observability, zero-downtime scaling, and production security.
- Directed the architecture and technical delivery of enterprise RAG pipelines and MCP integration, establishing standardized client-server communication, automated tool invocation, and multi-source context grounding across network documentation, operational runbooks, and real-time incident data to power unified chatbot experiences.
- Built the design and technical execution of Java Springboot and Python services, establishing enterprise architecture patterns for data preprocessing, vector embedding pipelines, hybrid retrieval/ranking logic, and LLM prompt engineering pipelines.
- Led the architectural strategy and deployment of operational GenAI chatbots, empowering NOC and engineering teams with automated network monitoring, real-time fault analysis, intelligent incident triage, and rapid root-cause discovery.
- Delivered customer-facing conversational interfaces to: Assist with product usage, troubleshooting, and service queries Provide guided workflows powered by GenAI reasoning and enterprise data
- Directed multidisciplinary teams across UX, engineering, QA, and platform groups to deliver production-grade GenAI solutions, driving core operational frameworks for data privacy, access control, cost-optimized performance, and feedback-driven observability.
- Acted as architectural authority, aligning GenAI solutions with enterprise standards, cloud best practices, and long-term platform strategy.
- Mentored engineering teams on GenAI adoption, architecture patterns, and responsible AI usage.
- Spearheaded end-to-end delivery of the enterprise GenAI & Network Platform programme, establishing master schedules, stage-gate approval frameworks, and operational acceptance criteria for platform rollouts on AWS

- Architected BT's CAMARA-compliant network API platform, leading the design and cloud-native deployment of standardized telecom APIs on production Kubernetes to enable secure, high-throughput capability exposure for external enterprise developers.
- Led operational readiness and handover to NOC and Network Engineering teams, defining acceptance metrics and establishing automated triage workflows that reduced incident resolution cycle times
- Led the end-to-end platform delivery of the UK's critical national 999 emergency call-handling infrastructure, serving 30M+ users annually directing the program schedule from concept through deployment and live operational handover.
- Coordinated multi-functional engineering teams (Data, SRE, Platform, QA) and external partners to deliver RAG pipelines and standardized MCP integration frameworks across multiple consumer touchpoints

## **British Telecom**

**01/2019 - 01/2022**

### **Software Engineering Manager**

- Led software engineering and platform support for the UK's 999 emergency platform, directing cross-functional teams to deliver and maintain a 24/7 high-availability system supporting millions of citizens under strict Critical National Infrastructure (CNI) reliability standards.
- Modernized the automated deployment framework using Ansible, standardizing release pipelines across environments to significantly cut deployment overhead, reduce operational costs, and accelerate time-to-market.
- Coordinated cross-functional teams spanning Network Engineering, DevOps, Platform/Software, Cyber Security, and 24/7 Operations (NOC) to align prerequisites and stage-gate dependencies prior to major go-live milestones for 999s platform
- Architected enterprise infrastructure management and DevSecOps release pipelines, embedding automated security gates, compliance scanning (Qualys), and vulnerability management directly into CI/CD workflows to ensure production-grade security and governance
- Spearheaded the architectural evolution and software engineering of BT's Business Support Systems (BSS), leading cross-functional teams to modernize cloud-native order management, billing, and customer fulfillment engines integrated with core network infrastructure.
- Architected enterprise data lake and observability platforms, designing scalable ingestion and analytics pipelines powered by Elasticsearch and Grafana to deliver real-time telemetry, centralized log management, and executive operational dashboards across distributed cloud systems.

## **Vodafone New Zealand via Infosys**

**04/2016 - 12/2018**

### **Software Engineering Lead**

**New Zealand**

- Led the end-to-end software engineering, deployment, and operational support for Vodafone New Zealand's BSS stack, directing cross-functional teams to modernise core billing, rating, and customer fulfillment engines while ensuring high-availability support for critical customer operations.
- Led the software engineering, delivery, and support for enterprise CRM and TIBCO integration stacks, directing cross-functional teams to modernise omnichannel customer workflows, streamline enterprise middleware messaging, and ensure seamless orchestration between BSS platforms and core network services.
- Architected and led the enterprise transition from legacy Oracle WebLogic deployments to a modern, containerized Docker platform. By replacing monolithic application server configurations with lightweight Docker containers, eliminated environment drift and established standardized, reproducible deployment artifact pipelines
- Led end-to-end infrastructure governance and cloud-native management, designing fault-tolerant hosting environments, automating provisioning workflows, and aligning platform operations with strict enterprise security and availability standards.
- Demonstrated extensive expertise in Unix/Linux enterprise administration and systems architecture, designing, optimizing, and supporting high-availability production workloads across mission-critical Linux environments.
- Leveraged deep networking domain expertise spanning transport and network layers (TCP/IP, UDP, IPv4/IPv6, BGP, Routing/Switching) to architect high-throughput, low-latency communication paths and ensure optimal packet flow across distributed telecom infrastructure.

- Engineered enterprise transport security frameworks across TLS/SSL protocols, directing end-to-end PKI certificate management, automated renewal lifecycles, and cryptographic governance to secure high-volume data-in-transit across distributed systems.
- Fostered a continuous learning culture by leading technical community calls, designing structured training modules and hands-on mentoring programs for junior and mid-level developers to scale engineering excellence and adoption of cloud-native architectures.

**Tata Consultancy Services (TCS)**  
**Systems Engineer**

**03/2013 – 03/2016**  
**Kochi, Kerala**

- Served as Senior Software Engineer across enterprise Banking and Insurance engagements, leveraging deep expertise in Java, Spring Boot/Spring Cloud, and Unix/Linux platforms to design, build, and deploy resilient, high-throughput microservices. Spearheaded containerization strategies by packaging core transactional services into Docker images, streamlining local dev-to-production parity, and modernizing legacy monolithic frameworks into cloud-ready architectures.
- Engineered automated CI/CD pipelines and release workflows, standardizing build, test, and packaging processes for Java/Spring microservices using Unix shell automation and Docker containerization. Streamlined build delivery pipelines to ensure reproducible deployment artifacts, minimize manual intervention, and accelerate code-to-production cycles across Banking and Insurance environments.
- Designed scalable system architectures and RESTful API frameworks for enterprise Banking and Insurance applications, defining microservice boundaries, data domain models, and high-throughput communication patterns using Java/Spring Boot. Enforced rigorous API contracts, secure endpoints, and containerized Docker execution environments to guarantee fault-tolerant performance and seamless system integration.
- Championed Test-Driven Development (TDD) and Behavior-Driven Development (BDD) practices, leveraging JUnit, Mockito, and Cucumber/Gherkin frameworks to write clean, maintainable code and establish executable business specifications. Integrated automated unit, integration, and acceptance test suites into CI/CD pipelines to achieve high code coverage, reduce defect leakage, and guarantee system reliability across Banking, Insurance, and Telecom platforms.
- Engineered high-performance batch processing and event-driven architectures utilizing Spring Batch, Redis, and Apache Kafka. Architected distributed messaging streams to decouple real-time telecom and financial microservices, implemented Redis for low-latency caching and session management, and designed automated Spring Batch schedulers to execute high-volume, transactional data processing jobs with resilient fault tolerance and automated retry mechanics.

**CERTIFICATIONS**

**AWS Certified AI Practitioner**  
 AWS

01/2026 – 01/2029

**VOLUNTEERING & LEADERSHIP**

**The AI People UK – <https://theaipeople.uk/>**  
 Founder

- Founded and lead a UK-based community of AI Engineers, Cloud Architects, and Full-Stack Developers focused on building production-grade AI and cloud-native systems.
- Drive initiatives around: Designing and deploying AI/ML and GenAI solutions Cloud-native architecture and scalable infrastructure on AWS Containerised, secure, and production-ready platforms Modern web application development
- Curate and contribute to open-source repositories showcasing: AI/GenAI experimentation and architecture patterns Cloud infrastructure and platform engineering best practices Practical implementations aligned with real-world enterprise use cases
- Facilitate knowledge sharing, mentoring, and collaboration across engineers and architects at different career stages.

## SKILLS

Ansible, CI/ CD, Consul, Data science, Docker, Elasticsearch, Gen AI, Git, Hazelcast, Java, Kafka, Kibana, MCP, Prometheus, RAG, Shell Scripting, Spring, Spring Boot, System design, UNIX