CHARAN PANCHAGNULA

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SENIOR ENGINEERING MANAGER | ENTERPRISE ARCHITECT | AWS CERTIFIED SOLUTIONS ARCHITECT – PROFESSIONAL

Strategic Technology Leader working in **Goldman Sachs** with a proven track record of delivering scalable, secure, and high-impact solutions across cloud-native and on-prem ecosystems. Adept at simplifying complex systems, scaling microservice architectures, and solving mission-critical challenges with clarity and precision.

Currently leading a global team of 23 engineers (scaled from 6 in early 2024) delivering resilient platforms that serve over **1 million requests per week with 99.9% effectiveness SLOs** tracked through rigorous SLI/SLO-based monitoring. Own 20+ production applications including security scanners that feed gating solutions for production pipeline decisions, requiring strict time budget adherence through auto-scaling, concurrency optimization, and performance tuning. ***AWS Certified Solutions Architect, Professional*** with demonstrated expertise in cloud-native architectures.

Extensive experience in Spring Boot, Eureka, Hazelcast, Redis, Kafka, RabbitMQ, Kubernetes, and distributed systems. Architecting with core AWS services including ECS Fargate, SQS, S3, DynamoDB, OpenSearch, and SNS, implementing robust failover mechanisms and automated scaling to meet stringent functional and non-functional requirements.

An **AI Architect**, currently leading enterprise AI initiatives including Agentic Security Remediation Intelligence systems, team agents with tool calls/Vector DB search, and MCP server integrations with Github Copilot. Pursuing the **Stanford Engineering Leadership Program** (60% completed).

- **Languages**: Java, Python,Shell Scripting
- **AWS Services**: ECS with Fargate, Lambda, DynamoDB, S3, Kinesis, OpenSearch, API Gateway, NLB/ALB, CloudWatch, Terraform
- **Frameworks & APIs**: Spring Boot, Eureka, Hazelcast, Redis, Shedlock
- **Messaging & Streaming**: Kafka, RabbitMQ, SQS, SNS
- **Containerization & Orchestration**: Docker, Kubernetes, Jenkins, Terraform
- **Architecture**: Microservices, Distributed Systems, Event-Driven Programming, High Availability, Multi-region, Multi-AZ Resilience
- **Databases**: DynamoDB, DocumentDB, DB2, MySQL, Oracle SQL

Core AI/ML Technologies:

- **AWS AI/ML Services:** SageMaker, Bedrock, Bedrock AgentCore
- **Orchestration Frameworks:** LangChain/LangGraph, Agno, CrewAI
- **AI Architectures:** RAG systems, Vector Databases (S3 Vectors, FAISS)
- **Integration Technologies:** MCP Server implementations

PROFESSIONAL EXPERIENCE

GOLDMAN SACHS – DALLAS, TEXAS
SENIOR ENGINEERING MANAGER (VICE PRESIDENT) | 07/2020 – PRESENT

Team & Organizational Growth:

- Scaled engineering team from 6 to 23 engineers (2024-2025), building a geographically distributed workforce across USA, Canada, Warsaw and multiple locations in India.

Platform & Reliability:

- Own a portfolio of 20+ production applications including enterprise security scanners with 99.9% effectiveness SLOs, tracked through rigorous SLI/SLO-based monitoring and governance.
- Drive end-to-end architecture and delivery for event-driven microservices processing 1M+ requests per week with stringent performance and reliability requirements.
- Scanner results feed into gating solutions that determine production pipeline blocking decisions, requiring strict time budget adherence.

Performance Optimization:

- Implemented auto-scaling, concurrency optimization, and ECS instance rightsizing to meet scanner time budget requirements.
- Delivered performance optimizations including S3 multi-part upload, SNS-to-SQS filtering, S3 Transfer Acceleration, DynamoDB with TTL and secondary indexes, and OpenSearch cluster tuning.

Cost Optimization:

- Reduced AWS infrastructure costs through S3 lifecycle rules (intelligent tiering, cold archives), S3 purge policies, DynamoDB TTL, dynamic auto-scaling with step scaling, ECS instance store usage, and AWS Compute Optimizer insights.
- Established cost monitoring using AWS Cost Explorer and CloudWatch to track and optimize spend.

Architecture & Cloud:

- Architected multi-region AWS deployments with automated failover, scaling, and high availability with multi-AZ resiliency.
- Spearheaded enterprise-wide migration from on-prem to AWS cloud, rearchitecting legacy solutions into scalable, cloud-native services.
- Designed distributed systems leveraging Spring Boot, Eureka, Hazelcast, Kafka, RabbitMQ, Kubernetes, and AWS (ECS Fargate, SQS, SNS, Kinesis, DynamoDB, OpenSearch, S3).

AI & Innovation:

- Architected enterprise AI solutions including agentic remediation intelligence systems using LLMs and vector databases for real-time security guidance.
- Built internal team agents with tool calls for scanner operations, FAISS vector search for documentation, and MCP server integrations with GitHub Copilot.

Leadership:

- Mentored senior engineers and tech leads across regions, influencing cross-functional roadmaps and system designs.
- Recognized as go-to AWS architecture expert, consulted across departments for infrastructure modernization and scalability.

ORACLE CERNER – KANSAS CITY, MISSOURI
SENIOR SOFTWARE ENGINEER - 06/2013 - 07/2020

- Led software design, development, and release for core products within $5B+ healthcare solution provider.
- Partnered with Architecture, Development, Platform, and DevOps teams to enhance web services using JAX RS and Ruby DSLs.
- Enhanced Cerner HealtheIntent platform, developing RESTful microservices for application consumer and public APIs.
- Deployed services using CI/CD pipelines, making public APIs highly available and resilient.

- Improved customer response times by 90% using distributed caching with Redis, achieving 99.9% database resilience.
- Developed HTTP service clients with middlewares for authentication, correlation identifiers, and retries using Circuit Breaker, Exponential Backoff, and Jitter patterns.
- Developed Java 8 (Maven, Oracle SQL, Hibernate) and C++ based backend services for desktop applications.
- Reduced memory footprint and security attack surface by migrating containers to Google Distroless images.
- Mentored junior engineers on processes, technologies, and engineering culture.

Educational Background

Master of Science in Computer Science, 2013 | Indiana University Bloomington, Bloomington, Indiana
Bachelor of Engineering in Electronics & Communication Engineering, 2011 | Sri Venkateswara College of Engineering, Tamil Nadu, India

Language Skills*:* English, Tamil, Telugu, Hindi | ***Visa Status****:* H-1B Visa

Certifications and Programs

- **AWS Certified Solutions Architect – Professional (2025)**
- **AWS Certified Solutions Architect – Associate (2025)**
- **Generative AI Certification At Educosys (**7-week comprehensive program covering complete AI spectrum**) (2025)**
- **Stanford Engineering Leadership Program** – Completed 60% (2025)