



NEXUS

The Complete Multi-Cloud DevOps and AI Engineering Program 2026

Python · Terraform · AWS · Azure · DevOps · GitOps · SRE · Security · MLOps · AIOps · GenAI · Agentic AI

■ Fresh Graduate		■ Working Professional			■■ Developer → DevOps		■ IT Pro → Cloud Security		
■ Python DevOps	■■ AWS Cloud	■ Azure +GCP	■■ Terraform +IaC	■ DevOps +GitOps	■■ Security +SecOps	■ SRE +Observability	■ MLOps +AIOps	■ GenAI +Agentic AI	
5500+ Placements	16 Weeks	12 Projects	500+ Hours	9 Tracks	■■ 25 LPA Highest Pkg				
9 PARALLEL TRACKS · ALL FROM DAY 1 · REAL-TIME PROJECTS EVERY MONTH									
Expected Salary: Rs.6 LPA - Rs.25 LPA \$80K - \$180K (Global)									

9666019191 | www.cloudsoftsol.com | Hyderabad | 2026 Batch
Cloud Soft Solutions | 5500+ Placed Professionals | Hyderabad #1 Tech Career Institute

WHO IS THE NEXUS PROGRAM FOR?

Fresh Graduates	B.Tech/BCA/MCA/BSc any branch. Zero cloud experience OK. Build 12 production projects and get placed.	Structured path from Python basics to multi-cloud production systems · Full placement support
	System admins, network engineers, developers moving into Cloud/DevOps/SRE — the highest-paying ops roles.	Fast-track AWS+Azure+Terraform · Add AI/ML to ops skills · Target Rs.8-15 LPA salary hike
Developers to DevOps	Python/Java/.NET developers wanting to build AND operate cloud-native systems and AI pipelines.	Skip basics — NestJS to EKS, Terraform, GitOps, MLOps · Add GenAI and Agentic AI to DevOps stack
IT Pros to Cloud Security	Network/sys admins, SOC analysts moving to Cloud Security, SecOps, SRE, or DevSecOps specialization.	AWS+Azure security certs · Zero Trust · CSPM · SOC2 · Incident response automation with AI

5500+ Placements across top product companies, MNCs, unicorns and global remote firms. Founded by veterans from Google, Amazon and TCS.	200+ Hiring Partners — direct referrals in Hyderabad, Bangalore, Pune, Chennai and US/UK/Canada. Curriculum built from 60,000+ JD analysis.	Flexible Batches — Weekday, evening and weekend options. Career team schedules all interviews. Placement support until your offer is signed.
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9-TRACK PARALLEL MODEL — ALL TRACKS FROM DAY 1

All 9 tracks run simultaneously from Week 1. You write Python scripts AND provision Terraform AND configure AWS+Azure AND build AI pipelines AND secure infrastructure every single week — exactly how Senior DevOps Engineers, SREs, and Cloud Security Architects work.

TRACK	MONTH 1 Wks 1-4	MONTH 2 Wks 5-8	MONTH 3 Wks 9-12	MONTH 4 Wks 13-16
Python DevOps	Scripts+Boto3+SDK	FastAPI+Ansible+Fabric	ML pipelines+ONNX	LLM agents+MCP tools
AWS	IAM+EC2+S3+RDS Wk1	EKS+Lambda+SQS+CF	SageMaker+Bedrock	Multi-acct+FinOps
Azure+GCP	Entra+VM+Blob Wk1	AKS+Functions+ADO	Azure ML+OpenAI	Bicep+Arc+Anthos
Terraform+IaC	HCL basics+modules	Workspaces+Terragrunt	Atlantis+CDKTF	Stacks+OPA+Crossplane
DevOps+GitOps	Git+Docker+Actions	ArgoCD+Flux+Helm	Tekton+Backstage	Platform Engg+IDP
Security+SecOps	IAM+Checkov+Trivy	Vault+DevSecOps+Falco	SIEM+SOC+SOAR	Zero Trust+Compliance
SRE+Observability	Prom+Grafana Wk1	ELK+Jaeger+Loki	Chaos+SLO+FinOps	AIOps+AutoRemediation
MLOps+AIOps	MLflow+Evidently	Kubeflow+Seldon+Feast	SageMaker+Vertex AI	LLMOps+ModelGovernance
GenAI+Agentic	Prompts+RAG basics	LangChain+LangGraph	CrewAI+Fine-tuning	Multi-Agent+VLLM+MCP

6-7 AM	DSA + Python scripting challenge — 1 problem daily throughout all 16 weeks
9-12 PM	PRIMARY: Terraform + AWS/Azure deep-dive rotating + Python automation scripts
1-3 PM	PARALLEL: DevOps + GitOps + Security — both run every afternoon from Week 1
3-5 PM	Project building — real infrastructure code, pipelines, and AI integrations
6-7 PM	SRE + MLOps + GenAI/Agentic AI — daily 1-hour lab exercises from Week 1
8-9 PM	GitHub commit · Blog/LinkedIn post · Architecture documentation · Prep

Python DevOps <ul style="list-style-type: none"> Python OOP, decorators, generators, async/await Boto3: automate EC2, S3, IAM, RDS via Python azure-sdk-python: VM, Blob, Entra ID automation Paramiko SSH, subprocess, os, pathlib automation 	AWS <ul style="list-style-type: none"> IAM: users, roles, policies, MFA, SCP, least privilege EC2: AMIs, user-data scripts, security groups S3: buckets, lifecycle, replication, presigned URLs RDS + CloudWatch alarms + Route53 + Cost Explorer 	Azure+GCP <ul style="list-style-type: none"> Entra ID: users, groups, service principals, MFA Azure VM + NSG + Public IP + Managed Disks Azure Blob + Static Website + CDN GCP: Compute Engine + Cloud Storage + IAM basics
Terraform+IaC <ul style="list-style-type: none"> HCL: providers, resources, variables, outputs, locals AWS provider: VPC, EC2, S3, RDS, security groups Azure provider: Resource Groups, VMs, Storage State: local state, plan/apply/destroy workflow 	DevOps+GitOps <ul style="list-style-type: none"> Linux: bash scripting, cron, systemd, journalctl Git: branching, conventional commits, signed PRs Docker: Dockerfile (Python multi-stage) + Compose GitHub Actions: first CI — lint+test+Docker+push 	Security+SecOps <ul style="list-style-type: none"> IAM security: permission boundaries, SCPs, CloudTrail OWASP Infrastructure Top 10: misconfigs, secrets Checkov: static IaC scanning for Terraform issues Trivy: container vulnerability scanning in CI
SRE+Observability <ul style="list-style-type: none"> Prometheus: metrics collection, PromQL from Week 1 Grafana: dashboards — CPU, memory, Golden Signals SLI, SLO, SLA fundamentals and target setting Golden Signals: latency, traffic, errors, saturation 	MLOps+AIops <ul style="list-style-type: none"> MLflow: experiment tracking, metrics, model registry Pandas + scikit-learn: EDA, RandomForest, XGBoost FastAPI model serving endpoint + Pydantic schemas Evidently: data drift detection, data quality reports 	GenAI+Agentic <ul style="list-style-type: none"> LLM fundamentals: tokens, context, temperature, prompts OpenAI + Anthropic API: GPT-4o calls, streaming Prompt engineering: zero-shot, few-shot, CoT, JSON LangChain basics: LLMChain, PromptTemplate, first RAG

Week-by-Week Plan — Month 1

Week 1	Python Core (OOP, decorators, async) + Boto3 scripts (EC2 launch, S3 upload, IAM audit) · AWS: IAM+EC2+S3+RDS console+CLI labs · Azure: Entra ID+VM+Blob setup · Terraform: first HCL provider+resource+variable · DevOps: Linux bash+Git+Docker basics · SRE: Prometheus+Grafana install + first dashboard · MLOps: MLflow setup + first experiment · GenAI: OpenAI API + 10 prompt experiments · DSA: 8 Easy
Week 2	Python advanced (generators, context managers) + azure-sdk automation · AWS: VPC (public/private subnets, NAT, IGW, NACL) · Azure: VNet + NSG + Azure Firewall basics + GCP Compute Engine · Terraform: VPC module + variables + outputs · DevOps: Docker multi-stage builds for Python + Compose · Security: Checkov scan on Terraform + Trivy on Docker image · SRE: PromQL queries + first SLO definition · MLOps: XGBoost + MLflow tracking · GenAI: LangChain LLMChain + first RAG prototype · DSA: 6 Easy
Week 3	Python Boto3 automation (auto-scaling, cost reporter) + FastAPI REST endpoint · AWS: ECS/Fargate+ECR+CloudWatch logs+Lambda first function · Azure: AKS first cluster + ACR · Terraform: modules (VPC+EC2+RDS) + Terragrunt intro · DevOps: GitHub Actions CI (Python lint+test+Docker+ECR push) · Security: IAM permission boundaries + CloudTrail + Config rules · SRE: Grafana alerting + PagerDuty + runbook · MLOps: FastAPI model + Evidently drift · GenAI: OpenAI function calling + tool patterns · DSA: 6 Easy
Week 4	PROJECT SPRINT: Build Projects 1 and 2 · Terraform applies full environment · GitHub Actions CI deploys · SRE dashboards live · MLflow model registry · GPT-4o agent integrated · LeetCode total: 26 Easy

MONTH 1 — REAL-TIME PROJECTS

PRJ 01	Multi-Cloud IaC with Terraform (AWS+Azure)	Tool: Terraform, AWS VPC+EC2+RDS+S3+ECS, Azure VNet+AKS+Blob+ACR, GitHub Actions, Python Boto3, Checkov, Trivy
Description	Production multi-cloud infrastructure via Terraform: AWS — VPC (public/private/db subnets, NAT, IGW), EC2 ASG, RDS PostgreSQL Multi-AZ, S3 lifecycle, ECS Fargate; Azure — VNet, AKS cluster, Azure SQL, Blob, ACR. Python Boto3 automation scripts: daily cost report, IAM audit, snapshot cleanup. Checkov IaC security scan + Trivy container scan in GitHub Actions CI. Remote state in S3 + DynamoDB locking.	
Deliverables	✓ Terraform AWS modules ✓ Terraform Azure modules ✓ Remote state S3+DynamoDB ✓ GitHub Actions CI+Checkov+Trivy ✓ Python Boto3 automation ✓ CloudWatch dashboards ✓ Architecture diagram ✓ Cost report	
Target Roles	Cloud Engineer Terraform Engineer DevOps Engineer Platform Engineer	
PRJ 02	SRE Observability Stack + AI-Powered Anomaly Alerts	Tool: Prometheus, Grafana, AlertManager, PagerDuty, ELK Stack, OpenTelemetry, Python, OpenAI GPT-4o, AWS

Description	Full observability on AWS: Prometheus scrapes 20+ metrics from ECS services. Grafana shows Golden Signals (latency p99, error rate, saturation, traffic). AlertManager routes to PagerDuty. ELK Stack centralizes logs. OpenTelemetry distributed tracing. AI dashboard: Python queries Prometheus + GPT-4o generates natural language alert summaries with remediation suggestions automatically.
Deliverables	✓ Prometheus + PromQL ✓ Grafana Golden Signals ✓ AlertManager + PagerDuty ✓ ELK log pipeline ✓ OpenTelemetry traces ✓ GPT-4o anomaly summaries ✓ SLO document ✓ Runbook
Target Roles	SRE Site Reliability Engineer Platform Engineer Observability Engineer

MONTH 2 ALL 9 TRACKS — Intermediate Depth Terragrunt+Atlantis · ArgoCD+Flux GitOps · EKS+AKS · Vault+DevSecOps · Kubeflow · LangGraph Weeks 5-8 | 2026

Python DevOps <ul style="list-style-type: none"> Python K8s client: automate namespaces, deployments, pods Ansible: playbooks, roles, dynamic inventory, Jinja2 Python Fabric: remote server automation over SSH Pulumi Python: IaC with Python SDK instead of HCL 	AWS <ul style="list-style-type: none"> EKS: managed nodes, Fargate profiles, IRSA, Karpenter Lambda advanced: layers, custom runtimes, Powertools SQS+SNS+EventBridge: event-driven serverless arch API Gateway: REST+HTTP APIs, throttling, caching, WAF 	Azure+GCP <ul style="list-style-type: none"> AKS: node pools, workload identity, AGIC ingress, Azure CNI Azure DevOps: Pipelines YAML, Boards, Repos, Artifacts Azure Functions: durable, triggers, bindings, Durable Task GCP GKE + Cloud Build + Artifact Registry + Cloud Run
Terraform+IaC <ul style="list-style-type: none"> Terraform workspaces: dev/staging/prod separation Terragrunt: DRY configurations, dependency management Atlantis: Terraform GitOps via PR plan/apply workflow tfsec + Infracost: security + cost estimation in CI 	DevOps+GitOps <ul style="list-style-type: none"> ArgoCD: Application, AppProject, RBAC, sync waves, hooks Flux: GitOps toolkit, Kustomization, HelmRelease, image automation Helm: chart development, values override, library charts Tekton Pipelines: tasks, pipelines, triggers on K8s 	Security+SecOps <ul style="list-style-type: none"> HashiCorp Vault: secrets engines, dynamic creds, PKI CA DevSecOps: Semgrep SAST + OWASP ZAP DAST + Snyk SCA Falco: runtime security rules + anomaly detection in K8s AWS Security Hub + Inspector + Macie: centralized findings
SRE+Observability <ul style="list-style-type: none"> Jaeger distributed tracing + OpenTelemetry instrumentation Loki + Promtail: lightweight log aggregation on K8s Chaos Engineering: LitmusChaos fault injection experiments Error budgets, burn rates, SLO-based multi-window alerting 	MLOps+AIops <ul style="list-style-type: none"> Kubeflow Pipelines: components, pipelines, experiments on K8s Seldon Core: model serving, canary, A/B testing on K8s Feast: feature store — online + offline feature serving Isolation Forest: AIops anomaly detection on Prometheus metrics 	GenAI+Agentic <ul style="list-style-type: none"> LangGraph: stateful agent workflows, nodes, conditional edges LangChain advanced: LCEL, memory, tools, RAG pipelines Pinecone + pgvector: vector databases for production RAG RAGAS: automated RAG quality evaluation metrics

Week-by-Week Plan — Month 2

Week 5	PRIMARY: Terraform workspaces + Terragrunt DRY configs + Atlantis GitOps PR workflow · AWS: EKS cluster + IRSA + Karpenter node provisioner · Azure: AKS + Azure DevOps Pipelines YAML · DevOps: ArgoCD install + first GitOps application sync · Security: HashiCorp Vault + Semgrep SAST in CI · SRE: Jaeger tracing + Loki logs + LitmusChaos first experiment · MLOps: Kubeflow Pipelines first component · GenAI: LangGraph stateful workflow + Pinecone setup · DSA: 8 Easy+4 Medium
Week 6	PRIMARY: Python Ansible playbooks + K8s Python client automation · AWS: Lambda Powertools + SQS/SNS event-driven arch · Azure: Azure Functions + GKE Cloud Run comparison · DevOps: Flux GitOps + Helm chart dev + Tekton pipeline · Security: DevSecOps pipeline (OWASP ZAP+Snyk+Falco) · SRE: Error budgets + burn rate alerts + SLO-based alerting · MLOps: Seldon Core canary + Feast feature store · GenAI: LangChain RAG + LangGraph agent + RAGAS eval · DSA: 5 Easy+6 Medium
Week 7	PRIMARY: Pulumi Python IaC + tfsec+Infracost in CI · AWS: API Gateway+WAF + Security Hub + Macie + Inspector · Azure: ADO Artifacts + AKS workload identity · DevOps: ArgoCD ApplicationSets + Helm library charts · Security: Vault dynamic DB credentials + PKI lifecycle · SRE: LitmusChaos game days + chaos hypothesis doc · MLOps: Isolation Forest AIops on metrics · GenAI: Fine-tuning intro + LangChain tools + function calling · DSA: 4 Easy+5 Medium
Week 8	PROJECT SPRINT: Build Projects 3, 4 and 5 · Terragrunt manages all envs · ArgoCD+Flux sync AWS+Azure · Vault secrets live · Kubeflow pipeline runs · LangGraph agent deployed · LeetCode: 60 Easy+22 Medium

MONTH 2 — REAL-TIME PROJECTS

PRJ 03	GitOps Multi-Cloud with ArgoCD+Flux+Terragrunt	Tool: ArgoCD, Flux, Terragrunt, Helm, EKS, AKS, GitHub Actions, Atlantis, tfsec, Infracost, Python
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Description	Complete GitOps platform: Terragrunt manages dev/staging/prod on AWS+Azure. Atlantis automates Terraform plan/apply via GitHub PRs with tfsec security gate + Infracost cost estimate. ArgoCD syncs application manifests to EKS. Flux manages AKS with HelmRelease + image automation. GitHub Actions CI: Semgrep+Trivy+OWASP ZAP → Docker → ECR/ACR → ArgoCD/Flux sync. Python script auto-creates ArgoCD Applications via API.
Deliverables	✓ Terragrunt multi-env ✓ Atlantis PR workflow ✓ ArgoCD ApplicationSets (EKS) ✓ Flux HelmRelease (AKS) ✓ DevSecOps CI ✓ tfsec+Infracost ✓ Python ArgoCD API ✓ Multi-cloud architecture doc
Target Roles	DevOps Engineer GitOps Engineer Platform Engineer SRE Cloud Engineer

PRJ 04 DevSecOps Pipeline + HashiCorp Vault Secrets Management **Tool: HashiCorp Vault, Semgrep, OWASP ZAP, Snyk, Falco, Trivy, Checkov, AWS Security Hub, Macie, Inspector, Python**

Description	Enterprise DevSecOps pipeline: GitHub Actions → Semgrep SAST+Checkov IaC+Snyk SCA+Trivy container+OWASP ZAP DAST → security gate (blocks CRITICAL/HIGH) → deploy. Vault provides dynamic AWS credentials, DB passwords, TLS certificates (zero-static-secrets). Falco runtime rules alert on container anomalies. Python aggregates Security Hub+Macie+Inspector into unified security posture dashboard.
Deliverables	✓ Semgrep+Checkov+Snyk+Trivy+ZAP ✓ Vault dynamic secrets ✓ Falco runtime rules ✓ Security Hub dashboard ✓ Python security aggregator ✓ Zero-static-secrets arch ✓ Security posture report
Target Roles	DevSecOps Engineer Cloud Security Engineer Security Automation Engineer Platform Engineer

PRJ 05 Kubeflow MLOps Pipeline + AIOps Anomaly Detection **Tool: Kubeflow Pipelines, Seldon Core, Feast, MLflow, Evidently, Isolation Forest, Python, FastAPI, Prometheus, GPT-4o**

Description	End-to-end MLOps on Kubernetes: Kubeflow Pipeline — data ingestion → feature engineering → XGBoost training → MLflow registry → Seldon Core canary deployment (10% traffic) → A/B test → promote. Feast feature store. Evidently monitors drift weekly, triggers retraining. AIOps: Isolation Forest on Prometheus metrics detects anomalies, Python auto-pages SRE and suggests remediation via GPT-4o.
Deliverables	✓ Kubeflow 5-stage pipeline ✓ Seldon canary ✓ Feast feature store ✓ Evidently drift ✓ MLflow registry ✓ Isolation Forest AIOps ✓ GPT-4o remediation ✓ MLOps dashboard
Target Roles	MLOps Engineer ML Engineer AIOps Engineer Platform Engineer Data Engineer

MONTH 3 ALL 9 TRACKS — Advanced Engineering **Crossplane+Backstage · SageMaker+Vertex AI · SIEM+SOAR+MITRE · LLMops · CrewAI · FinOps** **Weeks 9-12 | 2026**

Python DevOps <ul style="list-style-type: none"> Python ONNX Runtime: deploy ML models without Python in prod Click+Typer: build professional CLI DevOps tools Python gRPC client: inter-service automation Python Datadog/Dynatrace API: custom metric injection 	AWS <ul style="list-style-type: none"> SageMaker: training jobs, model registry, real-time endpoints AWS Bedrock: Claude, Llama 3, Titan via Python boto3 Bedrock Knowledge Bases: managed RAG with S3+OpenSearch Control Tower+Organizations+SCPs: multi-account governance 	Azure+GCP <ul style="list-style-type: none"> Azure ML: pipelines, compute clusters, model deployment Azure OpenAI Service: GPT-4o + embeddings via Python SDK Vertex AI: Gemini API + AutoML + Vertex AI Pipelines Azure Policy+Blueprints+Management Groups governance
Terraform+IaC <ul style="list-style-type: none"> CDKTF: write Terraform configurations in Python Custom Terraform providers: Go basics for custom resources Crossplane: K8s-native IaC via CRDs for cloud resources Terraform Enterprise: team workflows, SSO, audit logs 	DevOps+GitOps <ul style="list-style-type: none"> Backstage: Internal Developer Portal — service catalog, templates Crossplane: GitOps for cloud infrastructure via K8s CRDs Argo Rollouts: blue-green, canary, analysis templates Kustomize: overlays, patches, transformers per environment 	Security+SecOps <ul style="list-style-type: none"> Splunk SIEM: log ingestion, correlation searches, dashboards Microsoft Sentinel: analytics rules, SOAR playbooks MITRE ATT&CK: threat detection rules and adversary emulation SOAR automation: Python playbooks for auto-incident triage
SRE+Observability <ul style="list-style-type: none"> Datadog APM: service maps, flame graphs, trace analytics Dynatrace: AI-powered full-stack observability + root cause FinOps: cost allocation, tagging, showback, chargeback model Chaos Engineering game days: hypothesis to result framework 	MLOps+AIOps <ul style="list-style-type: none"> SageMaker Pipelines: managed MLOps workflow on AWS Vertex AI Pipelines: Kubeflow-compatible ML on GCP LLMOps: prompt versioning, evaluation, A/B testing LLMs Model governance: access control, audit logging, model cards 	GenAI+Agentic <ul style="list-style-type: none"> CrewAI: role-based multi-agent collaboration framework AutoGen (Microsoft): conversational multi-agent workflows QLoRA fine-tuning with Unsloth on Colab GPU VLLM: high-throughput LLM inference server for production

Week-by-Week Plan — Month 3

Week 9	PRIMARY: CDKTF (Terraform in Python) + Crossplane CRDs · AWS: SageMaker training + model registry + Bedrock boto3 · Azure: Azure ML Pipelines + Azure OpenAI SDK · DevOps: Backstage Developer Portal setup + service catalog + golden path templates · Security: Splunk SIEM setup + first correlation searches · SRE: Datadog APM + service maps · MLOps: SageMaker Pipelines + LLMops prompt versioning · GenAI: CrewAI multi-agent setup · DSA: 7 Medium+1 Hard
Week 10	PRIMARY: Python CLI tools with Click+Typer + gRPC automation · AWS: Bedrock Knowledge Bases + Control Tower multi-account · Azure: Vertex AI Gemini + Azure Policy governance · DevOps: Argo Rollouts canary + Kustomize overlays · Security: Microsoft Sentinel SOAR Python playbooks + MITRE ATT&CK; mapping · SRE: Dynatrace full-stack + Chaos Engineering game day · MLOps: Vertex AI Pipelines + model governance + model cards · GenAI: AutoGen agents + QLoRA fine-tuning intro · DSA: 5 Medium+2 Hard
Week 11	PRIMARY: Python ONNX Runtime + CDKTF advanced patterns · AWS: Organizations+SCPs+ControlTower governance · Azure: Azure Blueprints + Management Groups · DevOps: Crossplane GitOps for cloud infra + Backstage scaffolder · Security: MITRE ATT&CK; detection engineering + automated threat response · SRE: FinOps cost allocation + showback reports · MLOps: LLMops A/B testing + model governance audit · GenAI: VLLM production + Unsloth QLoRA fine-tuning · DSA: System design (multi-cloud arch, AI platform, streaming)
Week 12	PROJECT SPRINT: Build Projects 6 and 7 · SageMaker+Vertex AI pipelines live · Sentinel SOAR auto-responds · Backstage portal deployed · LLMops dashboard tracking · LeetCode: 80 Easy+36 Medium+3 Hard

MONTH 3 — REAL-TIME PROJECTS

PRJ 06	SecOps Automation Platform — SIEM+SOAR+MITRE ATT&CK;	Tool: Splunk SIEM, Microsoft Sentinel, SOAR Python playbooks, MITRE ATT&CK, Falco, AWS Security Hub, GuardDuty, Python
Description	Enterprise SecOps platform: Splunk ingests AWS CloudTrail+VPC Flow Logs+EKS audit logs. 15+ correlation searches detect brute force, privilege escalation, data exfiltration, cryptomining. Sentinel SOAR Python playbooks auto-triage P1 incidents: block IP in WAF, revoke IAM credentials, notify SOC via Teams. MITRE ATT&CK; maps 20+ detection rules to tactics. Python provides unified security posture score.	
Deliverables	✓ Splunk 15+ correlation rules ✓ Sentinel SOAR playbooks ✓ MITRE ATT&CK; mapping ✓ GuardDuty+Security Hub ✓ Python threat intel ✓ Security posture dashboard ✓ IR playbook ✓ SOC runbook	
Target Roles	SecOps Engineer SOC Analyst L2/L3 Cloud Security Engineer Security Automation Engineer	

PRJ 07	Multi-Cloud MLOps+LLMOps Platform (AWS+Azure+GCP)	Tool: SageMaker Pipelines, Azure ML, Vertex AI Pipelines, MLflow, Seldon, VLLM, Evidently, LangFuse, Python
Description	End-to-end MLOps across three clouds: SageMaker trains XGBoost → Seldon Core canary on EKS. Azure ML trains BERT fine-tuned → AKS. Vertex AI trains tabular model → Cloud Run. LLMops: VLLM serves fine-tuned Llama 3.2, LangFuse tracks all LLM calls (cost, latency, quality), automated prompt A/B testing, model governance dashboard with access control and audit log.	
Deliverables	✓ SageMaker+Azure ML+Vertex AI ✓ MLflow cross-cloud registry ✓ Seldon canary ✓ VLLM serving ✓ LangFuse LLMops ✓ Prompt A/B testing ✓ Model governance ✓ Architecture doc	
Target Roles	MLOps Engineer LLMops Engineer ML Platform Engineer AI Infrastructure Engineer	

MONTH 4	ALL 9 TRACKS — Production+Capstone	Platform Engg+IDP · AIOps Autopilot · Multi-Agent DevOps · Compliance+FinOps+AI + Capstone	Weeks 13-16 2026
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Python DevOps <ul style="list-style-type: none"> ■ ■ Python K8s operator SDK: build custom operators in Python ■ ■ eBPF with bcc/bpfftrace: kernel-level observability scripts ■ ■ Python celery: distributed task queue for async DevOps jobs ■ ■ LangChain.py agent tools: infrastructure task automation 	AWS <ul style="list-style-type: none"> ■ ■ EKS Blueprints: production EKS with add-ons in Terraform ■ ■ AWS Service Catalog + Landing Zone Accelerator multi-account ■ ■ AWS Resilience Hub: resilience score, recommendations, testing ■ ■ FinOps: Cost Intelligence Dashboard, Savings Plans, Spot Advisor 	Azure+GCP <ul style="list-style-type: none"> ■ ■ Azure Landing Zones: CAF-aligned multi-subscription architecture ■ ■ Azure Arc: manage AWS+GCP resources from Azure control plane ■ ■ GCP Anthos: multi-cloud K8s across AWS+Azure+GCP ■ ■ Multi-cloud networking: VPN+ExpressRoute+Direct Connect
Terraform+IaC <ul style="list-style-type: none"> ■ ■ Terraform Stacks: component-based large-scale IaC (new) ■ ■ OPA Gatekeeper + Sentinel: policy as code for Terraform ■ ■ Terraform module registry: public+private module publishing ■ ■ Zero-downtime IaC migrations: import, moved blocks, refactor 	DevOps+GitOps <ul style="list-style-type: none"> ■ ■ Platform Engineering: IDP with Backstage+Crossplane+ArgoCD ■ ■ Dagger: portable CI/CD pipelines as code in Python ■ ■ Istio advanced: mTLS, traffic shaping, WASM filter plugins ■ ■ Cilium CNI + Hubble: eBPF-based networking+observability 	Security+SecOps <ul style="list-style-type: none"> ■ ■ Zero Trust Network Access (ZTNA): BeyondCorp model ■ ■ Prisma Cloud / Wiz CNAPP: full CSPM+CWPP deployment ■ ■ Compliance as Code: InSpec, Chef Compliance, OpenSCAP ■ ■ SOC2 Type II + ISO27001 + CIS Benchmark automated evidence

SRE+Observability <ul style="list-style-type: none"> ■ ■ AIOps: ML-based root cause with Dynatrace Davis AI ■ ■ Predictive auto-scaling: Prophet forecast → HPA custom metrics ■ ■ Gremlin + AWS FIS: production fault injection service ■ ■ SRE toil reduction: Python automation eliminates repetitive ops 	MLOps+AIOps <ul style="list-style-type: none"> ■ ■ Model monitoring: WhyLabs + Arize + NannyML drift detection ■ ■ Feature platform: Tecton (enterprise) + Ray Serve inference ■ ■ Streaming inference: Spark ML + Kafka + Flink pipeline ■ ■ LLM fine-tuning: DPO + RLHF + Constitutional AI pipeline 	GenAI+Agentic <ul style="list-style-type: none"> ■ ■ LangGraph DevOps agent: autonomous infrastructure management ■ ■ Model Context Protocol (MCP): custom Python MCP servers ■ ■ Multi-agent SecOps: threat detection + auto-response agents ■ ■ GenAI FinOps: AI agent analyzes cloud spend + saves 30%+
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Week-by-Week Plan — Month 4

Week 13	PRIMARY: CDKTF+OPA Sentinel+Terraform Stacks+Policy as Code · AWS: EKS Blueprints+Resilience Hub+FinOps · Azure: Landing Zones CAF+Azure Arc · DevOps: Platform Engineering IDP (Backstage+Crossplane+ArgoCD) · Security: Prisma Cloud CNAPP+ZTNA+Wiz CSPM · SRE: AIOps root cause+Dynatrace Davis AI · MLOps: Model monitoring WhyLabs+Arize+DPO fine-tuning · GenAI: LangGraph DevOps agent+MCP server · DSA: Mock OA x2
Week 14	PRIMARY: Python K8s operator SDK+eBPF+Dagger CI/CD · AWS: Service Catalog+Landing Zone Accelerator · Azure: GCP Anthos+multi-cloud networking · DevOps: Istio mTLS+Cilium CNI+eBPF networking · Security: SOC2+ISO27001 compliance as code+InSpec · SRE: Predictive auto-scaling Prophet+HPA+Gremlin fault injection · MLOps: Ray Serve+Tecton+streaming inference · GenAI: Multi-agent SecOps+GenAI FinOps agent+RLHF · DSA: Mock OA x2
Week 15	CAPSTONE SPRINT Week 1: Architect + build Project 12 · Terraform Stacks provision full multi-cloud · ArgoCD+Flux GitOps syncs all clusters · Sentinel SOAR auto-responding · MLOps pipelines on 3 clouds · LangGraph DevOps agent managing infra · SOC2 evidence collected
Week 16	CAPSTONE SPRINT Week 2+PORTFOLIO: Polish + deploy all 12 projects · Architecture diagrams · Blog posts · GitHub+LinkedIn+Resume update · 5 mock technical+3 system design+2 HR interviews · Final infra pentest · LeetCode: 90 Easy+45 Medium+5 Hard COMPLETE

MONTH 4 — REAL-TIME PROJECTS

PRJ 08	Agentic DevOps Bot — AI Agent Manages Infrastructure	Tool: LangGraph, CrewAI, Python, AWS Bedrock, Terraform Python SDK, K8s Python Client, LangFuse, GitHub API, MCP
Description	Production AI agent that handles DevOps tasks autonomously. LangGraph orchestrates: Infrastructure Agent (reads Terraform state, plans changes), Monitoring Agent (queries Prometheus, identifies issues), Security Agent (runs Checkov on proposed changes), Deploy Agent (applies Terraform, updates ArgoCD). Custom MCP server exposes K8s API+Terraform+AWS to LLM. AWS Bedrock Claude provides reasoning. LangFuse traces all steps. Evaluated on 30 real DevOps scenarios.	
Deliverables	✓ LangGraph multi-agent workflow ✓ MCP server (Python) ✓ K8s Python client ✓ Terraform automation ✓ AWS Bedrock Claude ✓ LangFuse observability ✓ 30-scenario evaluation ✓ Demo video	
Target Roles	Agentic AI Engineer DevOps Automation Engineer Platform Engineer AI Infrastructure Engineer	
PRJ 09	FinOps+AI Cost Optimization Platform	Tool: Python, AWS Cost Explorer, Azure Cost Management, Infracost, Spot.io, LangChain, GPT-4o, Grafana, Terraform
Description	Multi-cloud FinOps platform: Python queries AWS Cost Explorer + Azure Cost Management daily, categorizes spend by team/project/env via tags, generates showback reports. Infracost estimates Terraform changes before apply. Spot.io Spot Instance recommendations. LangChain+GPT-4o AI advisor analyzes 90-day trends and generates natural language recommendations. Grafana FinOps dashboard with budget alerts.	
Deliverables	✓ Python AWS+Azure cost APIs ✓ Tag-based cost allocation ✓ Infracost in CI ✓ Spot.io recommendations ✓ GPT-4o cost advisor ✓ Grafana FinOps dashboard ✓ Budget alerts ✓ Monthly savings report	
Target Roles	FinOps Engineer Cloud Cost Engineer Platform Engineer Cloud Engineer	
PRJ 10	Platform Engineering — Internal Developer Platform	Tool: Backstage, Crossplane, ArgoCD, Helm, Terraform, Python, GitHub Actions, OPA Gatekeeper, Dagger
Description	Production IDP: Backstage service catalog with 50+ components, Techdocs from markdown, golden-path templates (Python microservice, Terraform module, K8s app) that self-provision infra via Crossplane CRDs + ArgoCD sync + GitHub Actions CI. OPA Gatekeeper enforces policies. Dagger portable CI/CD in Python. Developer self-service: provision new microservice with full CI/CD in 5 minutes.	
Deliverables	✓ Backstage service catalog ✓ Crossplane CRD provisioning ✓ ArgoCD GitOps ✓ OPA Gatekeeper policies ✓ Dagger CI/CD ✓ Golden path templates ✓ 5-minute self-service demo ✓ Platform runbook	
Target Roles	Platform Engineer IDP Engineer DevOps Engineer SRE Cloud Engineer	
PRJ 11	Multi-Cloud Compliance (SOC2+ISO27001+CIS Benchmark)	Tool: InSpec, Terraform Sentinel, OPA, AWS Config, Azure Policy, Prisma Cloud, Wiz, Python, GitHub Actions
Description	Automated compliance: InSpec profiles verify SOC2 Type II controls daily across AWS+Azure. Terraform Sentinel prevents non-compliant infra. OPA Gatekeeper enforces CIS K8s Benchmark. AWS Config + Azure Policy auto-remediate drift. Prisma Cloud CSPM continuous posture score. Wiz CNAPP attack paths. Python generates audit-ready SOC2/ISO27001 evidence package.	

Deliverables	✓ InSpec SOC2 profiles ✓ Sentinel IaC policies ✓ OPA K8s Gatekeeper ✓ AWS Config+Azure Policy ✓ Prisma Cloud CSPM ✓ Wiz CNAPP ✓ Python audit evidence ✓ SOC2+ISO27001 package
Target Roles	Cloud Security Architect Compliance Engineer GRC Analyst DevSecOps Engineer

CAPSTONE — PROJECT 12: ALL 9 TRACKS INTEGRATED

PROJECT 12		Autonomous Multi-Cloud Platform — AI-Operated Infrastructure		CAPSTONE · 9 Tracks · 4 Months · Production System	
Python+Terraform	Python automation+CDKTF+Terraform+OPA+Atlantis+Crossplane+IaC	AWS+Azure+GCP	EKS+AKS+GKE+SageMaker+Azure ML+Vertex AI+Bedrock+Azure OpenAI	Security+SecOps	Splunk+Sentinel+SOAR+Prisma Cloud+Vault+OPA+Wiz+InSpec+Falco
DevOps+GitOps	ArgoCD+Flux+Backstage+Dagger+Argo Rollouts+Cilium+Istio+Tekton	MLOps+GenAI	Kubeflow+SageMaker+VLLM+LangGraph+CrewAI+MCP+LangFuse+LLMOps		
SRE+AIOps	Prometheus+Grafana+Dynatrace+LitmusChaos+FinOps+AIOps AutoRemediation				
What it is	A production multi-cloud platform where an AI agent (LangGraph+CrewAI) monitors, scales, secures, and optimizes infrastructure across AWS+Azure+GCP autonomously — reducing ops toil by 70% and cutting cloud costs by 30%.				
Core Platform	Terraform+Atlantis manages 3 cloud environments · ArgoCD+Flux GitOps syncs 5 microservices to EKS+AKS+GKE · Backstage IDP with Crossplane self-service provisioning · Dagger portable CI/CD · Istio+Cilium service mesh · Argo Rollouts canary deployments with analysis				
AI Operations	LangGraph DevOps agent handles: auto-scaling (Prometheus → Prophet forecast → HPA), incident triage (Dynatrace alert → root cause → Sentinel SOAR), cost optimization (Cost Explorer → GPT-4o → Terraform PR), security response (Prisma finding → Vault rotation → Falco block). MCP server exposes all cloud APIs. LangFuse tracks every agent decision.				
ML+Security	MLOps: 3-cloud pipelines (Kubeflow+SageMaker+Vertex AI) with VLLM + LLMOps (LangFuse+prompt versioning+A/B testing). SecOps: Splunk+Sentinel unified SIEM with SOAR auto-triage. Compliance: SOC2+ISO27001 automated evidence (InSpec+Sentinel). FinOps: AI cost advisor saves 30%+				
Deliverables	Live multi-cloud platform · GitHub repo+full CI/CD · Terraform IaC (3 clouds) · Backstage IDP deployed · LangGraph agent demo (30 scenarios) · SOC2 evidence package · FinOps savings report · Architecture diagrams · SLO dashboard · Loom demo				
Target Roles	Senior DevOps Engineer · Platform Engineer · SRE · Cloud Security Engineer · MLOps Engineer · AIOps Engineer · DevSecOps Engineer · Cloud Architect · AI Infrastructure Engineer				

PLACEMENT SUPPORT + CAREER OUTCOMES

5500+ Placements	200+ Hiring Partners	98% Placement Rate	Rs.25 LPA Highest Package	60 Days Avg to Offer
Students Placed	Active Partners	Of Completers	2025 Record	First Offer

PHASE 1 Wk 13-14	Portfolio and Brand	ATS resume by career team · GitHub profile review (repos, READMEs, architecture diagrams, CI badges) · LinkedIn All-Star · Loom demos for 12 projects · Tailored resume per role (Platform Eng, SRE, Cloud Security, MLOps, AI Infra)
PHASE 2 Wk 15-16	Interview Preparation	10 mock interviews: 5 technical (Terraform, AWS, K8s, Python) + 3 system design + 2 behavioral HR · Templates: multi-cloud landing zone, MLOps platform, GitOps pipeline, SRE observability, AI ops system · Domain Q&A; banks: AWS, Terraform, ArgoCD, Prometheus, K8s, SecOps, MLOps, GenAI
PHASE 3 Post Wk16	Job Applications	Direct referrals to 200+ partners · Weekly alerts for DevOps/Cloud/SRE/MLOps/SecOps roles · Profile optimization: Naukri, LinkedIn, AngelList, Dice.com · Cold outreach templates for cloud engineering managers · 90-day application tracking support
PHASE 4 Ongoing	Interview Scheduling	Placement team schedules all interviews · Company-specific briefings (tech stack, rounds, culture) · Post-interview debrief and re-preparation plan · Cloud War Room Slack channel with 5500+ alumni referral pipeline
PHASE 5 Offer Stage	Offer Negotiation	Market salary benchmarking: Rs.8-25 LPA (India), \$80K-180K (Global) · Counter-offer strategy · Offer letter review: ESOPs, joining bonus, remote allowance, tech budget · Joining date negotiation

HYPERSCALERS	Amazon AWS, Microsoft Azure, Google Cloud — direct placements as Cloud/DevOps/SRE engineers
PRODUCT GIANTS	Uber, Stripe, Atlassian, Datadog, HashiCorp, Cloudflare, Grafana Labs, PagerDuty, Harness
INDIAN UNICORNS	Razorpay, CRED, PhonePe, Meesho, Zepto, BrowserStack, Postman, Freshworks, MindTickle
MNC CONSULTING	Accenture Cloud, Deloitte Cloud, IBM Cloud, Wipro Cloud, Infosys Cobalt, TCS Cloud
SECURITY FIRMS	Palo Alto Networks, CrowdStrike, Wiz, Prisma Cloud, Lacework, Aqua Security, Sysdig
GLOBAL REMOTE	Toptal, Turing, Arc.dev DevOps track + 60+ US/UK/Canada/Australia remote-first cloud startups

JOB ROLE	KEY SKILLS	INDIA 2026	GLOBAL
DevOps Engineer	Docker, K8s, GitHub Actions, Terraform, AWS/Azure	Rs.6-14 LPA	\$80-120K
Platform Engineer	Backstage, Crossplane, ArgoCD, Dagger, K8s, Python	Rs.8-18 LPA	\$100-145K
SRE	Prometheus, Grafana, SLOs, Chaos Engineering, Incident Response	Rs.10-20 LPA	\$100-150K
Cloud Engineer	Terraform, EKS/AKS, IAM, VPC, Multi-cloud IaC	Rs.7-18 LPA	\$90-140K
Cloud Architect	Multi-cloud design, Landing Zones, Well-Architected	Rs.15-30 LPA	\$130-180K
DevSecOps Engineer	DevSecOps pipeline, Vault, SAST/DAST/SCA, Falco	Rs.8-20 LPA	\$95-155K
Cloud Security Engineer	Zero Trust, CSPM, WAF, Sentinel, SIEM, SOC2	Rs.8-22 LPA	\$95-160K
SecOps / SOC Engineer	Splunk, Sentinel, SOAR, MITRE ATT&CK, Incident Response	Rs.6-16 LPA	\$80-130K
MLOps Engineer	Kubeflow, SageMaker, MLflow, Seldon, Feast, Evidently	Rs.10-24 LPA	\$110-165K
AIOps Engineer	Dynatrace AI, Prometheus ML, anomaly detection, auto-remediation	Rs.10-20 LPA	\$105-155K
LLMOps Engineer	VLLM, LangFuse, prompt versioning, model governance	Rs.12-28 LPA	\$120-175K

Agentic AI Infra Engg	LangGraph, CrewAI, MCP, multi-agent DevOps, Bedrock	Rs.15-32 LPA	\$130-200K
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CERTIFICATION	PROVIDER	PRIORITY
AWS Certified Solutions Architect – Associate SAA-C03	AWS	Very High
AWS Certified DevOps Engineer – Professional DOP-C02	AWS	Very High
AWS Certified Security – Specialty SCS-C02	AWS	Very High
HashiCorp Certified Terraform Associate 003	HashiCorp	Very High
Certified Kubernetes Administrator CKA	CNCF	Very High
Certified Kubernetes Security Specialist CKS	CNCF	Very High
Microsoft AZ-104: Azure Administrator Associate	Microsoft	High
Microsoft AZ-400: Azure DevOps Engineer Expert	Microsoft	High
CompTIA Security+ SY0-701	CompTIA	High - SecOps entry
Google Professional Cloud DevOps Engineer	GCP	High - GCP roles
Prometheus Certified Associate PCA	CNCF	High - SRE/Observability
DeepLearning.AI MLOps Specialization	Coursera	High - MLOps roles

WEEK 16 SUCCESS CHECKLIST + CAREER RULES

OK	12 Projects Live	Deployed with live endpoints, GitHub repos, architecture diagrams, CI/CD badges, Loom demos
OK	GitHub Profile	All 12 projects pinned, clean READMEs, 100+ commits/month, contribution graph green
OK	LinkedIn All-Star	All 9 tracks listed, project posts with demos, 300+ connections, OpenToWork
OK	Architecture Diagrams	draw.io / Lucidchart diagrams for all major projects — highly valued for Cloud/DevOps
OK	Tech Blog	5+ articles on Medium/Hashnode — Terraform tips, ArgoCD setup, SRE practices, MLOps
OK	ATS Resume	1-page PDF, quantified metrics, cloud keywords, tailored per role
OK	3 Certifications	AWS SAA + Terraform Associate + CKA minimum — 3 certs unlock resume screening filters
OK	Demo Videos	Loom walkthroughs (2-3 min) per project — infra demos, GitOps workflows, agent demos
OK	FinOps Report	Cost optimization report from Project 9 — prove you save money, not just deploy stuff
OK	Security Report	Pentest report + SOC2 evidence + compliance checklist — unique differentiator in interviews
OK	Mock Interviews	10: 5 Terraform/K8s/AWS technical + 3 system design (multi-cloud) + 2 behavioral HR
OK	Open Source	1+ PR merged to popular repos: Terraform modules, Helm charts, Prometheus exporters

1	Infrastructure is Code	Every resource in Terraform and Git. VPC, EKS, IAM, ML pipelines — all IaC, no console clicks.
2	Automate Everything	If you do it twice, write a Python script. Repetitive ops is toil. Toil is bad SRE. Eliminate it.
3	Security from Day 1	Shift-left security. Checkov, Vault, Falco, SIEM in every project. Security is not an afterthought.
4	Observe Before Acting	Cannot improve what you cannot measure. Prometheus and Grafana before any change is made.
5	Multi-Cloud is the Market	Companies use AWS plus Azure plus GCP simultaneously. Master all three, not just one.
6	AI Augments Operations	LangGraph and CrewAI agents that manage infrastructure autonomously are the future. Build one.
7	Get Certified Early	AWS SAA plus CKA plus Terraform Associate by Month 3. Certs unlock resume screening filters.
8	DSA and System Design	Cloud architects still get LeetCode. 140 problems plus 8 system designs equals interview-ready.



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