Uday Kandyanam

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Senior Software Engineer

PROFESSIONAL SUMMARY

Senior Software Engineer with 10+ years of experience in software infrastructure, platform engineering, and cloud automation. Experienced in developing Go- and Python-based engineering tools, operating Kubernetes platforms, and building scalable CI/CD systems supporting hundreds of microservices. Delivered measurable improvements in operational efficiency, reliability, observability, and security through infrastructure automation and engineering best practices. Expanding platform capabilities through Generative AI, LLM agents, and retrieval-augmented generation (RAG) for incident investigation and developer productivity.

TECHNICAL SKILLS

AI and ML: Generative AI, Predictive AI, Large Language Models (LLM), LLM-based Agents, LangChain, LangGraph, Model Context Protocol (MCP), Retrieval-Augmented Generation (RAG), Vector Databases, Artificial Intelligence (AI)

Cloud Platforms: AWS (EKS, ECS, EC2, S3, Lambda, RDS, VPC, IAM, API Gateway, Step Functions, SQS), Azure (AKS, VNet, Key Vault, ACR, Azure Monitor, Blob Storage), GCP

Infrastructure as Code: Terraform, Crossplane, CloudFormation, Ansible, Packer

CI/CD: Jenkins, GitHub Actions, Azure DevOps, LaunchDarkly, release quality gates

Containers & Orchestration: Docker, Kubernetes (EKS / AKS / OpenShift), Helm, Kustomize, ArgoCD, Istio service mesh, cert-manager, external-dns, external-secrets

Observability: Grafana, Dynatrace, Prometheus, Splunk, AppDynamics, OpenTelemetry, PagerDuty, OpsGenie, SLOs/SLIs, error budgets, operational readiness reviews, capacity planning

Languages & Scripting: Go, Python (FastAPI, Django), PowerShell, Bash/Shell, Groovy, YAML

Operating Systems & Servers: Linux (RHEL/Ubuntu, SELinux), Windows Server, IIS

Databases: PostgreSQL, MySQL, Kafka, schema design, query optimization, data modeling (relational and NoSQL)

Delivery: Agile SDLC (Scrum, Kanban), Jira, ServiceNow, Git, technical specifications, operational runbooks

Security & Compliance: HashiCorp Vault, Venafi, CyberArk, CSPM, SAML/OIDC federation, IAM/RBAC, JFrog Xray, SBOM, SOX/HIPAA controls, SOC 2

PROFESSIONAL EXPERIENCE

UnitedHealth Group, Senior Software Engineer

Horsham, PA | Jun 2023 to Present

- Architected and maintained enterprise-scale CI/CD pipelines using GitHub Actions and Terraform, standardizing delivery across hundreds of microservices, with LaunchDarkly feature flags enabling progressive rollouts and fast rollback when a release needed to be pulled back.
- Built an LLM-based agent using LangChain and LangGraph that diagnoses platform issues and reports findings in Microsoft Teams channels for faster incident triage.
- Built a platform knowledge assistant (LLM-based agent) that answers questions on platform issues, documentation, and team processes using retrieval-augmented generation (RAG).
- Automated large-scale Kubernetes cluster lifecycles (provisioning, scaling, and audits) by developing custom Go-based tooling linked with internal platform APIs, reducing manual operations by 70%.
- Built centralized observability correlating deployments, metrics, and centralized logging across Grafana, Dynatrace, and Splunk, with distributed tracing via OpenTelemetry, improving mean time to resolution (MTTR) by 40%. Led the end-to-end technical migration of application monitoring from self-hosted Dynatrace to Dynatrace SaaS across hundreds of services, coordinating instrumentation, configuration, and production validation.
- Participated in a 24/7 on-call rotation for production platform services, handling incident response and follow-up remediation.
- Built an internal platform tool with a single UI that brings together a security portal, per-service GitHub repository lists, vulnerability dashboards, and application and platform information for engineering teams.
- Developed Venafi and HashiCorp Vault automation for certificates, truststores, and secret rotation, achieving zero expired-certificate incidents; integrated JFrog Xray vulnerability scanning into CI/CD workflows with automated CVSS 9 reporting and release gates for compliance enforcement.

- Authored reusable Terraform modules for Kubernetes infrastructure, namespaces, and policies, embedding tagging standards and policy-as-code for governance, and enforced RBAC, artifact signing, and change-control evidence in pipelines to maintain SOX, HIPAA, and SOC 2 compliance. Designed secure software supply chain automation with SBOM generation, signature verification, and admission control for unverified images.
- Reduced infrastructure spend by automatically scaling down services across all lower environments during off-business hours and scaling back up for business hours.

Best Buy, DevOps Engineer

Remote | Jun 2021 to Jun 2023

- Built and maintained multi-environment CI/CD pipelines using Jenkins and Azure DevOps for 50+ applications.
- Automated infrastructure provisioning with Terraform, Ansible, and Python, improving provisioning speed by 70% and reducing configuration drift.
- Led Bitbucket-to-GitHub migration and automated Jenkins job conversion to GitHub Actions via scripting.
- Integrated SonarQube, Artifactory, and Dynatrace into CI/CD pipelines for quality, security, and observability.
- Implemented blue-green and canary deployment strategies, minimizing production downtime during releases.
- Provisioned Azure and AWS infrastructure with reusable Terraform and CloudFormation templates, including AWS VPC design (subnets, route tables, security groups) for multi-region scalability.
- Implemented GitOps-based continuous delivery with ArgoCD for Kubernetes workloads, automating deployment synchronization across environments.

American International Group (AIG), DevSecOps Engineer

Charlotte, NC | Aug 2018 to May 2021

- Implemented secure CI/CD pipelines in Jenkins, Git, and OpenShift, automating build, test, and deployment processes.
- Operated and hardened Kubernetes clusters on OpenShift, covering configuration hardening, patch management, and policy compliance.
- Automated infrastructure provisioning with Terraform, CloudFormation, and Ansible across cloud and on-premise environments.
- Built AWS automation with Python (Boto3) and Bash for resource audits, encryption enforcement, and automated remediation.
- Integrated SSO across DevOps tooling (GitHub, Jenkins, SonarQube, Nexus) using Okta/SAML.
- Managed monitoring with Grafana and AppDynamics, integrated with PagerDuty for proactive incident response.
- Administered PCF, Vault, Liquibase, and Datical for application and database automation, reducing release cycles by 40%.
- Partnered with architecture and security teams to establish DevSecOps standards and deliver organization-wide training.

O2 Technologies, Inc, Linux Administrator

India | Jan 2014 to Aug 2015

- Administered RHEL and CentOS servers, managing user accounts, groups, file permissions, and sudo access.
- Performed OS patching and package management using yum and rpm, and scheduled backups and log rotation with cron.
- Managed storage with LVM, creating and extending volume groups and logical volumes, and administered NFS shares.
- Wrote Bash scripts to automate routine system health checks for CPU, memory, and disk usage.
- Troubleshot system, service, and connectivity issues and handled day-to-day support tickets.

EDUCATION & CERTIFICATIONS

- M.S., Information Systems Technology, Wilmington University, DE, 2018
- B.Tech., Electronics & Communication Engineering, JNTU Hyderabad, 2014
- GenAI and Predictive AI Architecture Foundations; Advanced RAG with Vector Databases
- AWS Certified Solutions Architect (Associate)
- Certified Kubernetes Administrator (CKA)