## **DevOps Beginner Learning Path**

### ✅ Step 1: **Understand What DevOps Is**

* Learn the DevOps culture, goals, and practices
* Understand the difference between DevOps and traditional IT

Resources:

* YouTube: “What is DevOps?” videos
* Blog: Atlassian’s DevOps guide

### ✅ Step 2: **Learn Linux Basics**

* Basic commands (ls, cd, pwd, cp, mv, rm, etc.)
* File permissions and ownership
* Package management (apt, yum)
* SSH & remote access

Resources:

* [Linux Journey](https://linuxjourney.com/)
* OverTheWire Bandit (hands-on practice)

### ✅ Step 3: **Learn Scripting (Bash + Python basics)**

* Write shell scripts to automate tasks
* Learn basic Python: variables, loops, functions, file handling

Resources:

* Codecademy or W3Schools for Bash & Python
* Practice with small automation scripts

### ✅ Step 4: **Learn Git & GitHub**

* Git basics: clone, commit, push, pull, merge, branch
* GitHub: create repos, pull requests

Resources:

* learngitbranching.js.org
* GitHub Learning Lab

### ✅ Step 5: **Understand CI/CD Concepts**

* What is Continuous Integration / Delivery / Deployment?
* Watch how a basic pipeline works

Tools to explore:

* GitHub Actions (beginner-friendly)
* Jenkins (industry standard)

Resources:

* YouTube tutorials: “GitHub Actions CI/CD for beginners”

### ✅ Step 6: **Learn Docker (Containers)**

* What is Docker and why it’s used
* Build and run containers
* Dockerfile, docker-compose basics

Resources:

* Docker docs
* YouTube: “Docker for Beginners” playlist

### ✅ Step 7: **Basics of Cloud (AWS or Azure or GCP)**

* Focus on:
  + EC2 (virtual servers)
  + S3 (storage)
  + IAM (users/roles)
  + VPC (networking basics)

Free Tier: [AWS Free Tier](https://aws.amazon.com/free/)

### ✅ Step 8: **Intro to Kubernetes**

* Understand Pods, Deployments, Services
* Use Minikube or Play with Kubernetes online

Resources:

* Kubernetes official docs
* YouTube: “Kubernetes for beginners”

### ✅ Step 9: **Start a Small Project**

Build a mini DevOps pipeline:

* Use GitHub → CI with GitHub Actions → Docker build → Deploy to AWS EC2

### ✅ Step 10: **Learn Infrastructure as Code (IaC)**

* Start with Terraform
* Learn how to provision EC2 or S3 with code

Resources:

* Terraform Docs
* YouTube: “Terraform for beginners”

### 🎯 Bonus: Join Communities & Practice

* Reddit: r/devops
* Discord: DevOps communities
* FreeCodeCamp, YouTube, and Medium articles