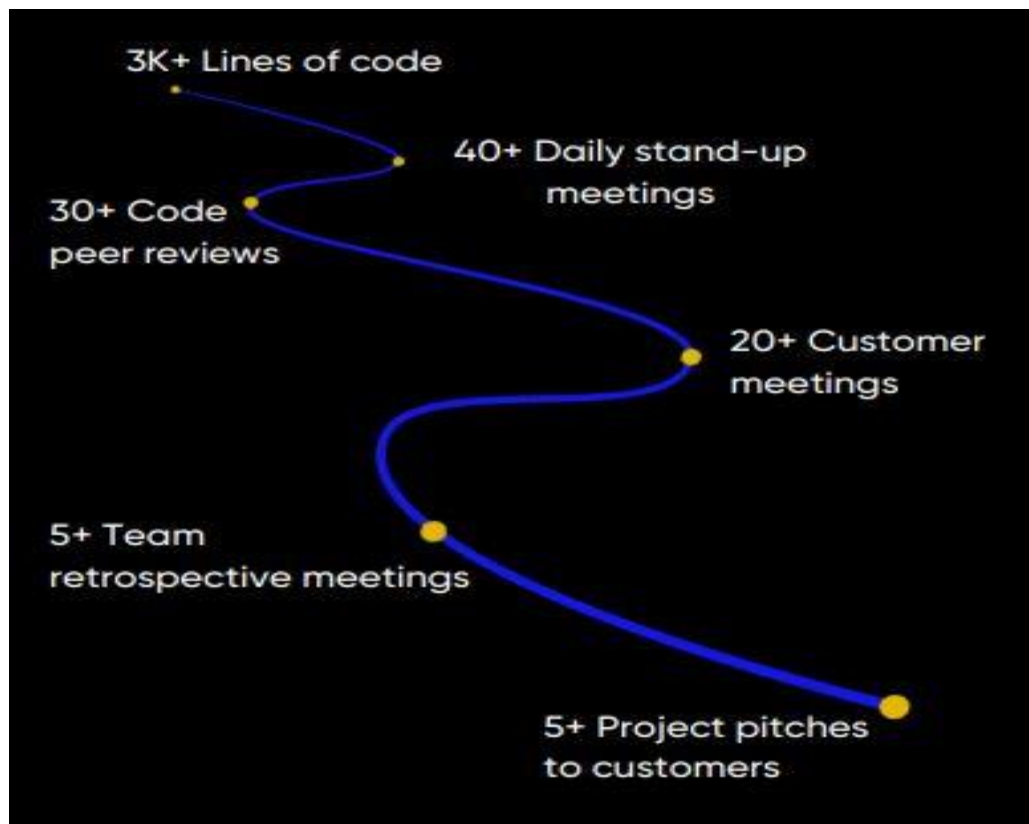
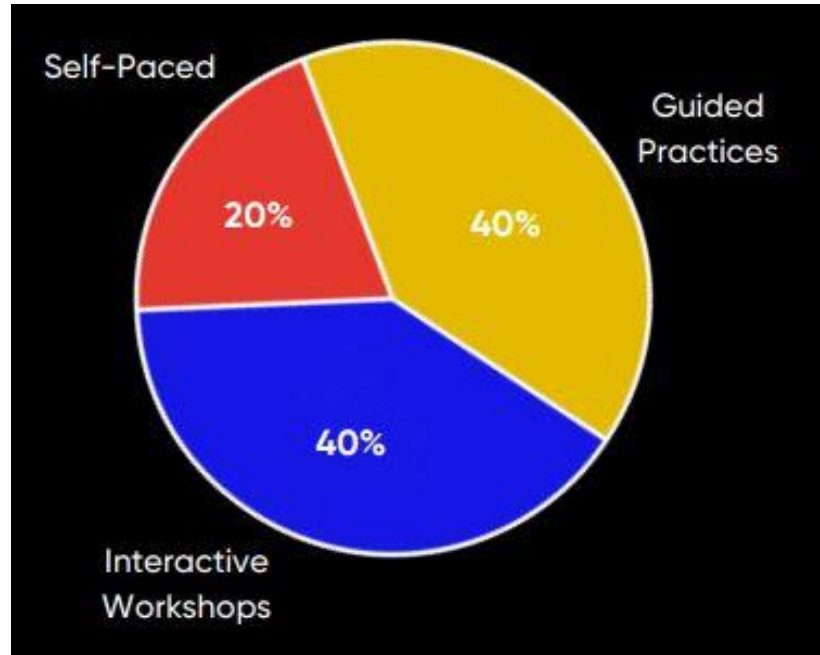


DevOps Boot Camp Curriculum



Linux

- Linux history
- Linux component
- Directory hierarchy
- Basic commands
- File & directory manipulation
- Installing and managing SW (RPM-YUMAPT-get)
- User and group administration
- Permissions
- VI text editor
- Initialization files
- Process, signal concepts
- Redirection & Piping
- Systems, services manipulation (time dependent)
- File systems management (Fdisk utility)

Python essentials

- Introduction
- Programming Intro
- Python History
- Python Installation
- Basic
- Syntax
- Variables
- Data Types
- Strings
- Lists
- Operators
- Conditionals and Loops
- If-Else Statements
- For Loops
- While Loops
- Pass, Break, and Continue

Functions
Object Oriented Programming in Python
Python Modules

Version control

Version control systems
Introduction to Git
Git Workflow
Git commands
Git in action
Git & Github
Git UI tools

Introduction to cloud

Characteristics of web app
Data centers
Hardware utilization
Application architecture
cloud computing
history of cloud
Cloud service model
Characteristics of web app
Cloud deployment models

Bash script

Quick revision on basic commands
Processes
Sed utility

AWK utility

Shells

Sourcing VS execution

Variables (local, environment
predefined)

Bash scripting tools kit (case, select,
loops, breaks, continue, functions)

Django

Web Development Intro

Django Installation

Django Intro

How Django Works

Django Models

Django URLs

Django Views

Django Forms

Django Templates

Django User

Django Admin

nginx

What's Nginx

Install Nginx

Nginx Configurations

Working with Nginx

Introduction to DevOps

What's DevOps

Agile VS DevOps

DevOps Team & Engineer

Principals of DevOps

DevOps cycle (Phases & tools)

DevOps Objectives

Demo

Microservices

Software industry issues

Monolithic Architecture

Microservice Architecture

Introduction to DevOps tools

Docker

Introduction to Docker

Docker Architecture

Docker Basics (Images-containers)

Docker files

Docker Networking

Docker Storage

Docker Compose

Docker security

Introduction to Swarm

AWS

AWS Account Basics

AWS Global Network

AWS IAM

AWS Network (VPCs, Subnets, IGW, RTs, NACLs, SGs)

AWS EC2 (AMI, EBS, EIP, SGs)

AWS Storage Services (S3, RDS)

AWS Cloud Watch

AWS SNS

AWS Server less Lambda

AWS Cloud Formation

Kubernetes

Why K8s and Difference Between

Docker and K8s

Intro “Pods, Replica, Depl, Arch And Desired State”

Core Concepts: K8s Cluster

Components

End to End Test

Pods

Replica Set and Replica Controller

Deployment

Demonsets

Services

Namespaces

Limits and Requests

Labels and Selectors

Taints and Toleration
Node Selector and Scheduling
Affinity and Toleration
Application Life Cycle
Storage
Networking
Ingress
Security
Troubleshooting

Jenkins

What is Continuous Integration?
What is Jenkins? – An Introduction.
Jenkins Architecture Types
Jenkins Alternatives
Installing and Configuring Jenkins.
Jenkins Terms and walkthrough GUI
Jobs Types
Users and Permissions Management
Jenkins Integration between Services
using Plugins
Jenkins' s file & Pipeline syntax types
Backup Jenkins Data & Configuration

Ansible

What is Ansible?

Why Ansible?

How Ansible Works?

SSH

Inventory

Playbook

Modules

Roles

Ansible Galaxy

Terraform

What is infrastructure as a code (Iac)?

What is Terraform

Why Terraform?

How Terraform works?

Terraform core

Terraform plugins

Installation

State file

Plan

Apply

Destroy

Module

Workspaces & environments

Variables

Variable definition files

Backend

Monitoring

DevOps Monitoring Introduction

Introduction to Prometheus

Monitoring Basics

Application Monitoring

Infrastructure Monitoring

Managing Alerts

Visualizing Data

Introduction to other Monitoring tools
(Zabbix-Nagios)