SUDHAKAR CHUNDU

Distinguished Cloud AI Architect & Platform Engineering Leader

GPU/HPC Infrastructure | AI/ML Platforms | DevSecOps | Site Reliability Engineering

chundubabu@gmail.com • (+1) 513-666-0099 • San Jose, CA • linkedin.com/in/schundu

EXECUTIVE SUMMARY

Distinguished Cloud AI Architect and Platform Engineering Leader with 18+ years of hands-on experience (13+ years in cloud platforms, 5+ years in Linux/Middleware) building and operating large-scale GPU compute platforms, AI/ML infrastructure, and distributed systems at planetary scale. Expert in Slurm cluster management, GPU scheduling (NVIDIA A100/V100/T4/DGX), Kubernetes orchestration, and multi-cloud architecture (AWS, Azure, GCP, OCI). Lead global teams of 13+ engineers across Infrastructure, Security, Networking, and DevOps, managing $15M+ budgets while delivering $8M+ in documented cost savings.

Proven track record designing scalable HPC and AI/ML platforms serving 10M+ users and processing petabytes of data with 99.97% uptime across 15+ regions. Deep expertise in AIOps, serverless GPU computing, edge AI deployment, MLOps, and real-time data processing (Databricks, Spark, Flink, Kafka). Strong foundation in Linux internals, bare-metal infrastructure, observability pipelines, and regulatory compliance (SOC2, HIPAA, FedRAMP, FDA, ISO 13485, HITRUST). Active conference speaker at KubeCon, SREcon, and MLOps World.

CORE TECHNICAL COMPETENCIES

GPU/HPC Computing	Slurm, Slinky, NVIDIA BCM/DGX, vcluster, CUDA, TensorRT, A100/V100/T4 scheduling, fair-share policies, QoS, preemption, Triton Inference Server, vLLM
AI/ML Infrastructure	PyTorch, Ray, Flyte, MLflow, Kubeflow, SageMaker, Azure ML, Vertex AI, TorchServe, KServe, Ray Serve, distributed training, model serving
Edge AI & Multi-Platform	NVIDIA Jetson, K3s, KubeEdge, OpenVINO, Apple MLX, ROCm, ONNX, serverless GPU (Cloud Run, Lambda), offline inference
Cloud Platforms	AWS (EKS, EC2, Fargate, SageMaker, EMR, Lambda), Azure (AKS, APIM, ML, ExpressRoute), GCP (GKE, Cloud Run, Vertex AI), OCI
Big Data & Streaming	Databricks, Apache Spark, Flink, Kafka, Hadoop/HDFS, Hive, Trino, Airflow, Delta Lake, Kinesis, real-time pipelines, petabyte-scale processing
Container Orchestration	Kubernetes (EKS/AKS/GKE), Docker, Helm, Istio Service Mesh, KEDA, ArgoCD, FluxCD, container security (JFrog Xray)
Infrastructure as Code	Terraform (50+ modules), Ansible, ARM/Bicep, CloudFormation, Packer, GitOps, policy-as-code (OPA, Checkov, tfsec)
CI/CD & DevOps	GitHub Actions, Azure DevOps, Jenkins, GitLab CI, CircleCI, blue-green/canary deployments, Pipeline-as-Code, 50+ daily releases
Security & Compliance	SOC2, HIPAA, FedRAMP, ISO 27001, HITRUST, FDA/ISO 13485, DevSecOps (Snyk, Veracode, SonarQube, OWASP), Vault, ZTNA
SRE & AIOps	SLI/SLO/SLA, error budgets, chaos engineering, FMEA, load testing, predictive monitoring, anomaly detection, automated RCA, 24x7 on-call
Observability	Prometheus, Grafana, Datadog, ELK Stack, OpenTelemetry, Splunk, ClickHouse, custom exporters, distributed tracing, AI monitoring (Evidently, Arize)
Networking	VPC/VNet design, DNS (Route53), Load Balancers (ALB/NLB), SD-WAN, SASE-WAN, ZTNA, ExpressRoute/Direct Connect, TCP/IP, service mesh
Programming	Python (expert), Go, Bash/Shell, Java, SQL, YAML, automation frameworks, custom exporters, API development
Linux & Systems	RHEL/Ubuntu, kernel tuning, systemd, cgroups/namespaces, JVM tuning, performance optimization, bare-metal, VMware/Hyper-V

PROFESSIONAL EXPERIENCE

Distinguished Cloud AI Architect / Director of Platform Engineering

Trackonomy Systems • San Jose, CA • Oct 2023 – Present

Lead Infrastructure Engineering team (0→6 members) across Cloud, DevOps, Security, Networking, and Databases serving Pharma, Airlines, Government, Manufacturing, Healthcare, and IoT sectors globally across 8 countries.

GPU/HPC Infrastructure & AI/ML Platforms:

- Designed, deployed, and operated Slurm-based GPU compute platform — 65 GPUs across 8 nodes using Slurm, Slinky (Slurm-on-Kubernetes), and NVIDIA BCM; achieved 99.97% uptime serving 12+ enterprise clients for AI inference and training

- Architected serverless GPU infrastructure using Google Cloud Run and AWS Lambda containers, reducing inference costs by 65% while serving 5M+ daily predictions
- Deployed multi-platform inference pipeline supporting NVIDIA CUDA/TensorRT, Apple MLX, and CPU fallback across 15+ edge locations with intelligent workload routing via K3s and NVIDIA Jetson
- Implemented Databricks platform (Jobs, Compute, Unity Catalog) with MLflow for ML training; built real-time streaming with Apache Kafka and Flink processing millions of daily jobs
- Built platform features improving developer experience — Python-based job submission APIs, automated environment setup, GPU utilization dashboards, and self-service provisioning interfaces

Cloud Architecture & FinOps:

- **Reduced cloud costs 73% ($10M→$2.7M/year)** through GPU utilization optimization, fair-share scheduling, reserved instance planning, and vendor consolidation
- Redesigned multi-cloud architecture (AWS, Azure, GCP, OCI) reducing Azure resources from 8.7K to 1.1K (87% reduction); migrated VMs to AKS/EKS with Helm and GitOps workflows
- Led FinOps practice with cost transparency dashboards, showback/chargeback models, and ROI-driven infrastructure investments across multi-tenant environments

DevOps, CI/CD & Platform Engineering:

- Built CI/CD pipelines for 100+ applications using GitOps (ArgoCD, FluxCD), Azure DevOps, GitHub Actions, Jenkins; enabled 50+ daily releases with zero-downtime blue-green/canary deployments
- Led Platform Engineering transformation delivering infrastructure-as-product with modular, API-driven services; reduced deployment time 95% (days→15 minutes)
- Implemented Infrastructure as Code using Terraform (50+ modules), ARM/Bicep, CloudFormation, Ansible with policy-as-code (OPA, Checkov, tfsec) for compliance

Security & Compliance:

- Led SOC2 Type II, ISO 27001, HIPAA, FedRAMP, and HITRUST compliance using Vanta; implemented DevSecOps (Snyk, Veracode, SonarQube, OWASP ZAP); achieved zero critical findings
- Secured GenAI/LLM platform implementing safeguards against prompt injection, data exfiltration, and model attacks; established ML/AI governance framework for model lifecycle security
- Established RBAC, secrets management (HashiCorp Vault, Azure Key Vault, AWS Secrets Manager), Zero Trust architecture, and continuous compliance monitoring

SRE, AIOps & Observability:

- Led SRE L3 operations — RCA, incident management, blameless postmortems, SLI/SLO definition, error budgets, 24x7 on-call rotations (<15min response), and runbook development
- Implemented AIOps frameworks using ML models for predictive monitoring, anomaly detection, and automated root cause analysis; reduced incidents by 65% and MTTR by 60%
- Unified 5 monitoring platforms into Datadog; built Prometheus/Grafana/OpenTelemetry observability with custom GPU exporters, distributed tracing, and intelligent alerting
- Designed and executed Chaos Engineering, FMEA testing, Load Testing, and Disaster Recovery validation; achieved RPO<1hr, RTO<4hrs with automated failover

Cloud & SRE Architect — OSDU Data Platform

Wipro Technologies • BP, Total, Chevron, ExxonMobil • Feb 2020 – Oct 2023

Lead Infrastructure Architect for OSDU R3 Platform — enterprise-scale data ingestion platform for global energy sector clients processing exabytes of seismic data across multi-cloud environments.

AWS Platform — ML Infrastructure & SRE | Feb 2022 – Oct 2023

- Architected OSDU R3 data platform processing exabytes of seismic data on GPU-accelerated Kubernetes clusters (EKS/Fargate) with Spark, Kafka, and Hadoop/HDFS
- Delivered GPU cluster management at scale with Kubernetes, Istio, and KEDA, ensuring 99.95% availability for ML inference workloads across multi-region deployments
- Created 50+ Terraform modules (VPC, EKS, RDS, DynamoDB, S3, SageMaker, IAM); implemented GitOps (ArgoCD/FluxCD), KEDA autoscaling; reduced deployment time 80%
- Implemented MLOps best practices: model versioning, automated retraining pipelines, blue-green deployments for 30+ production models using MLflow
- Built observability stack with Prometheus/Grafana/ELK and GPU metrics; created automation in Go/Python reducing manual operations 85%; led 24x7 on-call rotations
- Implemented multi-tenant AWS Landing Zones using Organizations and SCPs; achieved 99.99% availability with HA architecture and DR across distributed data centers

Azure Platform — ML & Platform Engineering | Feb 2020 – Feb 2022

- Engineered scalable AI infrastructure using Azure ML, AKS with GPU node pools, and ExpressRoute for hybrid connectivity to on-premise GPU clusters

- Deployed and managed 15+ microservices on AKS with Istio service mesh (mTLS, distributed tracing); implemented GitOps using FluxCD achieving 99.9% availability
- Built Azure DevOps pipelines with Terraform/Bicep IaC, approval gates, security scanning (Checkov, tfsec); improved deployment speed 80%
- Delivered compliance-as-code achieving SOC 2, HIPAA, ISO 27001 certifications; configured Linux systems with cgroups for resource isolation
- Orchestrated Airflow DAGs for workflow automation; integrated Azure Monitor, Prometheus, Grafana for ML workloads with custom GPU metrics
- Contributed platform enhancements to OSDU open-source community (infra-azure-provisioning); collaborated with global developer community on best practices

Multi-Cloud Architect / Senior Infrastructure Engineer

Tata Consultancy Services • Multiple Locations • May 2007 – Feb 2020

Progressive 13-year career across Fortune 500 clients in healthcare, government, telecom, and financial services. Started with 5 years in Linux/Middleware administration, then transitioned to cloud infrastructure architecture leadership, managing global teams and driving cloud transformation initiatives.

Cloud Architect — Harvard Pilgrim Health Care (via NTT Data) | Jun 2018 – Feb 2020

- Led cloud modernization for HIPAA/HITRUST-regulated AI/ML applications to AWS; implemented GPU-enabled EKS clusters with NFS-backed persistent storage
- Designed compliant ML pipeline with end-to-end encryption, audit logging, secure model serving meeting FDA GxP requirements
- Implemented Jenkins/Ansible CI/CD pipelines; DevSecOps (HashiCorp Vault, SonarQube, OWASP); designed DR with business continuity
- Led IT infrastructure planning for facility expansions including structured cabling, network closets, and telecom systems; managed $6M infrastructure budget

Cloud Senior Engineer — CNA Insurance | May 2015 – Jun 2018

- Managed Kubernetes/Helm deployments on AWS; built reproducible K8s applications; automated provisioning with Ansible playbooks
- Led cloud migrations to AWS, Azure, OpenStack; pioneered Docker/Kubernetes adoption (2013-2014); implemented CI/CD with Jenkins/Ansible

Solutions Architect — PwC | May 2012 – Apr 2015

- Prepared engagement proposals, led team activities; integrated Chef/Jenkins deployment pipelines; migrated VMware VMs to AWS (EC2, S3, ELB)
- Led infrastructure deployments for 20+ facility buildouts including branch offices, call centers, and data centers; managed $15M+ annual budgets

Middleware Engineer / Systems Administrator — Verizon, Owens Corning | May 2007 – May 2012

- 5 years deep Linux/Unix administration with WebSphere/WebLogic middleware; kernel tuning, JVM optimization, clustering, and HA configurations
- Implemented WebSphere clustering, IBM HTTP Servers, SSO with CA SiteMinder/LDAP; managed performance tuning and 24x7 L3 operations
- Managed large-scale production systems on bare-metal serving millions of users; led capacity planning, performance testing, and DR initiatives

KEY ACHIEVEMENTS & METRICS

Scale & Performance

- 200+ microservices | 10M+ users | Petabyte-scale data processing | 15+ AWS regions | 50+ daily releases
- 99.97% uptime for GPU clusters | 99.99% availability for critical systems | 5M+ daily predictions served

Cost Optimization

- $8M+ documented annual savings | 73% cloud cost reduction ($10M→$2.7M) | 87% infrastructure sprawl eliminated
- 65% inference cost reduction through serverless GPU optimization and intelligent caching strategies

Operational Excellence

- 95% deployment time reduction (days→15 minutes) | 90% decrease in production issues | 85% reduction in manual operations
- 60% MTTR improvement | 65% incident reduction via AIOps predictive monitoring | <15min on-call response time

Security & Compliance

- Zero critical findings in SOC2/HIPAA/FedRAMP/HITRUST audits | Secured GenAI/LLM platforms against emerging threats

Leadership

- Built infrastructure team 0→6 members | Managed $15M+ budgets | Led 13+ engineers across global distributed teams
- Conference speaker: KubeCon, SREcon Americas, DevOps Enterprise Summit, MLOps World | Open-source contributor

CERTIFICATIONS

Cloud: AWS Solutions Architect Professional | Azure Solutions Architect Expert | Google Cloud Professional Architect

AI/ML: AWS Machine Learning Specialty | Azure AI Engineer Associate | GCP Professional ML Engineer | NVIDIA DLI Infrastructure

DevOps/SRE: Certified Kubernetes Administrator (CKA) | HashiCorp Terraform Associate | Databricks Certified

Enterprise: TOGAF 9 Foundation | ITIL v4 Foundation | VMware VCP | Cisco CCNP

EDUCATION

Bachelor of Engineering, Mechanical Engineering — Acharya Nagarjuna University, 2005