# SAHITH AITHA

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## PROFESSIONAL SUMMARY

Software Engineer with over 2 years of experience spanning Software Engineering, Cloud, DevOps, and Machine Learning. Adept at building scalable, efficient, and production-ready applications using AWS, Kubernetes, Terraform, and CI/CD automation. Certified Terraform Associate and Google Cloud Professional Architect. Proven ability to deploy AI/ML models in real-world environments, with successful outcomes such as 92% accuracy in emotion recognition and 50% reduction in ML deployment time. Demonstrated success in designing resilient architectures, automating infrastructure, and optimizing ML pipelines across cross-functional teams.

## SKILLS

- **Cloud Computing:** Amazon Web Services (AWS), Terraform, AWS-CDK, Cloud Security and Monitoring
- **DevOps and Automation:** Kubernetes, Ansible, CI/CD: Jenkins, GitHub Actions, Prometheus, Grafana, Git
- **Languages and DB:** Java (Spring), Python, TypeScript, Shell Scripting (bash), PostgreSQL
- **AI and Machine Learning:** TensorFlow, PyTorch, OpenCV, CNNs, RNNs and LSTMs, Generative AI
- <u>**Certifications:**</u> HashiCorp Terraform Associate, GCP: Professional Cloud Architect

## PROFESSIONAL EXPERIENCE

**Software Engineer, University of Cincinnati, Cincinnati, OH**                                    **May 2024 – Present**

- Deployed predictive ML models on AWS (SageMaker, EC2, S3) to forecast heart failure readmissions with 85% accuracy, enhancing clinical decision-making
- Developed automated ETL pipelines for the MIMIC-III dataset using PostgreSQL and AWS Glue, optimizing data workflows and storage efficiency
- Engineered CI/CD pipelines with Git and integrated cloud-native practices to streamline model deployment and improve infrastructure scalability

**Application Engineer, Amazon, India**                                    **January 2023 -June 2023**

- Architectured automated real-time ticketing pipeline with AWS Lambda and CDK, reducing manual effort by 15% and improving high-severity issue detection
- Streamlined ticket management by ingesting JSON data into Amazon S3 and DynamoDB, boosting team efficiency and accelerating project delivery
- Built an AWS SES-powered alerting system, cutting ticket review time by 50%

**Software Engineer, EduSkills Foundation, Hyderabad, India**                **January 2021 – November 2022**

- Implemented AWS cost monitoring strategies using CloudWatch and alerts, optimizing resource utilization and reducing monthly cloud expenses by 20% through right-sizing and automation
- Automated cloud infrastructure provisioning using Terraform and AWS CloudFormation, improving deployment speed by 35% and reducing manual intervention by 40%
- Optimized cloud resource allocation on AWS using auto-scaling and cost management tools, resulting in a 25% reduction in monthly cloud expenses

## EDUCATION

**Master of Science in Information Technology (CGPA: 4.0)**                **January 2024 - May 2025**

University Of Cincinnati, Cincinnati, OH

**Course Work:** Data Structures and Advanced algorithms, System Administration, Software Engineering

## PROJECTS

**IntelliScale: RL-Driven Cloud-Native Auto-Scaling Platform**                **April 2025 – Present**

- Designed a cloud-native system that improved app responsiveness by 30% and reduced over-provisioning by 25% by integrating Reinforcement Learning with Kubernetes auto-scaling, Docker-based microservices, and Prometheus-driven metric optimization

**TeraKube: Cloud-Native CI/CD Pipeline with AWS, Terraform, and Kubernetes**        **March 2025 – April 2025**

- A fully automated cloud-native CI/CD pipeline using Terraform, AWS EKS, GitHub Actions, and Kubernetes, achieving 100% infrastructure-as-code deployment and 90-second build-to-deploy cycle, while eliminating cloud costs with teardown logic