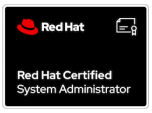
Niranjan Sai KV

saikvns@gmail.com 945-308-3232 Richardson, Texas
linkedin/kvnsai kvnsai.github.io



Education

University of Texas at Dallas **Richardson, Texas** *01/2024 – 05/2025*
MS, Information Technology and Management

Indian Institute of Space Science and Technology **Trivandrum, India** *08/2015 – 05/2019*
B.Tech, Electronics and Communication Engineering

Certifications: Redhat certified System Administrator(RHCSA), AWS Solutions Architect, Comptia Cybersecurity Analyst+ (CySA+)

Skills

- **High Performance Computing (HPC):** Linux (RHEL/Rocky, Ubuntu), Cluster Management (OpenHPC, BaseCommand, Confluent), Job Scheduling (Slurm, PBS, SGE), Parallel File Systems (Panasas, GPFS, WekaFS, LustreFS, MooseFS)
- **Automation & Observability:** Go, Python, Bash, Ansible, Git, Splunk, Zabbix, Prometheus, Grafana, PowerBI
- **Platform Engineering:** Docker, Apptainer, Kubernetes, LXC/LXD, Proxmox, VMware, Citrix, KVM
- **Systems, Security & Operations:** Cloud Computing, Networking, Vulnerability Assessment, Compliance Audits, IT Project Management, Agile Methodology, Database Management

Professional Experience

Linux (HPC) Engineer *X-ISS (N2 Group)* **Richardson, Texas** *07/2025 – Present*
- Managed and optimized 15+ HPC clusters, executing infrastructure upgrades across compute, network, and storage layers to enhance performance, scalability, and system reliability.
- Developed a platform-agnostic monitoring solution, including a custom node agent and centralized manager compiled using Golang, to track health, utilization, and performance metrics across HPC clusters.
- Automated deployment and lifecycle management of HPC clusters across multiple management stacks, schedulers, and storage platforms, performing benchmarking and tuning to ensure optimal performance.
- Packaged and deployed scientific applications using modules, containers, and Spack, and implemented robust batch scheduling workflows to support large-scale simulation and research workloads.

HPC Engineer Intern, *University of Texas at Dallas* **Richardson, Texas** *06/2024 – 05/2025*
- Developed custom monitoring solutions using Python to collect metrics and export to Prometheus for system-wide analytics along and Grafana dashboards for visualizing and automated alerts.
- Developed Ansible playbooks for deploying HPC cluster with OpenHPC, SLURM, automating system provisioning.
- Built RPMs of scientific software to a local repository, installed packages on HPC clusters, and created environment modules.
- Developed Apptainer definition files to containerized environments, ensuring reproducible research computations.

IT Infrastructure Engineer *Indian Space Research Organisation* **Sriharikota, India** *08/2019 – 12/2023*
- Architected and administered a scalable VMware vSphere environment, migrating 150+ mission-critical applications and improving resource utilization by 65% through capacity optimization.
- Designed and operated enterprise SAN/NAS storage with NetVault backup and site-to-site replication, ensuring high availability, disaster recovery, and data integrity for mission-critical systems.
- Engineered secure, fault-tolerant network infrastructure supporting telemetry pipelines, CCTV, and space operations, enabling real-time data delivery to mission control.
- Built and operated a high-performance computing (HPC) cluster using Slurm, Confluent Cluster Manager, and Lustre, supporting compute-intensive scientific workloads.
- Deployed and integrated datacenter observability platforms (Splunk, Zabbix, Nagios, Graylog) and automated vulnerability assessments using Python and Bash, reducing incident response time by 40%.
- Strengthened organizational security posture by implementing firewalls, EDR solutions, MITRE ATT&CK-aligned incident response playbooks, and leading CIS Control-based IT audits for compliance and risk mitigation.

Research Intern, *Indian Space Research Organisation* **Trivandrum, India** *05/2018 – 05/2019*
- Developed a comprehensive API call log dataset and introduced an API Call Transition Matrix (API-CTM) for feature extraction, achieving 96% accuracy in malware detection. [Relevant publication]
- Utilized traffic analysis of HTTP TCP headers to engineer an N-gram based detection technique, achieving 99.5% accuracy in identifying botnet traffic and 98.9% accuracy in detecting unauthorized operating systems through OS fingerprinting.

Leadership & Organizational Experience

Technology Officer, *AWS Student Organization, UTD* *08/2024 – present*

- Conduct workshops and give lectures to college students about Cloud infrastructure basics and introduce various cloud services and operations Developed practical, hands-on cloud computing modules, interactive quizzes, and peer competitions, enabling students from diverse backgrounds to effectively utilize AWS services in projects and real-world applications.
- Planned, led, and presented technical workshops and lectures on cloud infrastructure fundamentals and AWS operations, enhancing participants' technical proficiency and broadening cloud adoption across the campus community

Technical Lead, *Media Streaming and Collaboration Systems, ISRO* *08/2020 – 12/23*

- Led the end-to-end live streaming operations for multiple major launches of the Indian space program, managing camera infrastructure, high-capacity networks, and real-time streaming servers to ensure seamless public broadcast and archival.
- Designed and deployed an on-site video conferencing platform based on Jitsi, integrating collaborative tools such as Nextcloud and OpenOffice to support secure team communication and mission coordination across geographically distributed ISRO teams

Coordinator, *Conscientia & Dhanak, IIST* *10/2017 – 10/2018*

- Contributed to the college festivals by leading web development and publicity teams. Developed the websites, organized online events and coding hackathons, and managed registrations, achieving a 45% increase in participants.