

# Hema Kalsi

hema.kalsi@gmail.com | 408-854-0642 | linkedin.com/in/hemakalsi

US Citizen | Willing to undergo MBI for Public Trust Positions

## SUMMARY

Results-driven Engineering Leader with 25+ years of experience in software engineering and over 10 years in senior management, specializing in building and scaling secure, resilient cloud infrastructure and platforms. Proven track record leading and mentoring high-performance, distributed Engineering teams to deliver solutions for SaaS and emerging technologies. Deeply passionate about fostering innovation, driving architectural vision, operational excellence through automation, and aligning technical roadmaps with strategic business goals to deliver high-impact results for customers.

## EXPERIENCE

### Director Engineering, Quantum Security Group

Apr 2023 - Present

*SandboxAQ (Google X Moonshot)*

- Led multiple globally distributed Quantum Security Engineering teams across the US and Europe, including Managers/Architects, building a customer-facing SaaS cybersecurity platform rooted in AI-powered cryptography and Non-Human Identity (NHI) management
- Scaled the team 6x, growing from 5 to 30 hiring engineers and managers across multiple disciplines, while fostering a culture of high performance and ownership
- Introduced engineering/product plans, reviews, demos, workshops and ensured timely delivery to milestones
- Owned AWS/Kubernetes-based infrastructure and security teams - including service mesh, secret management (KMS, Secret Manager), and authentication controls
- Directed hands-on architecture reviews, platform readiness, and delivery governance
- Partnered with compliance, product, and customer teams to ensure business-aligned infrastructure outcomes
- Drove product strategy, architecture, and execution, spearheading the development of AQtive Guard Platform from prototype to production-ready on an accelerated timeline
- Oversaw Cloud Infra and SRE teams, managing quarterly budgets, hiring forecasts, and cloud cost optimization
- Partnered with Research on feature productization efforts, integrating RAG, DEEP, and LLM-based solutions with platforms like VertexAI and AWS Bedrock

### Senior Engineering Manager

May 2020 - Mar 2023

*VMware/ Broadcom - VMware Cloud / GovCloud Platform & Services*

- Managed global teams in VMware Cloud Availability, New Instance Management, and Bring Your Own Storage - multi-cloud projects
- Grew the team by 70% in a remote-first setup during the COVID pandemic
- Led initiatives in Cloud Availability such as AutoScaling & AutoRemediation, automating operations across multiple clouds
- Collaborated with AWS and vSphere teams to improve resilience, reducing failure rates by 50%
- Led development of the Availability Platform, increasing resilience by 20%, added a TensorFlow-based prediction engine
- Led an initiative to automatically retrofit/ patch/replace instances in the entire VMWare fleet bringing down operations cost to zero
- Led AWS-FSx Integration with vSphere across multiple teams
- Awarded Customer Excellence and Operational Excellence awards for two consecutive years

### Senior Engineering Manager, Cloud Services

Jun 2014 - May 2020

*TiVo/Xperi*

- Re-architected and migrated to AWS, transitioning from monolith to secure microservices-based cloud DVR platform
- Reduced partner onboarding time by 90% through automation and standardization
- Built Hubble, a debugging and alerting data pipeline system adopted company-wide
- Directed distributed engineering teams across 3 continents

**Staff Engineer, R&D;***Jun 2000 - Jun 2014**Oracle Inc. / Sun Microsystems*

- Led an engineering team for an IoT platform that achieved FIPS certification and CC Eval Level 5
- Designed and developed security modules for JVM (2/3-factor authentication, SSL, etc.)
- Architected and Contributed to JVM specification and delivered multiple presentations at JavaOne

## SKILLS

### Leadership & Management

Strategy and Long term planning, Architecture & Technical Strategy, Innovation & Product Delivery, Team Leadership, Mentoring, Hiring, Budgeting, Forecasting, Resource Allocation.

### Architecture & Infrastructure

Cloud Platforms (AWS, GCP, Equinix, VMware), SaaS Architecture, Event-Driven Architecture, Multi-Tenant Systems, Availability & Resilience Engineering, Scalability, Microservices, Distributed Architecture, PaaS.

### Data & Streaming

Apache Kafka / MSK, Real-Time Data Pipelines, Distributed Systems, Prediction Engines (TensorFlow)

### Security & Compliance

Secure Infrastructure & Compliance, Secure Software Development, Cryptography, JVM Security, FIPS, CC Eval Level 5, Authentication/Authorization (SAML, OAuth, IDConnect), FedRamp

### Observability

Prometheus, Grafana, Loki, Splunk, Datadog, New Relic - Integration & Dashboards for monitoring.

### DevOps & Automation

CI/CD (Jenkins, CircleCI), Deployment Automation (Terraform, Kubernetes, ArgoCD), SRE, Observability Solutions aligned with SLA/SLO goals.

### Software Engineering

Coding Standards, Code Reviews, Build Processes, Testing, Full SDLC. Java, Go, C++

### Communication & Project Management

Cross-functional Collaboration, Partner Integration, Technical Reports and Presentations, Agile, Scrum, Kanban

## EDUCATION

### M.S. Computer Science

Boston University

### Software Security Foundations

Stanford University

### Executive Presence in Leadership

Wharton School

### Quantum Fundamentals

MIT

## SELECTED ACHIEVEMENTS

- **AWS Expertise:** Directed large-scale migrations, cross-cloud integrations, and auto-scaling infrastructure.
- **Leadership:** Built and scaled global engineering orgs; mentored emerging leaders to drive impact.
- **Awards:** Customer & Operational Excellence, Best Engineering Team Productivity & Delivery
- **DevOps & Automation:** Delivered CI/CD pipelines, predictive remediation, and cost-optimized multi-cloud infra.
- **Security & Compliance:** Designed compliant systems aligned with FIPS, GlobalPlatform, and enterprise security standards.
- **Innovation:** Integrated AI into observability and governance pipelines to drive resilience.