

Tharun Chowdary Mannam

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SUMMARY

MS Computer Science graduate (ASU, 2026) with 2+ years of DevOps and cloud engineering experience. Hands-on with CI/CD pipeline design and automation, Infrastructure as Code (Terraform, Ansible), container orchestration (Docker, Kubernetes), and observability (Prometheus, Grafana, CloudWatch). Experienced across AWS, Azure, and GCP with strong emphasis on secure, reliable, and scalable deployments.

EDUCATION

Arizona State University

Master of Science in Computer Science | GPA: 3.73/4.0

Tempe, AZ

Aug 2024 – May 2026

KL University

Bachelor of Technology in Computer Science and Engineering | GPA: 9.22/10

Vijayawada, India

June 2019 – May 2023

EXPERIENCE

NCR Corporation

Hyderabad, India

Software Engineer 1

May 2023 – July 2024

- Designed and managed Azure cloud infrastructure by provisioning 50+ VMs and 40+ resource groups using Bash scripts and ARM templates (IaC); enforced IAM role assignments, secrets management, and access policies, reducing downtime by 20%.
- Built and maintained CI/CD pipelines using Jenkins and GitHub Actions with Ansible automation, accelerating deployment cycles by 30%; developed a Python/Bash VM provisioning tool end-to-end that contributed 30% to a major product milestone.
- Integrated Docker into Jenkins pipelines, resolving 25+ pipeline failures and 10+ container issues through root-cause analysis; authored runbooks, SOPs, and technical documentation, improving CI/CD throughput by 40%.

Vosyn

Remote, USA

ML/DevOps Intern

June 2025 – Dec 2025

- Deployed and managed distributed cloud services on GCP Vertex AI with Cloud Run serverless functions, cutting execution time by 25% and latency by 20%; implemented structured logging, telemetry, and Grafana dashboards for production observability.
- Built and extended Python backend microservices for media ingestion and transformation, automating output staging to Google Cloud Storage and improving processing versatility by 30%.
- Contributed to CI/CD pipeline development for a microservice system on Vertex AI; implemented pre-release validation and end-to-end testing ensuring deployment stability, boosting speaker identification accuracy by 15%.

VISA Lab, Arizona State University

Tempe, AZ

Research Volunteer

May 2025 – Dec 2025

- Deployed and configured Kubernetes (Minikube) cluster with OpenFaaS; integrated Prometheus and Grafana for full observability covering metrics, dashboards, and alerting across a serverless research platform.
- Authored Bash automation scripts, runbooks, and SOPs for reproducible environment setup; debugged the FaaSFlow distributed workflow framework resolving critical dependency and configuration errors.

Holoworld

Mysuru, India

SDE Intern

May 2022 – May 2023

- Developed and shipped production application modules in Unity (C#) using OOP design patterns; resolved Android performance issues and deployed to Google Play Store (ARCore) and iOS (ARKit) for 5,000+ users.

PROJECTS

Elastic Face Recognition Platform | AWS, Python, Docker, Kubernetes, Terraform, CloudWatch, REST APIs

- Architected a multi-tier distributed cloud application on AWS with Terraform IaC and Kubernetes orchestration, processing 100 concurrent requests at sub-second latency with 100% accuracy; enforced IAM and secrets management per service.
- Built a Python autoscaling controller scaling EC2 workers (0–15) from SQS queue depth and a containerized serverless pipeline on AWS Lambda/ECR; implemented CloudWatch monitoring and alerting for production observability.

CI/CD Observability Stack | Jenkins, GitHub Actions, Docker, Prometheus, Grafana, Terraform, Bash, Kubernetes

- Designed and deployed a CI/CD monitoring stack on Kubernetes (Minikube) with Prometheus metrics and Grafana dashboards for real-time visibility into pipeline health, container resource usage, and configurable alerting.
- Scripted full cluster bootstrap and OpenFaaS deployment with Bash; contributed Terraform IaC modules for environment provisioning, reducing setup from hours to minutes for reproducible deployment environments.

Travelcation – Travel Booking Platform | Python, Django, React, PostgreSQL, REST APIs

- Built a full-stack web application with Django REST backend and React frontend supporting 500+ concurrent users across 200+ locations; designed normalized PostgreSQL schema with ORM-based data access.
- Implemented cost-optimization algorithm using modified Dijkstra's approach reducing travel costs by 30%; wrote unit and integration tests with pytest applying TDD practices throughout.

TECHNICAL SKILLS

Languages: Python, Bash, Java, Go, C, C++, C#, JavaScript, TypeScript, SQL, YAML

Cloud & DevOps: AWS, Azure, GCP, Docker, Kubernetes, Terraform, Ansible, GitHub Actions, Jenkins, GitLab CI, CI/CD, Linux/Unix

Monitoring & Security: Prometheus, Grafana, AWS CloudWatch, Logging, Telemetry, Alerting, IAM, Secrets Management, SAST/DAST, Vulnerability Scanning

Frameworks & Databases: Django, FastAPI, Spring Boot, React, PostgreSQL, MySQL, MongoDB, REST APIs, IaC, Microservices, Runbooks/SOPs, System Design