



# DEVSECOPS COURSE



FRONTLINES EDUTECH PRIVATE LIMITED



# ABOUT US

Frontlines Edutech Private Limited envisions bridging the gap between academia and industry. We understand the pain of unemployment and are trying to wipe off the words of impossible and unemployment from the brains of youth by training and turning them into diamonds. We provide tailor-made, hands-on, and need-based programs on par with industry standards. We believe that the youth of today is the future of tomorrow. And so our courses are tutored by experts from top industries who are passionate about mentoring the youth. Since its inception, Frontlines Edutech has earned the trust and gained recognition from thousands of learners across the state.



**FOCUSED ON REFINING TALENT AND TURNING LEARNERS INTO HIGHLY SKILLED PROFESSIONALS SOUGHT AFTER BY TOP COMPANIES.**



# OUR MISSION AND VISION

At Frontlines Edutech Private Limited, our mission is to bridge the gap between academia and industry by offering practical, customized training programs that equip youth with the skills needed for easy employment. We aim to eliminate unemployment by fostering a mindset of possibility and transforming learners into skilled professionals. With expert industry mentorship, we empower the next generation with the tools to succeed in today's competitive world.

It is in our vision that each young person be prepared with the skill, confidence, and opportunity to succeed in their career. We want to lead an online skills development platform that provides focus on determining the needs of industries through education, so that it would be well-prepared in nurturing professionals who will shape the future of employment. Innovative training eliminates unemployment and helps in unlocking the potential of thousands of learners.





# WHY CHOOSE US

We are Success Trainers, Mentors, and Motivators, passionate about helping you reach your full potential with a blend of warmth, wisdom, positivity, and proactivity. Our goal is always your highest good and greatest growth, offering support that is both caring and daring, fun and focused. We ensure learning is not only powerful but also enjoyable, making every step of your growth journey meaningful and engaging.





# WHY LEARN THIS COURSE

- This course is for those who want to start their coding journey, whether a beginner or an expert.
- No prior programming knowledge is required.
- This course covers basics to advanced concepts straightforwardly and systematically.
- We take special care of Non-IT students
- Easy to learn
- Beginner Friendly
- The diversity of our learners adds richness to course discussions and interactions.





# DELIVERABLES

- DELIVERABLES**

  1. FROM SCRATCH TO MASTER LEVEL TRAINING
  2. RESUME BUILDING
  3. DAILY ASSIGNMENTS
  4. LINKEDIN PROFILE BUILDING
  5. INTERVIEW GUIDANCE
  6. COURSE COMPLETION CERTIFICATE
  7. Q&A SESSIONS
  8. PLACEMENT UPDATES
  9. ON-DEMAND VIDEO COURSE CONTENT
  10. DOWNLOADABLE RESOURCES



# TOP COMPANIES HIRING

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Infosys

tcs TATA  
CONSULTANCY  
SERVICES

accenture

cognizant

Capgemini

wipro

IBM

BOX8

KPMG



## TOP CITIES FOR DEVSECOPS DEVELOPER DEMAND

- BANGALORE (BENGALURU)
- GURGAON (GURUGRAM)
- HYDERABAD
- PUNE
- MUMBAI
- CHENNAI
- NOIDA

## KEY SECTORS DRIVING DEMAND FOR DEVSECOPS DEVELOPER

- TECHNOLOGY AND SOFTWARE DEVELOPMENT
- E-COMMERCE HEALTHCARE
- FINANCE AND FINTECH
- HEALTHCARE
- EDUCATION AND EDTECH
- DATA SCIENCE AND ANALYTICS
- ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
- MEDIA AND ENTERTAINMENT
- STARTUPS AND TECH INCUBATORS



# DEVSECOPS SYLLABUS

## 1. OS: LINUX

- Linux Introduction
- Flavours of Linux
- Linux History
- Linux Advantages
- System Information
- Hardware Information
- File Commands
- VIM Editor
- Users & Groups
- File Permissions
- Networking
- Compression / Archive
- Disk Usage
- Package Installation
- Scripting
- SED Filters
- GREP Filters
- Some Additional Commands
- Assignment

## 2. AWS SERVICES

- Elastic Compute Cloud (EC2)
- Virtual Private Cloud (VPC)
- Simple Storage Service (S3)
- Elastic Block Storage (EBS)
- Identity and Access Management (IAM)
- Relational Database Service (RDS)
- Elastic Load Balancer (ELB)
- Auto Scaling Group (ASG)
- Elastic File System (EFS)
- Elastic Container Registry (ECR)
- Simple Notification Service (SNS)
- Code Build
- Code Commit
- Code Deploy
- AWS Code Pipeline

## 3. SCM TOOLS - GIT

- What is VCS
- VCS History
- SCCM
- Revision Control System
- Subversion
- Concurrent Versions System
- Why GIT
- GIT Stages
- Working Directory
- Staging Area
- Repository (Local, Central, Remote)
- GIT Installation
- GIT Lifecycle
- GIT Logs
- GIT Push
- GIT Pull
- GIT Cloning
- GIT Branch
- GIT Merge
- GIT Stash
- GIT Tags
- GIT Cherry Pick
- GIT Revert
- GIT Merge
- Merge Conflicts
- Configuration of User
- Ignoring Content
- Branching Strategies

## 4. GITHUB

- GIT Repos (Private & Public)
- Integrating Repos
- Forking
- GitHub FileAdd
- Tokens
- Compare & Pull Request.



- Renaming Repos
- Danger Zone Options
- Making Public Repo as Private
- Ownership Transfer
- Archiving Repos
- Deleting Repos
- Accessing the Private Repos
- Advantages & Disadvantages
- Difference Between GIT and Other Tools
- Interview Questions

## 5. BITBUCKET

- Bitbucket Repos (Private & Public)
- Bitbucket Projects
- Tokens
- Push
- Pull
- Cloning
- Branch
- Merge
- 

## 6. BUILD TOOLS - MAVEN

- Introduction
- Maven Objectives
- Project Information
- Features
- Download Requirements
- Plugins
- Maven Goals
- What Maven Does
- What is Build Tool?
- POM.XML
- Requirements for Build
- Maven Architecture
- Maven Build Life Cycle
- Maven Directory Structure
- Generating JAR File
- Problems Without Maven
- Maven vs Ant
- Interview Questions

## 7. INTEGRATION TOOL - JENKINS

- Introduction
- Workflow
- Continuous Integration
- Continuous Delivery
- Continuous Deployment
- Jenkins Setup
- Jenkins Setup Requirements
- Java Installation
- Git Integration
- Maven Integration
- Jobs Types in Jenkins
- Free Style Job
- Pipeline
- Maven Job, Task
- Parameter Building
- Choice Parameter
- File Parameter
- String Parameter
- Multi-String Parameter
- Credentials Parameter
- Branch Building
- Schedule Project
- Cron Jobs
- Poll SCM
- Webhooks
- Linked Projects
- Up Stream
- Down Stream
- Build Pipeline View
- Master – Slave Architecture
- Master – Slave Setup
- Environment Variables
- Local Variable
- Global Variable
- Disabling Jobs
- Renaming Jobs
- Build Pipeline View
- Shell Execute
- Build Triggers



- Authentication for Build Trigger
- Pipelines
- Scripted Pipelines
- Declarative Pipelines
- Pipeline Stages
- Pipeline Syntax
- Hello World Pipeline
- Staged Pipeline
- Multi-Staged Pipeline
- Pipeline as a Code
- Multiple Commands on Pipeline
- PAAC Variables
- PAAC Parameters
- PAAC Input Parameter
- PAAC Postbuild
- PAAC Input
- Pipeline Through Build Pipeline
- Pipeline Post-Build
- Plugin Management
- Console Output
- List View
- Custom View
- Build History
- Cron Syntax Generator
- Editing Build Info
- Agent Setup
- User Management
- Adding Users
- Assigning Roles
- Managing Roles
- Blue Ocean Introduction
- Advantages
- Jenkins Alternatives
- Interview Questions

## 8. CONTAINERIZATION TOOL - DOCKER

- Microservices Introduction
- Difference Between Monolithic & Microservices
- Microservices Advantages

- Virtualization Intro
- Docker vs VMs vs Servers
- Before Docker vs After Docker
- Docker Introduction
- Understanding Docker
- Docker Architecture
- Docker Client
- Docker Server
- Docker Daemon
- Docker Objects
- Docker Basic Commands
- Stop vs Kill
- Run vs CMD vs Entrypoint
- ADD vs COPY
- Run vs Pull
- Docker Exec
- Container Limits
- Docker Images
- Docker Containers
- Docker Volumes
- Working with Containers
- Build Image from Container
- Creating Custom Images
- Ways of Container Creation
- Docker File
- Docker File Components
- Docker File Creation
- Docker Volumes
- Uses of Volumes
- Creating Volumes
- Creating Volumes by Using Commands
- Volumes (Container - Container)
- Volumes (Host - Container)
- Creating Volume from File
- Creating Volume from Commands
- Volume Mounting
- Volume Modifying
- Docker Port Mapping
- Docker Multistage Build
- Creating Jenkins by Docker



- Docker Registry Types
- Cloud Based Registry vs Local Registry
- Docker Login
- Docker Hub Account Creation
- Image Pushing to Registry
- Docker Swarm
- Docker Swarm Architecture
- Docker Swarm Components
- Docker Swarm Manager
- Docker Swarm Worker
- Docker Swarm Service
- Docker Portainer
- Docker Compose
- Docker Compose Advantages
- Docker Compose Installation
- Docker Compose File
- Docker Compose File in JSON
- Docker Compose File in YAML
- Docker Compose Single Service
- Docker Compose Multi Services
- Docker Compose File Commands
- Docker Compose Scale
- Docker Stack
- Portainer Introduction
- Portainer Use Cases
- Portainer Setup
- Working with Portainer
- Memory Management
- ECS Tasks & Services
- Load Balancers
- Hosting an Application
- Docker Networks
- Why to Use Docker Networks
- Types of Networks
- Interview Questions

## 9. KUBERNETES

- History
- Container Orchestration
- Kubernetes Introduction
- Architecture

- Master Components
- Node Components
- Working with K8s
- Role of Master
- Components of Control Plane
- Kube-API Server
- ETCD
- Features
- Kube-Scheduler
- Control Manager
- Node Components
- Kubelet
- Container Engine
- Kube-Proxy
- Pod
- Pod Limitations
- Pod Multi Container Pod
- Minikube Intro
- Single Node Cluster
- ReplicaSet
- Drawback of ReplicaSet
- DaemonSet
- Drawback of DaemonSet
- Deployments
- Labels & Selectors
- Rolling Updates
- Scaling Pods
- Types of Scaling
- Deployment Scaling
- Pausing & Unpausing Rolling Deployment
- Proportional Scaling
- HPA
- KOPS
- KOPS Advantages
- KOPS Installation
- Kubectl Installation
- Cluster Creation Using KOPS
- Cluster Scaling
- Service in Kubernetes
- Types of Services
- Cluster IP



- Node Port
- Load Balancer
- Ingress
- NodePort vs ClusterIP vs LB
- Kubernetes Volumes
- Empty Dir
- HostPort
- Persistent Volume
- Persistent Volume Claim
- What is Probes
- Use Cases of Probes
- Readiness Probe
- Liveness Probe
- Startup Probe
- Readiness vs Liveness vs Startup
- Config Maps
- Secrets
- What is RBAC
- Namespaces
- Resource Quotas
- Helm
- Stateful Application
- Stateless Application
- Stateful vs Stateless Application
- Working with Stateful Applications
- Working with Stateless Applications
- Prometheus & Grafana
- Interview Questions

## 10. MONITORING: DATADOG

- What is Datadog
- How to Setup Datadog
- How to Monitor App Servers
- Monitor Jenkins Pipelines
- Monitor Containers
- Export Logs to Datadog

## 11. CONFIGURATION MANAGEMENT TOOL

### - ANSIBLE

- Ansible Introduction
- Ansible Use Cases

- Ansible History
- Ansible Architecture
- Ansible Inventory Host Pattern
- Ansible Execution Types
- Ad-Hoc Commands
- Working with Ad-Hoc
- Ansible Modules Introduction
- Working with Ansible Modules
- Ansible Playbooks
- YAML Introduction
- YAML Indentation
- Commenting Sections
- Ansible Variables
- Ansible Handlers
- Ansible Loops
- Ansible Conditions
- Ansible Vault
- Ansible Roles
- Ansible Tags
- Ansible Dry Run
- Ansible Pip
- Ansible User Info
- Ansible Setup Modules
- Ansible Debug Module
- Ansible Raw Module
- Ansible Command Module
- Ansible Copy Module
- Ansible Shell
- Creating Local Resources
- Static Website Using Playbook
- Advantages & Disadvantages
- Ansible vs Chef vs Puppet vs SaltStack
- Interview Questions

## 12. INFRA AS A CODE TOOL - TERRAFORM

- Introduction
- History
- Advantages & Disadvantages
- Terraform Setup & Installation
- Terraform Init
- Terraform Plan
- Terraform Apply



- Terraform Destroy
- Creating a Main.tf
- Role Based Authentication
- S3 Backend Setup
- Terraform Variables
- String
- Number
- Boolean
- List
- Terraform Loops
- Terraform Workspaces
- Terraform Locals
- Terraform Outputs
- Creating VPC
- Creating EC2
- Creating S3 Bucket
- Creating Security Groups
- Creating Subnets
- Creating EBS
- Creating EFS
- Terraform Multiple tfvar Files
- Terraform CLI
- Dynamic Block

### 13. CODE & ARTIFACT STORAGE

- Nexus
- SonarQube

### 14. INTEGRATIONS

- Git Integrated with Jenkins
- Maven Integrated with Jenkins
- Ansible Integrated with Jenkins
- Docker Integrated with Jenkins
- Terraform Integrated with Jenkins
- S3 Integrated with Jenkins
- Nexus Integrated with Jenkins
- Sonar Integration with Jenkins
- Slack Integration with Jenkins
- Splunk Integration with Jenkins

### 15. SECURITY TOOLS

- Sonarqube
- Open Source Web Application Secure Project
- Trivy
- Kube bench
- Istio
- Calico
- Falco
- AWS WAF
- AWS GuardDuty
- AWS BACKUP
- Terraform vault
- terraform HCP
- Terrascan
- TF SEC

### 16. AI TOOLS

- K8s GPT
- SYNC
- Kube cost



# ALL THE BEST





# FRONTLINES EDUTECH

Building Trust & Careers

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