**DevOps 4-Month Weekly Learning Plan**

**📌 Phase 1: Foundations (Weeks 1–4)**

**Week 1: Linux & Shell Scripting**

* Learn basic Linux commands, file permissions, process management
* Write Bash scripts: loops, conditionals, functions
* Tools: ssh, scp, top, ps, grep, sed, awk

**Week 2: Git & Version Control**

* Understand git init, clone, commit, branch, merge, rebase
* Hands-on with GitHub: Pull Requests, Issues, Actions
* Try a mini Git project

**Week 3: Networking for DevOps**

* OSI/TCP-IP model, ports, DNS, NAT, VPN, IP/Subnetting
* Tools: ping, traceroute, nslookup, curl, netstat, telnet

**Week 4: Python/Bash for Automation**

* Write scripts to automate file handling, backups, and cron jobs
* Basic Python: loops, functions, exception handling, subprocess, requests

**📌 Phase 2: CI/CD, Containers & Configuration (Weeks 5–8)**

**Week 5: Introduction to DevOps + CI/CD Concepts**

* Learn DevOps principles: CI, CD, pipelines
* Tools: Jenkins/GitHub Actions basics
* Set up a simple CI pipeline

**Week 6: Docker**

* Understand containers vs VMs
* Dockerfile, docker build, run, volumes, networks
* Create and run your own containerized app

**Week 7: Docker Compose + Basic Kubernetes**

* Define multi-container apps with docker-compose.yml
* Intro to Kubernetes architecture: pods, deployments, services
* Try Minikube or Kind locally

**Week 8: Configuration Management (Ansible)**

* Intro to Ansible: inventory, playbooks, modules, roles
* Automate tasks (installing packages, managing users, etc.)

**📌 Phase 3: Cloud & Infrastructure as Code (Weeks 9–12)**

**Week 9: AWS Basics**

* IAM, EC2, S3, VPC, Security Groups
* Use AWS CLI to launch and manage resources

**Week 10: Terraform**

* Intro to IaC: Providers, Resources, Variables, Modules
* Deploy infrastructure to AWS with Terraform

**Week 11: Kubernetes (Advanced)**

* Learn Helm, ConfigMaps, Secrets, Ingress, Autoscaling
* Deploy a multi-tier app to Kubernetes

**Week 12: Monitoring & Logging**

* Tools: Prometheus, Grafana, ELK stack
* Set up basic monitoring and alerting for a Docker/K8s setup

**📌 Phase 4: Final Projects & Interview Prep (Weeks 13–16)**

**Week 13–14: Capstone Project**

* Deploy a full CI/CD pipeline with:
  + GitHub → Jenkins → Docker → Kubernetes → AWS
  + Include Terraform & Ansible in provisioning

**Week 15: DevOps Interview Prep**

* Common DevOps questions
* System design questions (CI/CD pipelines, scalable infra)
* Mock interview sessions

**Week 16: Polish Resume & Portfolio**

* Showcase your GitHub projects
* Prepare a 5-minute demo video or documentation
* Apply for jobs & schedule interviews

**✅ Support I'll Provide:**

* Weekly check-ins and feedback
* Hands-on labs and project ideas
* Mock interviews and resume review