Micro Degree

AWS & DEVOPS

Course Duration: 2 Months

Click to Enroll: **aws-developer-certification-live**

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More Details Please Contact

📞 **804-710-9999**

PLACEMENT STORIES

PLACED IN
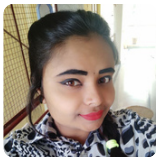
Nikshitha
Tetherfi Tech
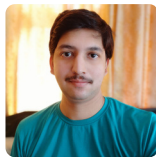
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Litifer Technology

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VNC Digital

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Global Services

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Amiti Software

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"

" *Thank you so much for your* *wonderful platform. Learning in* *mother tongue helps us to easily* *understand coding and other IT-* *related courses.*"
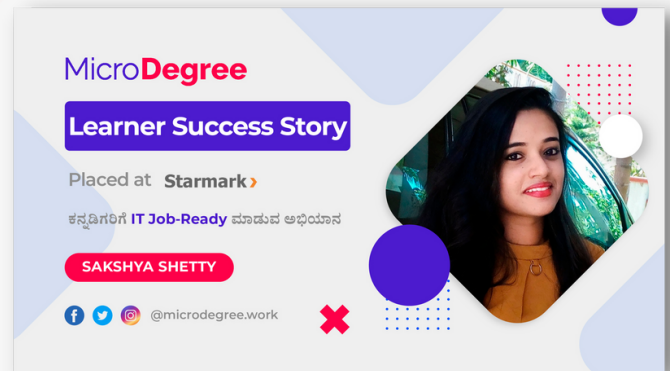
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SANDEEP N
Course Learner

CHECK OUT OUR DEMO ↓

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AWS
DEVOPS
ಕಲಿಯಿರಿ ಕನ್ನಡದಲ್ಲಿ
LIVE DEMO

- Mithun Holi

https://youtu.be/t3g494yxPQk

OUR LEARNER STORY ↓

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Learner Success Story

Placed at **Starmark** ›

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SAKSHYA SHETTY

@microdegree.work

https://youtu.be/ltirsj1pTj4

NEWS COVERAGE

THE TIMES OF INDIA

YOURSTORY

Entrepreneur

ಚಂದನ

BusinessLine

AWS - amazon web services

Introduction :

- Introduction to Cloud Computing and AWS
- Advantages of Cloud Computing
- SaaS, IaaS & PaaS
- Why we should care about AWS
- Computer networks, Infrastructure of the company
- IP addresses.

Hands On :

Signing up for a free account with AWS

Networking :

- Creating a VPC(Virtual Private Cloud)
- Creating Private & Public Subnets
- Cloudfront
- Route53
- Securing VPC

- VPC peering
- Transit Gateway
- Updating and working with domain names

Hands On :

- Creating your own VPC with specified CIDRs
- Setting up subnets and Routing Tables
- Connecting internet Gateways for Internet Connectivity
- Setting up a peering connection in two VPCs in different Regions/Accounts
- Setting up a NAT gateway

EC2 (Elastic Compute Cloud) :

- Explanation about EC2
- Creating Internet Gateways
- Creating security groups
- Creating and assigning Elastic IPS

Hands On :

- Launching EC2 instance within a given VPC
- Connecting from one EC2 instance to another EC2 instance
- Creating Automated Backups of server storage volumes
- Creating AMIs and Launching from AMIs
- Establishing the relationship between AMI creation and Snapshots

Identity Access Management :

- Introduction to IAM
- Configuring IAM via AWS Management Console
- Multi-Factor Authentication
- AWS Security Token Service (STS)
- Configuring Routing & Route Tables

Hands On :

- Creating Users on IAM
- Adding/Modifying/Deleting permissions
- Creating IAM Groups and adding users to groups
- Creating and Assigning Roles to AWS Resources a Creating new Policies & applying to Roles/Users

ELB(Elastic Load Balancing) :

- Characteristics of ELB
- Configuring ELB via AWS Management Console
- Auto Scaling Features
- How Auto Scaling works
- Configuring Auto Scaling

Hands On :

- Setting ups an Auto Scaling Group
- Attaching Cloudwatch Alarm to autoscaling
- Creating Target Based vs Step Scaling Auto Scaling Group
- Setting up Notification service
- Adding a class load Balancer to manage traffic on Auto Scaling Group
- Setting up an Application Load Balancer for two different target groups
- Creating three different target groups with three different Network ports
- Setting up a Network load Balancer on the target groups

Logging & Monitoring Tools :

- CloudWatch
- Cloud trail
- Trusted Advisor
- Systems manager

S3(Simple Storage Service):

- Different storage types
- About Buckets and storing data
- Glaciers
- EFS
- Storage Gateway

Hands On :

- Creating S3 Buckets
- Managing Bucket Permissions
- Creating Bucket policies using JSON
- Setting up automation of Storage Class migration

Databases on AWS :

- Introduction to Databases
- Amazon Relational Database Service (RDS)
- Create an RDS Database Instance
- Amazon RDS Read Replicas
- Amazon RDS Multi-AZ Deployments

Hands On :

- Creating a MySQL Database RDS instance
- Connecting to MySQL RDS instance through another Ec2 in the same network
- Setting up a NoSQL Database
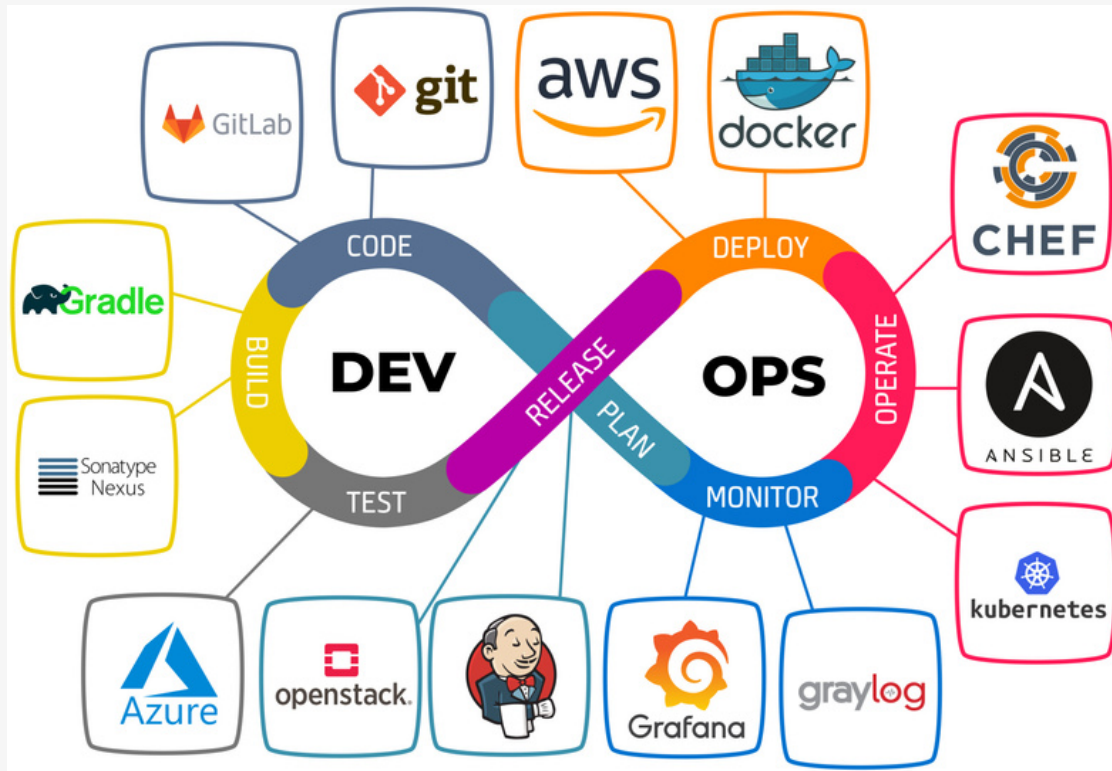- Adding and Filtering Data from DynamoDB

Serverless Architectures :

- Cloud front
- Lambda

We will assign / help with the required real time projects & assignments which includes all above Topics

DevOps

DevOps Basics :

- DevOps Culture End to End DevOps What, Why DevOps ?
- Continuous Integration
- Continuous Delivery
- Continuous Deployment
- Cloud Importance Principles of DevOps

DevOps Tools:

GIT

- Version controllers basics
- Why Version controllers
- Installation & Configuration
- Cloning repositories
- Dealing with branches
- Git commands

- Git stash
- Complete understanding of Github & Gitlab

Hands On :

- Signing up for an account on GitHub
- Installing and initializing local Git repository on Red Hat Linux
- Configuring local git with credentials to connect to GitHub account
- Connect local and remote repositories
- Creating Origin Master
- Creating files, staging, committing, and pushing to the remote repository
- Pulling from Remote repository
- Checking status and logs
- Creating branches
- Checking out to different branches and setting upstream
- Pushing code to different branches
- Merging / Rebasing branches

Maven

- Introduction to building tools
- Importance of build tools
- Installation
- Working with build commands
- Build lifecycles
- Understanding artifacts
- Usage in CICD process

Hands On :

- Installing Maven Integration plugin
- Creating Keys on Jenkins & configuring with GitHub repository
- Setting up Maven Goals
- Setup git connectivity
- Setup Continuous Integration between Git and Jenkins

Jenkins

- Jenkins installation
- Jenkins setup
- Creating users
- Managing permissions
- Creating Jobs
- Git integration
- Configuring Master-Slave
- Emails server configuration
- Email notifications
- Automatic builds
- Creating Pipelines and Jenkins files

Hands On :

- Installation of Java on Red Hat Linux
- Installation of Jenkins on Red Hat Linux
- Signing in with an auto-generated password
- Installation of Plugins on Jenkins
- Setting up global security on Jenkins
- Configuring Selenium in Eclipse
- Writing test cases for testing a simple web page
- Using Selenium in maven project
- Creating a Jenkins job using Selenium

Ansible

- Why Infra as Code
- Provisioning infrastructure with Code
- Ansible Introduction
- Installation Control Machine
- Configuration file
- YAML
- Command-line
- Inventory
- Playbooks

Hands On :

- Installation of Ansible
- Writing Playbooks
- Running playbooks
- Continuous Deployment through Jenkins by publishing through SSH on Ansible

Docker

- Containers vs VMs
- Docker Introduction
- Docker Architecture
- Installing Docker
- Docker registry
- Docker commands
- Docker Compose
- Docker Containers
- Docker Images
- Networking
- Docker Services
- Docker Swarm

Hands On :

- Installing Docker on Red Hat Linux
- Creating and configuring a docker user
- Pulling Docker Image from docker hub
- Running docker images to create containers
- Running containers on foreground and background
- Keeping multiple versions of the same image
- Creating a Dockerfile to install Apache2 server on a Ubuntu instance
- Configuring Port mapping during containerization
- Exposing Ports through Dockerfile
- Building docker file to create containers and access through host port

- Creating docker files with custom names and building
- Installing docker-compose
- Configuring docker-compose to pull multiple images
- Add Dockerfiles to docker-compose for a custom build of images
- Scaling up of containers through docker-compose up command
- Setting up Docker swarm for docker container management
- Deployment through Docker

Kubernetes

- Kubernetes Introduction
- Microservices with Kubernetes
- Installing Kubernetes
- Pods
- Services
- YAML syntax
- Create Kubernetes Cluster
- Minikube Kubectl Commands
- Deploying Containerised apps to Kubernetes Cluster

Hands On :

- Installation and setup of Kubernetes on Ubuntu
- Setting k8s cluster on AWS
- Configuring YAML files for K8s deployment
- Autoscaling and Load Balancing in Kubernetes
- Registering services through Kubernetes
- Deployment through Kubernetes

Monitoring using Prometheus & Grafana

- Introduction to Prometheus and Grafana
- Prometheus and Grafana Setup
- Monitoring using Prometheus
- Dashboard Visualization using Grafana
- Creating a Dashboard to monitor the Pipeline

Provisioning using Terraform

- Introduction to Terraform
- Terraform vs Ansible
- Terraform Architecture
- Terraform Configuration
- Terraform Common Commands

Hands On :

- Installation of Terraform
- Creating EC2 instances on AWS cloud using Terraform
- Writing Terraform scripts
- Integration of Terraform and Ansible for configuration management

REACH US

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