ARUN SANNA

arun.sanna@outlook.com
https://www.linkedin.com/in/arunsanna/
https://github.com/arunsanna

PROFESSIONAL SUMMARY

Innovative Chief Architect and Cloud Solutions Expert with 10+ years of experience designing enterprise-scale DevSecOps platforms and AI-powered infrastructure for federal agencies and defense systems. Strategic technology leader who has successfully directed large-scale digital transformations, established technical roadmaps aligned with business objectives, and built high-performing engineering teams. Expertise in implementing zero-trust architectures, deploying advanced AI/ML solutions, and developing open-source tools that solve complex cloud computing challenges. Committed to driving innovation while maintaining rigorous security compliance and operational excellence.

PROFESSIONAL EXPERIENCE

Precise Software Solutions

Enterprise DevSecOps & AI Architect Apr 2025 – Present

- Serve as the primary liaison between senior leadership and technical teams, presenting architecture roadmaps, ROI analyses, and strategic recommendations to the executive steering committee driving adoption of GenAI.

- Conduct capacity planning, performance tuning, and cost-optimization exercises, driving down infrastructure spend while maintaining 99.9%+ availability targets.

- Mentor and coach solution and application architects, fostering adoption of cloud-native patterns, design thinking, fusion of AI into Software lifecycle and architectural rigor throughout the organization.

- Defined and maintained the overall enterprise architecture roadmap, ensuring alignment of IT with Gen AI strategy with Precise-Soft's business objectives.

- Designed and governed scalable, secure multi-cloud environments (AWS, Azure, GCP), leveraging Infrastructure as Code (Terraform, CloudFormation) for consistent, repeatable deployments.

- Architect and integrate enterprise-wide DevSecOps pipelines (GitLab CI/CD, ArgoCD, FluxCD), embedding automated security checks (SAST/DAST, SBOM generation) into every stage of delivery.

- Collaborated with product, engineering, and security teams to perform risk assessments, technology evaluations, and proof-of-concepts for emerging technologies, including AI/ML and serverless architectures.

VivSoft Technologies LLC

Chief Architect **| June 2019 – Apr 2025**

Strategic Business Development & AI Innovation (Executive Leadership)

- Established and led company-wide AI strategy, securing $3.2M in investment for advanced AI capabilities

- Created 3-year technical roadmap aligning AI initiatives with business goals, prioritizing ROI-focused innovation
- Managed cross-functional team of 15 engineers, data scientists, and product managers developing AI solutions
- Oversaw $5M annual R&D budget, achieving 20% year-over-year increase in innovation output
- Spearheaded AI-driven automation across enterprise workflows using OpenAI, LangChain, and Flowise frameworks, reducing operational turnaround times by 60%
- Architected RAG-based document processing system for federal compliance verification with 93% accuracy
- Developed intelligent systems for automated proposal generation and compliance analysis, eliminating 25+ hours of manual work weekly
- Established partnerships with key AI technology providers, negotiating favorable terms saving $300K annually
- Led organization-wide AI adoption through training programs, directly contributing to 30% growth in opportunity pipeline
- Presented quarterly technology briefings to C-suite, translating technical innovation into business value

Principal Cloud DevOps Architect – Centers for Medicare and Medicaid Services (CMS)

- Led modernization of 5 applications (50+ microservices) in record 90 days, condensing traditional 18-month ATO process
- Designed production-ready EKS platform meeting strict CMS SecOps compliance standards with NIST 800-53 controls
- Developed architecture decision records (ADRs) establishing technical direction and standardizing cloud adoption
- Created reference architectures for microservices adoption, enabling consistent implementation across teams
- Implemented event-driven architecture pattern for real-time data processing in fraud detection systems
- Built and managed JupyterHub environments supporting AI-driven fraud detection in Medicare payments
- Engineered ML pipelines using TensorFlow and PyTorch with model validation frameworks for 97% accuracy
- Deployed NVIDIA GPU-powered Kubernetes clusters enabling secure LLM training with proper data governance
- Integrated AI-powered security automation with SBOM tools for automated CVE scoring and threat detection
- Achieved 40% cost reduction and accelerated release frequency from months to days through modernization

Principal Cloud DevOps Architect – Department of Defense/USAF PlatformOne

- Served as lead architect and technical director for DoD's largest PaaS platform, supporting 300+ defense applications across multiple classification domains
- Established technical vision and 3-year roadmap for platform evolution, securing $18M in additional funding
- Led vendor selection and partnership development with key technology providers aligning with platform strategy

- Managed high-availability infrastructure of 1000+ VMs with zero-trust security architecture
- Designed and implemented software supply chain security with immutable container verification and attestation
- Orchestrated emergency deployment for Operation Allies Refuge, enabling evacuation of 120,000+ individuals in 72 hours
- Implemented advanced cybersecurity with service mesh and containerized security stack enforcing zero-trust to container level
- Integrated AI/ML capabilities for Air Force jets, providing co-pilot functions with real-time ML model inferencing
- Created model evaluation framework ensuring 99.8% accuracy for mission-critical AI systems
- Architected comprehensive monitoring infrastructure with 99.9% system visibility, saving $2M annually in proprietary costs
- Presented quarterly platform roadmap and metrics to DoD executive leadership, securing continued funding

HITACHI VANTARA

Sr. DevSecOps and Data Science Engineer | October 2018 - June 2019

- Implemented first-ever DISA Secure Cloud Computing Architecture (SCCA) framework on AWS GovCloud for USTRANSCOM
- Created reusable Terraform modules for GCP environments, eliminating duplication of work
- Provisioned ML/AI infrastructure using Kubeflow on Kubernetes for data scientist prediction models
- Developed product integrating Jira and Tempo data to optimize employee allocation across projects

REAN CLOUD

DevSecOps and Data Science Engineer | March 2015 - October 2018

- Automated infrastructure provisioning using Terraform, Python, and Ruby for enterprise clients
- Built CloudFormation templates and Chef cookbooks for automated stack deployments
- Helped Ellucian design cloud architecture for 100+ products, reducing infrastructure expenses
- Created end-to-end CI/CD solutions with Ansible, Jenkins, Docker, and Kubernetes
- Developed Lambda functions and ELK stack tools to automate operations and analyze cost patterns

EDUCATION

- **Master's in Electrical Engineering** (Computers and Networks), California State University, Los Angeles (2014-2015)
- **Bachelor's in Information Technology**, Jawaharlal Nehru Technological University (2011-2014)
- **Diploma in Electronics and Communication Engineering**, Govt Polytechnic College, Andhra Pradesh (2008-2011)

CERTIFICATIONS

- Certified Kubernetes Administrator

- NVIDIA Certified AI Infrastructure and Operations
- AWS Certified Solutions Architect Professional
- Google Cloud Certified Professional Architect
- Azure Certified Solutions Architect Expert
- IBM Certified Associate Developer, WebSphere
- Microsoft Certified Technology Specialist

STRATEGIC LEADERSHIP & INNOVATION

- **Technical Vision & Roadmap:** Established technology strategy and architectural vision for CMS and DoD platforms, aligning infrastructure decisions with mission objectives
- **Budget & Resource Management:** Managed $12M annual infrastructure budget for enterprise cloud platforms, achieving 35% cost optimization through strategic consolidation
- **Team Building & Development:** Built and mentored cross-functional engineering teams of 25+ professionals, implementing skill development programs resulting in 30% higher retention
- **C-Suite Collaboration:** Regularly presented technical strategies to executive leadership, translating complex technical concepts into business value propositions
- **Innovation Management:** Established innovation labs for exploring emerging technologies, resulting in 5 new patentable methodologies for secure cloud deployment

OPEN-SOURCE CONTRIBUTIONS

Project	Description
AWS-SAGE (MCP)	• Python application using Model Context Protocol for advanced AWS service interactions • Intelligent context management for enhanced AWS resource handling and automation • Streamlined interfaces simplifying cloud resource management for DevOps engineers
DocQueryAI	• Intelligent document querying system processing both text and PDF documents • Vector embedding and similarity search with RAG for context-aware responses • Streaming response capability with local LLM integration for interactive experience
K8s-Sherlock	• Kubernetes diagnostic pod with comprehensive troubleshooting tools • "Swiss-army knife" for expediting cluster diagnostics and issue resolution • Built-in network analysis, container inspection, and cluster debugging capabilities
MicroEKS	• Lightweight tool creating local Kubernetes environments mimicking AWS EKS clusters • MicroK8s in Multipass VMs providing fully-functional Kubernetes playground • Designed for macOS users to streamline local Kubernetes development
Local-OpenShift	• Management script for OpenShift Local (formerly CodeReady Containers) • Tooling to simplify complex container orchestration platform setup

TECHNICAL SKILLS

Category	Skills
Cloud Platforms	AWS, Azure, Google Cloud
Containerization & Orchestration	EKS, GKE, AKS, Rancher, OpenShift, Konvoy, RKE2, K3s, VMware TKG
Infrastructure as Code	Terraform, OpenTofu, Terragrunt, CloudFormation, AWS CDK
AI/ML Technologies	AWS Bedrock, SageMaker, Azure OpenAI, JupyterHub, TensorFlow, PyTorch, NVIDIA GPU Optimization, LangChain, RAG, Vector Databases, MLOps
Kubernetes Ecosystem	Helm, Kyverno, OPA, Istio, Nginx, Vault, NVIDIA GPU Operator
CI/CD & DevOps	GitLab CI, Jenkins, ArgoCD, FluxCD, Chef, Ansible, Puppet
Security	Zero Trust Architecture, IAM, WAF, KMS, Secrets Management, Compliance Automation (FedRAMP, RMF, NIST 800-53)
Monitoring & Observability	Prometheus, Grafana, CloudWatch, ELK Stack, Jaeger, OpenTelemetry
Languages & Scripting	Python, Ruby, Go, Bash, PowerShell, AWS CDK/SDK
Databases	MySQL, PostgreSQL, SQL Server, MongoDB, DynamoDB, Elasticsearch, Redis, Neo4j