

VAMSI KRISHNA SETHU

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Portfolio

EXPERIENCE

Nava (CTM Labs Private Limited)

Dec 2025 – Present

Software Engineer

Bengaluru

- Kubernetes Platform Engineering** - Built and automated **2 production bare-metal Kubernetes clusters** (Bengaluru & Hyderabad), comprising **3 control-plane and 4 worker nodes each**, by remotely provisioning operating systems through HPE iLO, configuring networking with Netplan, hardening SSH using Ansible, and orchestrating end-to-end cluster deployment using Tekton and Kubespray. Interconnected the two production clusters using **Cilium ClusterMesh** to enable cross-region service connectivity over P2P networking.
- GitOps & CI/CD** - Architected reusable Helm charts for **10+** multi-service control plane applications and implemented GitOps-based continuous delivery using ArgoCD, enabling consistent, repeatable Kubernetes deployments across **multiple environments** while eliminating manual deployment workflows.
- Cache-as-a-Service** - Architected a Kubernetes-native Cache-as-a-Service platform using the Opstree Redis Operator, enabling automated provisioning of **4 deployment topologies** (standalone, replicated, Sentinel, and clustered) for both Redis and Valkey.
- Cloud Infrastructure Platform** - Designed a multi-cloud infrastructure platform for bare-metal, virtual machine, and Kubernetes environments by evaluating **3 enterprise ecosystems** (Canonical, SUSE, and Red Hat). Standardized on MAAS, Ubuntu Pro, Landscape, Teleport, RKE2, Rancher, and ArgoCD to automate infrastructure provisioning, lifecycle management, secure access, and GitOps-based operations.

Jio Platforms Limited

Oct 2023 – Dec 2025

Site Reliability Engineer

Hyderabad

- VM as a Service (VMaaS)** - Deployed OpenStack on OpenShift and integrated its APIs to provision **100+ VMs**, enhancing cloud resource management. Conducted PoCs with KubeVirt and oVirt to assess virtualization solutions.
- CaaS (Containers as a Service)**: Built a highly available Kubernetes cluster with **3 master nodes and 2 worker nodes** using Kube-VIP and KubeVirt-based VMs, ensuring **99.99% uptime**.
- Ceph Storage & S3 Buckets** - Deployed a multi-site Rook Ceph cluster for Kubernetes storage across **3 production clusters** and configured NooBaa for S3-compatible object storage.
- Jenkins Pipelines** - Automated Docker image builds and Kubernetes deployments using Jenkins, **reducing deployment time by 50%** and improving release consistency across environments.
- GitOps with ArgoCD** - Managed **10+ production applications** using ArgoCD for GitOps-based deployments and implemented Stakater Reloader for automatic config and secret updates, eliminating manual restarts.
- OpenStack Telemetry (Ceilometer) Metrics API** - Engineered a Golang-based telemetry API using Gin to fetch real-time VM performance metrics from Prometheus, refining cloud monitoring and dashboard visualization of **100+ VMs**.
- Face Authentication** - Developed a FastAPI-based face authentication service using FaceNet for recognition and MiniFAS for anti-spoofing. Customized Keycloak via a custom SPI for seamless IAM authentication of **50+ users**.
- MLOps Pipeline** - Architected and optimized a scalable MLOps pipeline for object detection model training, automating data ingestion, model training, and deployment. Used K3s, NVIDIA GPU Operator, MinIO, Airflow, and MLflow to manage models, track experiments, and perform inference with BentoML, **reducing manual overhead by 80%**.
- DataCenter as a Service Backend** - Contributed to backend development and issue resolution in a Golang-based DataCenter as a Service (DCaaS) platform, rising efficiency for **10+ enterprise users**.

PROJECTS

FaceAPI | FastAPI, PyTorch, Docker, Kubernetes

May 2024

- Leveraged an AI-powered face authentication microservice using **PyTorch FaceNet & FastAPI**, enabling real-time facial recognition for secure authentication.
- Designed a fully containerized microservice architecture with Docker & Kubernetes, **reducing deployment time by 40%**.

EDUCATION

Indian Institute of Technology Jodhpur (IITJ)

July 2019 – May 2023

Bachelor of Technology (B. Tech) in Computer Science and Engineering

Jodhpur

SKILLS & TECHNOLOGIES

Programming: Python, Golang, JavaScript, Bash

Cloud & Containers: Kubernetes, Docker, OpenStack, Linux (Ubuntu, RHEL)

Automation & CI/CD: Helm, ArgoCD, Jenkins, Terraform, Ansible, Tekton, Airflow

Observability & Monitoring: Grafana, Prometheus, ELK Stack (ElasticSearch, Kibana)

Networking & Storage: Ceph, MySQL, Linux Networking, DNS, Load Balancers

Security: IAM, TLS, Container Security, Vulnerability Scanning

ACHIEVEMENTS

- Earned the **Kubestronaut** designation by successfully completing multiple CNCF Kubernetes certifications, demonstrating expertise in Kubernetes administration, application development, security, and cloud-native technologies.