

# Karthik Katragadda

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## PROFESSIONAL SUMMARY

**DevOps Engineer** with over 3 years of experience in automating and managing scalable AWS infrastructure within production environments. Proficient in enhancing CI/CD pipelines using **Terraform**, **Kubernetes**, **Jenkins**, and **GitOps**, resulting in faster, more reliable deployments. Experienced in implementing cloud security best practices and cost optimization through automation of IAM, **GuardDuty**, and auto-scaling, while ensuring compliance with **HIPAA** and SOC 2 standards. Seeking an AWS DevOps Engineer position to contribute to infrastructure **automation** and drive operational excellence in a high-scale environment.

## TECHNICAL SKILLS

<b>Scripting Languages</b>	: Python, Java, JavaScript, SQL, Golang, Ruby, TypeScript, Bash, PowerShell, Groovy
<b>Cloud Platforms</b>	: AWS (IAM, S3, EC2, ECS, Far gate, RDS, Lambda, VPC, Code Pipeline, CloudFormation), Azure, OpenShift, VMware, GCP
<b>IaC, DevOps Tools</b>	: Terraform, Docker, Kubernetes (K8s, EKS, GKE, AKS), Ansible, Nexus, Packer, JSON, Chef, Puppet, YAML <b>Build, CI/CD,</b>
<b>Version control</b>	: Git, Maven, , GitOps, Jenkins, GitLab CI, GitHub Actions, Bitbucket, , Azure Bicep
<b>Monitoring &amp; Collaboration:</b>	Grafana, Datadog, Cloud Watch logs, Confluence, New Relic, Splunk, ELK Stack, Prometheus,
<b>Data Systems &amp; Processing</b>	: MySQL, No SQL, DynamoDB, MongoDB, PostgreSQL, Cassandra, RDBMS, Apache Kafka, Microsoft SQL Server, Redis
<b>Web Servers &amp; Networking</b>	: Tomcat, RabbitMQ, TCP/IP, DNS, HTTP, HTTPS, RESTFUL API's, API Gateways, NGNIX, XML, Load balancing, Firewalls
<b>Security &amp; Compliance</b>	: AWS (GuardDuty, Security Hub, Shield), SSL/TLS, RBAC, Hashi Corp Vault, FedRAMP, SOC 2, HIPAA, SAT/DAST, SIEM
<b>Operating Systems, IDE</b>	: Linux, Unix, Windows, Red Hat Enterprise Linux, CentOS, Ubuntu, Windows Server, Debian, Visual Studio Code

## PROFESSIONAL EXPERIENCE

<b>AWS DevOps Engineer   Client: Deloitte   Austin, Texas</b>	<b>July 2024 – Present</b>
<ul style="list-style-type: none"><li>Provisioned and automated <b>AWS</b> infrastructure on Linux systems using <b>Terraform</b>, <b>CloudFormation</b>, and <b>Ansible AWX</b>, leading to a 50% reduction in deployment errors and enabling high-availability <b>GPU</b>-powered <b>EC2</b> instances for <b>machine learning</b> inference workloads with 99.9% uptime.</li><li>Developed full-cycle automation scripts using <b>Python</b>, <b>Golang</b>, <b>PowerShell</b>, and <b>JavaScript</b> to enhance provisioning, <b>CI/CD</b> integration, and API network diagnostics (traceroute, dig) with <b>YAML/JSON</b> handling—boosting team efficiency by 40%.</li><li>Instrumented observability using <b>CloudWatch Logs &amp; Metrics</b>, <b>Datadog</b>, and <b>Prometheus/Grafana</b>, improving incident triage by 35% and enabling <b>performance monitoring</b> of key services, including <b>ML model-serving endpoints</b>.</li><li>Managed deployment of containerized microservices using <b>Docker</b>, <b>Amazon EKS</b>, <b>Helm</b>, and <b>Argo CD</b> with <b>NGINX ingress</b>, implementing Blue/Green release strategies that minimized production rollout failures by 60% for high-impact healthcare APIs.</li><li>Hardened infrastructure security and disaster recovery across <b>IaaS</b>, <b>PaaS</b>, and <b>SaaS</b> environments using <b>IAM</b>, <b>Security Groups</b>, <b>AWS WAF</b>, <b>Secrets Manager</b>, <b>TLS/SSL</b>, <b>PKI</b>, and <b>Vault</b>, ensuring <b>SOC 2</b>, <b>HIPAA</b>, and <b>FedRAMP</b> compliance across production systems.</li><li>Reduced cloud spends by 25% through <b>EC2 instance right-sizing</b>, <b>Auto Scaling Group tuning</b>, and <b>S3 lifecycle policies</b>, including optimization of <b>GPU node utilization</b> for <b>ML inference workloads</b>.</li><li>Executed <b>SRE best practices</b> by defining <b>SLIs</b>, <b>SLOs</b>, and <b>SLAs</b>, running <b>JUnit tests</b>, <b>post-incident reviews</b>, and collaborating across <b>Dev</b>, <b>QA</b>, and <b>IT</b> using <b>JIRA</b> and <b>Agile Scrum</b>, boosting deployment reliability by 25%.</li></ul>	

<b>Azure DevOps Engineer   Wipro   Bengaluru, India</b>	<b>Jun 2021 – May 2022</b>
<ul style="list-style-type: none"><li>Architected <b>auto-scaling strategies</b> on <b>AKS</b> using <b>HPA</b>, <b>Cluster AutoScaler</b>, and <b>custom metrics</b>, reducing 5xx errors by 65% during peak user loads and <b>GPU-backed inference service spikes</b> across pricing and recommendation APIs.</li><li>Streamlined <b>CI/CD pipelines</b> with <b>Azure DevOps</b>, <b>YAML</b>, and <b>Git Repos</b>, reducing deployment time by 50% and integrating automated rollout of <b>containerized model-serving endpoints</b> into <b>e-commerce workflows</b>.</li><li>Orchestrated <b>Azure IaaS</b> and <b>PaaS</b> resources using <b>Terraform</b>, <b>ARM templates</b>, and <b>Bicep</b>, provisioning <b>N-series GPU VMs</b> and codifying deployments for <b>ML inference workloads</b>, reducing environment setup and deployment time by 60%.</li><li>Established <b>observability</b> using <b>Azure Monitor</b>, <b>Log Analytics</b>, <b>Prometheus</b>, and <b>App Insights</b>, <b>cutting MTTD</b> by 45% and monitoring latency, availability, and error rates for <b>ML-powered APIs</b>.</li><li>Automated <b>AKS health checks</b>, <b>load tests</b>, and <b>deployment probes</b> using <b>Python</b>, <b>PowerShell</b>, and <b>Bash</b>, improving operational response by 40% and expanding day-2 automation coverage by 50%.</li></ul>	

- Designed and implemented end-to-end CI/CD pipelines using **Jenkins**, **Bitbucket**, and **GitOps**, reducing deployment cycles by 60% for a major Capgemini financial services client, ensuring continuous delivery under stringent compliance frameworks.
- Automated provisioning of secure and scalable **AWS infrastructure** (EC2, RDS, S3) using **Terraform**, **Ansible**, and **CloudFormation**, resulting in a 40% improvement in uptime during peak transaction periods.
- Integrated **DevSecOps practices** into deployment workflows by incorporating **IAM**, **GuardDuty**, and **KMS**, achieving 99.9% security compliance and enabling real-time remediation of critical vulnerabilities.
- Deployed and managed **containerized microservices** using **Docker**, **Kubernetes**, and **Helm** on **AWS EKS**, increasing availability of payment and fraud analytics APIs by 35% during high-load events.
- Built custom automation and monitoring tools using **Python**, **Bash**, and **PowerShell**, cutting Mean Time to Detect (MTTD) by 45% and streamlining operational workflows across cloud environments.

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EDUCATION

Lamar University   Master of Science, Computer Science	May 2024
KLU University   Bachelor of Engineering, Computer Science	April 2021

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