

Cloud Computing and DevOps Course

with AI/ML



International
Certification



Capstone
Projects



Live
Classes

Index

About Us	03
Chairman's Message	04
Digitally Transforming Organisations	05
IITPSA Accreditation	06
Course Overview	08
Job Roles	09
Career Path	09
Certification Alignment	10
Cloud Foundations and Essentials	11
Advanced Cloud Engineering & DevOps	17
AI & Machine Learning for Cloud Professionals	24
Work Readiness	29
Course Fee	32
Our Global Network	33

About Us

Empowering Students Through Revolutionary Upskilling Digital Courses

Experience the innovation of Digital Regenesys, the groundbreaking online platform brought to you by Regenesys, a global educational institution renowned for its 25+ years legacy of providing quality and holistic education.

Embark on a transformative journey with Digital Regenesys.

- ✔ We provide cutting-edge digital courses
- ✔ We empower individuals to upskill in futuristic domains that span multiple industries.
- ✔ Our platform has a track record of transforming lives and propelling careers.
- ✔ We have successfully guided over 300,000+ learners to upskill and secure placements in top multinational corporations worldwide.

Live (••)

Interactive Classes

Shaping Careers Since

25+ Years

Esteemed Alumni

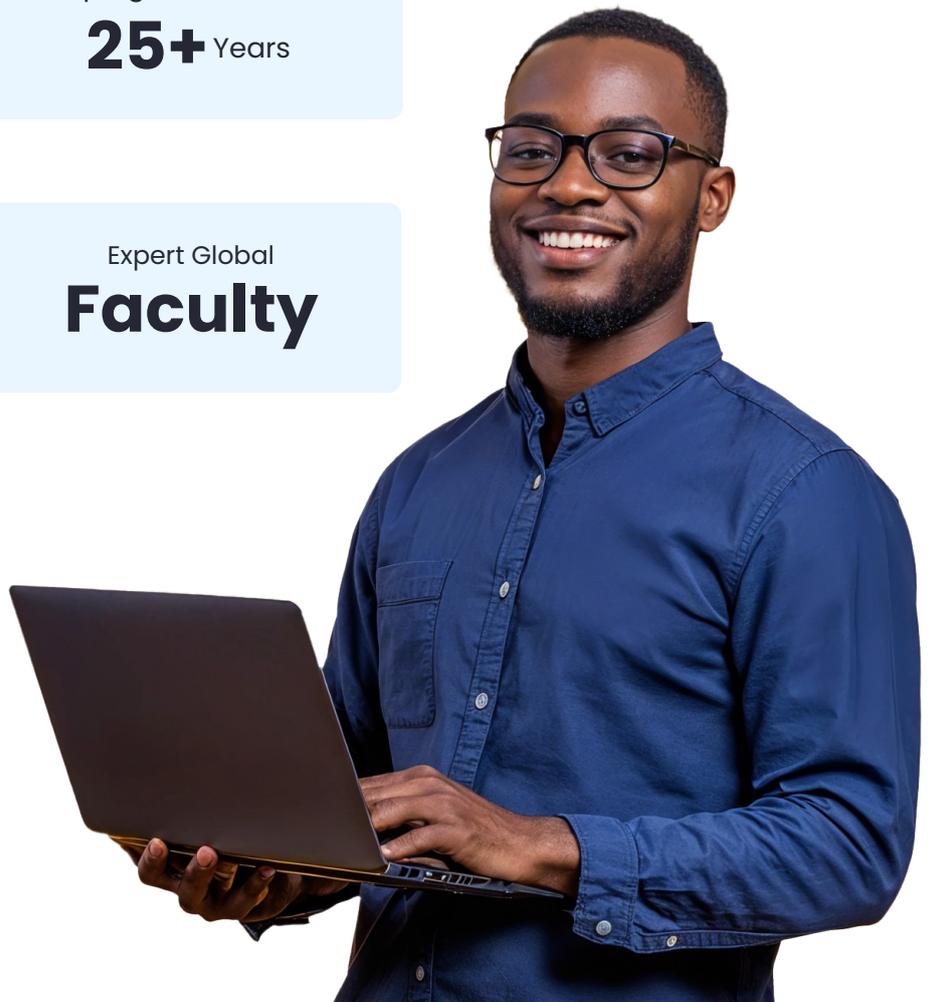
300,000+

Expert Global

Faculty

Students from

180+ Countries



Chairman's Message



Dr. Marko Saravanja

Executive Chairperson
Regenesys Group

I am delighted to welcome you to Digital Regenesys, part of the Regenesys Group. The purpose of Regenesys is to help individuals awaken their potential and achieve their dreams. New technologies, social media, and innovation have sparked a digital revolution that is rapidly changing the world. The digital revolution demands a new breed of professionals to succeed in the new digital world. To give you a competitive advantage, we have developed cutting-edge digital programmes in the areas of information technology and management. Our programmes are facilitated by leading experts, entrepreneurs, and academics from top local and international institutions.

Regenesys is a global education institute with presence in USA, South Africa, India, Nigeria, Kenya, Tanzania, Croatia & Uganda, delivering cutting-edge online and contact learning programmes. Over the past 25 years, Regenesys has educated more than 300,000 students from 190+ countries, and delivered corporate education programmes to 1000 reputable local and multinational companies. The majority of them are large multinationals such as Mercedes-Benz, Microsoft, Coca-Cola, Barclays, and Samsung, to name a few.

Regenesys alumni occupy top leadership positions in multinational corporations and government institutions all over the world, and form a very influential alumni network that supports its members with business opportunities across the world.

Get inspired, energised, and transform your career with programmes grounded in the realities of the new digital world. I wish you success on your journey towards greatness.

Transforming Businesses: Our Alumni Impact



And 1000+ Organisations

IITPSA Accreditation: A Milestone for Excellence

Regenesys Education is accredited by the Institute of Information Technology Professionals South Africa (IITPSA).

Established in 1957, IITPSA is South Africa's leading professional body- committed to growth of ICT Professionals and ensuring IT courses are high-quality, job-ready, and meet industry standards.

Why Is IITPSA Accreditation Important?

IITPSA accreditation is a hallmark of quality, affirming that Regenesys Education meets the highest standards in curriculum design, faculty expertise, and industry alignment.

It ensures our courses are recognised locally and internationally, providing our students with a competitive edge in the job market.



What are CPD Points?

CPD, or "Continuous Professional Development" refers to structured learning activities aimed at improving professional knowledge, skills, and competencies.

Purpose:

- To ensure professionals stay updated with the latest trends, tools, and best practices in their field.
- To maintain and enhance professional standards and career development.

Our IITPSA-accredited courses provide CPD opportunities, helping professionals meet annual requirements to maintain industry body memberships while enhancing their expertise.

Cloud Computing and DevOps Course with AI/ML **30 CPD points**

What This Means for Our Students?

01**Global Credibility:**

Internationally recognised qualifications that open global career opportunities.

02**Industry Relevance:**

A curriculum aligned with real-world industry demands.

03**Professional Recognition:**

Eligibility to join IITPSA and access its professional network.

04**Enhanced Employability**

Proof of rigorous training, boosting career prospects.

Our Commitment to Excellence

IITPSA accreditation is more than a milestone; it is a testament to our unwavering commitment to delivering education that empowers individuals and transforms societies. It strengthens our resolve to continue innovating, improving, and leading in digital education.



Course Overview

The **Cloud Computing & DevOps with AI Integration programme** is designed to prepare you for the future of IT, where cloud computing, automation, and artificial intelligence (AI) are transforming how businesses operate. Whether you're looking to start a career in cloud and DevOps or advance your existing skills, this programme will place you at the forefront of technological innovation.



Cloud computing market to grow

From \$680B to \$1.44 Trillion by 2029

Source: Mordor Intelligence



9 Certificates

from Digital Regenesys



DevOps is one of the Top paying

Most in Demand Skill

in technology

Source: Robert Half



Gen AI Infused Programme

to become 10x cloud engineer



100K+ Jobs Worldwide

growing over 15% every year



Hands-on Labs

and exercises



Job Roles



- System Administrator



- Cloud AI Engineer



- Cloud Engineer



- Site Reliability Engineer



- Cloud Administrator



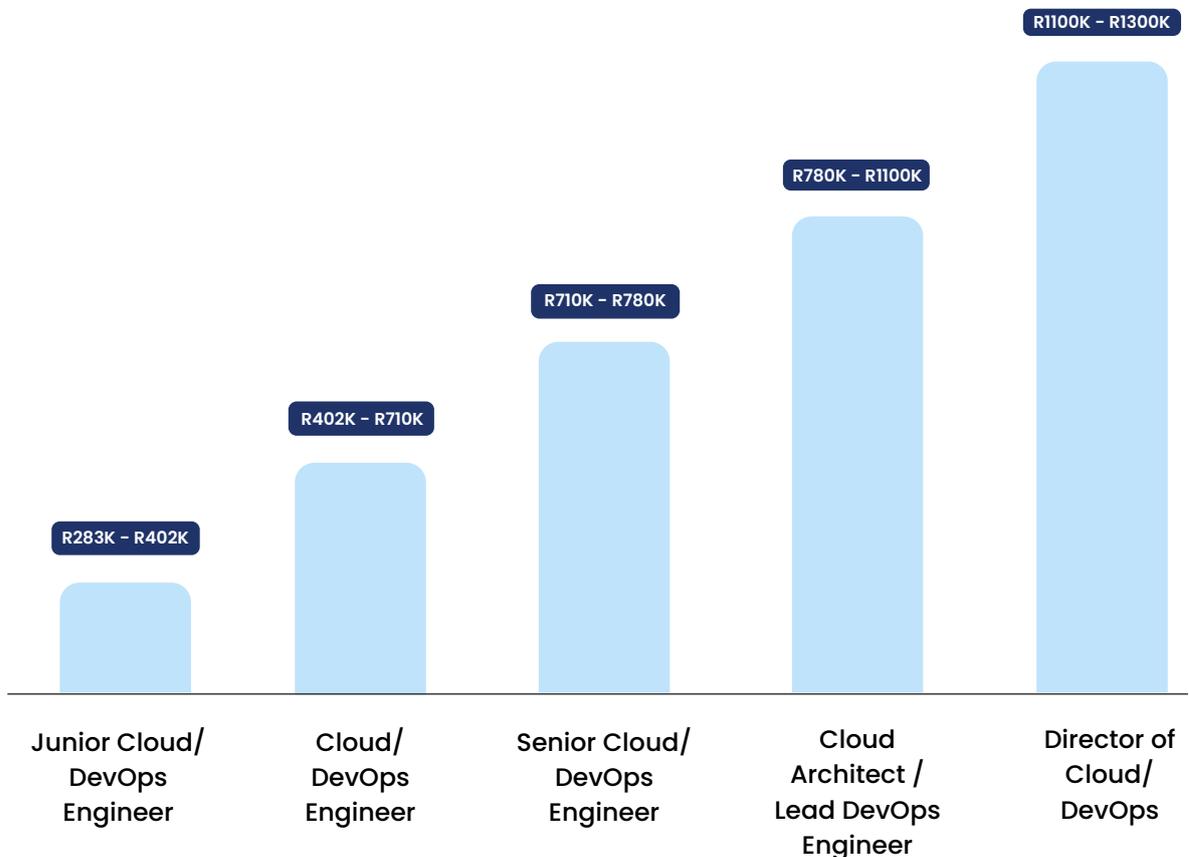
- Cloud Architect



- DevOps Engineer

Career Path

Average Salary Per Year



Note: These figures are indicative and sourced from Payscale, specific to South Africa.

Certification Alignment

Note: These Certificates are not awarded by Digital Regenesys, but upon completion; learners can pursue the below certifications.



**AWS Certified
Cloud Practitioner
(CLF-C02)**



**AWS Certified
Developer - Associate
(DVA-C02)**



**AWS Certified
DevOps Engineer -
Professional Exam**



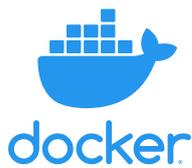
**AWS Certified
AI Practitioner**



**AZ-900:
Microsoft Azure
Fundamentals**



**Google Cloud
Fundamentals**



**Docker Certified
Associate**



**Certified Kubernetes
Administrator (CKA)**



Terraform Associate





Cloud Foundations and Essentials

✓ 4 hours/week (2 Sessions)

✓ Expert Led sessions

✓ Lab sessions

In-Depth Overview



Aligned to **AWS Certified Cloud Practitioner** and
Azure Fundamentals AZ-900



Introduction to Cloud Computing :

- ✓ Overview of cloud computing concepts and history.
- ✓ Importance of cloud computing in modern IT.
- ✓ Introduction to major cloud providers (AWS, Azure, GCP).

Cloud Service Models & AI in Cloud :

- ✓ Cloud service models: IaaS, PaaS, SaaS.
- ✓ Overview of AI in the cloud (e.g., ChatGPT using cloud infrastructure).
- ✓ Practical examples of AI integration in cloud services.

Introduction to Networking in the Cloud :

- ✓ Basics of cloud networking: IP addresses, DNS.
- ✓ Introduction to Load Balancing.
- ✓ Understanding Virtual Private Clouds (VPCs).

Cloud Economics and Billing :

- ✓ Understanding cloud pricing models and billing.
- ✓ Cost management strategies.
- ✓ Introduction to cloud cost calculators.

Cloud Storage Solutions :

- ✓ Understanding cloud storage types: Object, Block, File.
- ✓ Overview of storage solutions on AWS, Azure, and GCP.
- ✓ Managing and creating cloud storage solutions.

Security Fundamentals in Cloud

Computing :

- ✓ Introduction to cloud security principles.
- ✓ Understanding the Shared Responsibility Model.
- ✓ Introduction to Identity and Access Management (IAM).

Google Cloud Platform (GCP), Azure, and AWS



Fundamentals of AWS

- ✓ Introduction to AWS platform.
- ✓ Key AWS services: EC2, S3, RDS, VPC.
- ✓ Overview of AWS global infrastructure.



AWS Certified Cloud Practitioner (CLF-C02)



AWS Certified Developer - Associate (DVA-C02)

Fundamentals of Azure

- ✓ Introduction to Azure platform.
- ✓ Key Azure services: VMs, Blob Storage, SQL Database, VNet.
- ✓ Overview of Azure global infrastructure.



AZ-900: Microsoft Azure Fundamentals

Fundamentals of GCP

- ✓ Introduction to GCP platform.
- ✓ Key GCP services: Compute Engine, Cloud Storage, Cloud SQL, VPC.
- ✓ Overview of GCP global infrastructure.



Google Cloud Fundamentals

Lab Sessions



IAM on AWS

- ✓ Set up IAM roles and policies on AWS.
- ✓ Assign roles to users and resources.
- ✓ Understand how IAM integrates with AWS services.



Networking in the Cloud

- ✓ Set up DNS and load balancers on AWS.
- ✓ Configure a Virtual Private Cloud (VPC) on AWS.
- ✓ Gain hands-on experience by replicating similar network configurations on Azure.



Storage on AWS

- ✓ Create and configure an AWS S3 bucket.
- ✓ Attach an Elastic Block Store (EBS) volume to an EC2 instance.
- ✓ Make files publicly accessible via a URL.



Azure

- ✓ Set up your Azure free account.
- ✓ Discover and explore key Azure services.
- ✓ Deploy a simple web application on Azure.



Storage on Azure

- ✓ Create and configure an Azure Blob Storage container.
- ✓ Attach a Managed Disk to a Virtual Machine (VM).
- ✓ Easily make files publicly accessible.



GCP

- ✓ Set up your Google Cloud account.
- ✓ Deploy a Linux-based Compute Engine VM.
- ✓ Deploy a simple web application on Compute Engine.

Expert Led Sessions



Expert Session 1 – Cloud Computing Best Practices

- ✔ Structure of the cloud computing programme.
- ✔ Practical applications in cloud computing.
- ✔ Breakdown of real-world cloud computing scenarios.



Expert Session 2 – Emerging Cloud Computing Strategies

- ✔ Real-life examples of cloud implementation.
- ✔ Expert insights into cloud instrumentation.
- ✔ Discussion on emerging trends in cloud computing.



Tools Covered

AWS Tools:



Amazon Aws EC2



Amazon S3



Amazon EBS



Amazon VPC



Amazon Route53



Amazon Load Balancers



Amazon IAM



Amazon Cost Calculator

Azure Tools:



Azure Virtual Machine



Azure Managed Disks



Azure Storage - Blob



Azure VNet

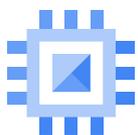


Azure IAM

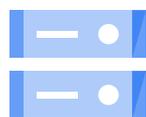


Azure Storage - Blob

GCP Tools :



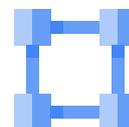
Compute Engine



Cloud Storage



Cloud SQL



Virtual Private Cloud



Cloud DNS



CODE

DEV

SEC

OPS

Advanced Cloud Engineering & DevOps

✓ 6 hours/week (2 Sessions)

✓ Expert Led sessions

✓ Lab sessions



✓ Capstone Projects



Advanced Cloud Engineering and DevOps



Introduction to DevOps & Linux :

- ✓ What is DevOps?
- ✓ History and evolution of DevOps.
- ✓ Importance of DevOps in modern software development.
- ✓ Key DevOps practices and principles, including real-world use cases.
- ✓ Basics of the Linux operating system.
- ✓ Understanding the Linux file system and command line.

Linux Commands, Shell Scripting & Programming Basics :

- ✓ Learn essential Linux commands.
- ✓ Understanding file permissions and ownership.
- ✓ Introduction to shell scripting for automation.
- ✓ What are programming languages?
- ✓ Fundamentals of programming concepts (variables, data types, logic).
- ✓ Writing simple programmes.

Python Basics: Setup, Data Types & Control Structures

- ✓ Introduction to Python and its uses.
- ✓ Set up your Python environment and install IDEs.
- ✓ Write your first Python programme, "Hello, World!"
- ✓ Learn about different data types: integers, floats, strings, and booleans.
- ✓ Work with variables and assignments.
- ✓ Perform basic operations with numbers and strings.
- ✓ Learn about if, elif, and else statements.
- ✓ Use logical operators like and, or, and not.
- ✓ Write decision-making programmes using conditionals.

Loops, Functions & Data Structures in Python :

- ✔ Introduction to for and while loops.
- ✔ Use loops to iterate over lists and strings.
- ✔ Work with nested loops for more complex tasks.
- ✔ Learn to define and call functions.
- ✔ Understand parameters, return values, and importing modules.
- ✔ Introduction to lists, tuples, and dictionaries.
- ✔ Access, modify, and iterate through data structures.

Version Control with Git & GitHub :

- ✔ Master Git fundamentals.
- ✔ Set up a simple local Git project to practice these skills.
- ✔ Learn how to collaborate with Github.

CI/CD Pipelines with Jenkins and AWS CodePipeline :

- ✔ Discover the principles of Continuous Integration and Continuous Deployment (CI/CD).
- ✔ Learn to set up automated CI/CD pipelines using Jenkins and AWS CodePipeline.
- ✔ Understand how CI/CD helps in automating and speeding up the software release process.

Containerisation with Docker & Kubernetes :

- ✔ Learn the fundamentals of containers and Docker, including security and networking.
- ✔ Explore Kubernetes for managing and scaling applications, and troubleshoot clusters.
- ✔ Deploy containerised applications on AWS, integrating Docker and Kubernetes for seamless management and troubleshooting.



Infrastructure as Code (IaC) with Terraform & Ansible :

- ✔ Master cloud automation with Terraform, from scripting AWS resources to seamlessly migrating and managing existing infrastructures.
- ✔ Unlock the power of Infrastructure as Code (IaC) to drive reusability and streamline cloud setup processes.
- ✔ Gain real-world experience by automating and efficiently managing cloud environments using Terraform's advanced capabilities.
- ✔ Explore Ansible for automating configuration management and application deployment.
- ✔ Learn to write Ansible playbooks for automating tasks across multiple servers.



AI Ops and AI in DevOps :

- ✔ Learn about the role of AI in DevOps.
- ✔ Understand the concept of AI Ops and how machine learning can enhance DevOps practices.
- ✔ Explore real-world use cases of AI in monitoring, alerting, and predictive analytics.



Expert Led Session



Expert-Led Session on DevOps Use Cases and Success Stories :

- ✔ Discussion on real-world use cases and success stories related to DevOps practices and principles.

Lab Sessions



Python Setup & Basics

- ✔ Set up a Python development environment.
- ✔ Write your first Python programme.
- ✔ Perform operations with different data types and variables in Python.



Functions, Modules & Advanced Data Handling in Python

- ✔ Define and call functions, and work with Python modules.
- ✔ Practice using advanced data structures like lists, tuples, and dictionaries.



Control Structures, Loops & Data Structures

- ✔ Write decision-making programmes using conditionals.
- ✔ Master the use of loops to efficiently iterate over data structures like lists and strings.
- ✔ Manipulate and iterate through lists, tuples, and dictionaries.



Git & Version Control

- ✔ Set up a simple local Git project to practice version control.
- ✔ Push, pull, and manage changes using Git.
- ✔ Learn how to share your projects via GitHub and use pull requests for collaboration.



Docker and Kubernetes

- ✓ Deploy containerised applications on AWS using Docker.
- ✓ Use Kubernetes for orchestration to manage and scale containers.



Infrastructure as Code with Terraform & Ansible

- ✓ Use Terraform to automate the creation and management of AWS infrastructure.
- ✓ Write and run Ansible playbooks to automate configuration and server management tasks.



Implementing AI in DevOps

- ✓ Set up AI-driven monitoring and alerting systems.
- ✓ Use AI to automate complex tasks and improve operational efficiency.

Capstone Projects



Full DevOps Pipeline with AI Integration – Part 1

- ✓ Design and implement a comprehensive DevOps pipeline that includes version control, CI/CD, containerisation, orchestration, IaC, and AI-driven monitoring.



Full DevOps Pipeline with AI Integration – Part 2

- ✓ Continue working on the pipeline, finalising deployment, and integrating AI tools to automate and enhance the pipeline.

Tools Covered

Linux 

 git

 python™

 ANSIBLE

 HashiCorp
Terraform

 AWS CodePipeline

 kubernetes

 Jenkins

 docker





AI & Machine Learning for Cloud Professionals

✓ 4 hours/week (2 Sessions)

✓ Expert Led sessions

✓ Lab sessions

AI & Machine Learning for Cloud Professionals



Introduction to AI/ML and AWS :

- ✓ Overview of AI and Machine Learning (ML) concepts.
- ✓ The role of AWS in AI/ML.
- ✓ Introduction to AWS AI/ML services with Amazon SageMaker, AWS Comprehend, and AWS Rekognition.

Training and Deploying AI Models on AWS :

- ✓ Train models with Amazon SageMaker, including hyperparameter tuning using SageMaker Automatic Model Tuning.
- ✓ Perform distributed training using SageMaker and EC2 instances.
- ✓ Explore model deployment strategies with SageMaker.
- ✓ Use AWS services like SageMaker Endpoint and CloudWatch for deployment, monitoring, and A/B testing.
- ✓ Manage and update deployed models on AWS.



Data Preparation and Feature Engineering in AWS :

- ✓ Data collection, cleaning, and preprocessing using AWS services (e.g., AWS Glue, AWS Data Pipeline).
- ✓ Data management in AWS and best practices.

End-to-End AI Model Deployment on AWS :

- ✓ Build, train, and deploy an AI model using AWS services (SageMaker, S3, Lambda).
- ✓ Set up an end-to-end pipeline from data collection to deployment.

MLOps with AWS :

- ✓ Introduction to MLOps using AWS.
- ✓ Integrating AI models into CI/CD pipelines with AWS CodePipeline, SageMaker, and Lambda.
- ✓ Monitoring and managing AI models post-deployment using AWS tools like CloudWatch and SageMaker Model Monitor.

Leveraging Generative AI to Become a 10x Cloud Engineer :

- ✓ Introduction to Generative AI in Cloud Engineering.
Overview of popular GenAI tools and platforms (e.g., AWS CodeWhisperer, OpenAI Codex).
- ✓ GenAI for Automation and Optimisation.
- ✓ Enhanced problem-solving with GenAI (diagnosis, troubleshooting).



Expert Session



Expert Session on AI/ML

- ✓ Insights and real-world examples from industry experts on AI/ML in the cloud.

Learning Outcome: Understand best practices and emerging trends in cloud-based AI/ML.

Lab Sessions



Data Preparation and Feature Engineering on AWS

- ✓ Perform data collection, cleaning, and preprocessing using AWS tools (e.g., AWS Glue, AWS Data Pipeline).
- ✓ Apply best practices for data management in AWS.



Deploying and Managing AI Models on AWS

- ✓ Deploy AI models using Amazon SageMaker.
- ✓ Monitor and manage deployed models using CloudWatch and SageMaker Model Monitor.
- ✓ Set up A/B testing with SageMaker Endpoint.



MLOps with AWS

- ✓ Integrate AI models into a CI/CD pipeline using AWS CodePipeline, SageMaker, and Lambda.
- ✓ Monitor AI models post-deployment using AWS tools like CloudWatch and SageMaker Model Monitor.



Training AI Models on AWS

- ✓ Train AI models using Amazon SageMaker.
- ✓ Perform hyperparameter tuning and optimisation using SageMaker Automatic Model Tuning.
- ✓ Apply distributed training using SageMaker and EC2 instances.



End-to-End AI Model Deployment

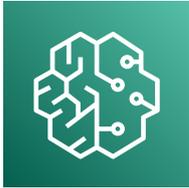
- ✓ Build, train, and deploy an AI model using AWS services (SageMaker, S3, Lambda).
- ✓ Set up an end-to-end AI model pipeline from data collection to deployment.



Leveraging Generative AI for Cloud Engineering

- ✓ Explore GenAI tools like AWS Code-Whisperer and OpenAI Codex.
- ✓ Use GenAI for cloud automation, optimisation, and problem-solving (diagnosis, troubleshooting).

Tools Covered



Amazon SageMaker



AWS Glue



AWS Data Pipeline



AWS Comprehend



AWS Rekognition



AWS S3



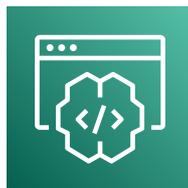
AWS Lambda



AWS CloudWatch



AWS CodePipeline



AWS CodeWhisperer

Work Readiness

Work Readiness at Digital Regenesys empowers learners with critical soft skills, emotional intelligence, stress management, and mindfulness, fostering resilience and adaptability to meet evolving professional demands. By bridging the gap between academic learning and workplace expectations, it prepares learners for success in the workplace. Practical components like resume building and LinkedIn profile optimisation complement this approach, ensuring learners are equipped for real-world challenges.



Foundations of Work Readiness

Unit 1: Introduction to Soft Skills

Unit 2: Communication Skills

Unit 3: Resume Crafting and Digital Presence

Level 01



Advanced Work Readiness (Practical-Oriented)

Unit 1: Advanced Soft Skills

Unit 2: Emotional Intelligence

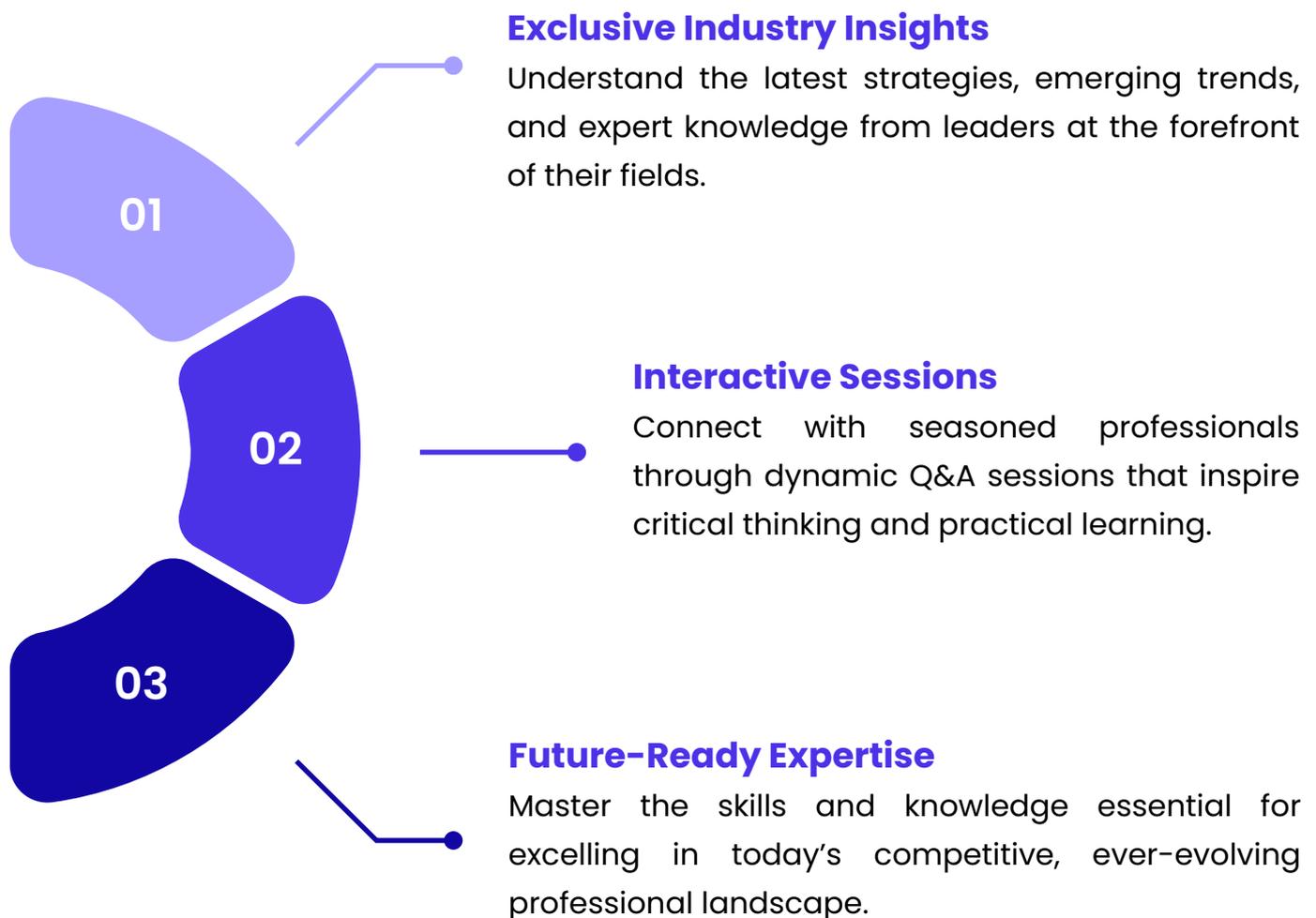
Unit 3: Stress Management

Unit 4: Mindfulness

Level 02

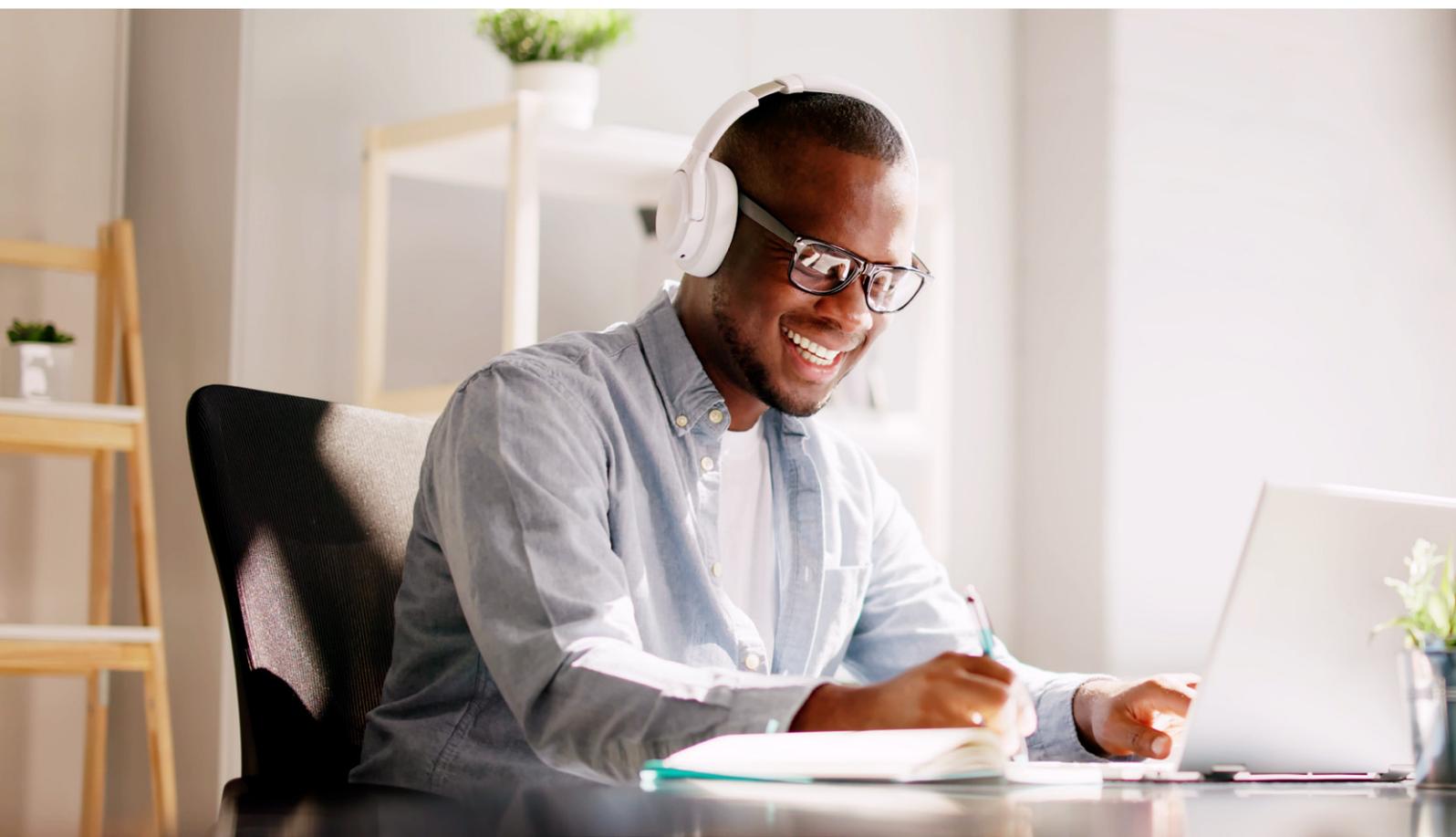
Industry Expert Sessions

At Digital Regenesys, we bring learning to life with exclusive Industry Expert Sessions integrated into every course. These sessions not only connect students with seasoned professionals who share real-world insights, emerging trends, and practical knowledge but also foster personal growth. Through interactive Q&A discussions, learners gain clarity, enhance their decision-making skills, and develop a deeper understanding of their career paths, ensuring they are both industry-aligned and future-ready.



Work Readiness Programme Benefits

- ✔ **Develop Critical Skills** : Gain soft skills like collaboration, adaptability, and conflict resolution.
- ✔ **Communicate Confidently** : Improve verbal, non-verbal, and digital communication for professional interactions.
- ✔ **Build Your Professional Identity** : Create impactful resumes, optimise LinkedIn profiles, and manage your online presence.
- ✔ **Learn from Experts** : Gain real-world insights, emerging trends, and practical strategies from seasoned professionals.
- ✔ **Prepare for Success** : Tackle workplace challenges confidently and align with future career opportunities.



Course Fee

	Countries	Course Fee
	South Africa	R44,600
	Kenya	Ksh231,920
	Nigeria	₦2,415,800
	Uganda	UGX5,807,300
	Tanzania	TSh4,662,700
	USA	\$2,488
	India	₹223,000
	Botswana	P39,469
	Namibia	\$40,140
	Zimbabwe	ZWG60,818
	Zambia	ZMW55,449
	Mauritius	MURs124,581

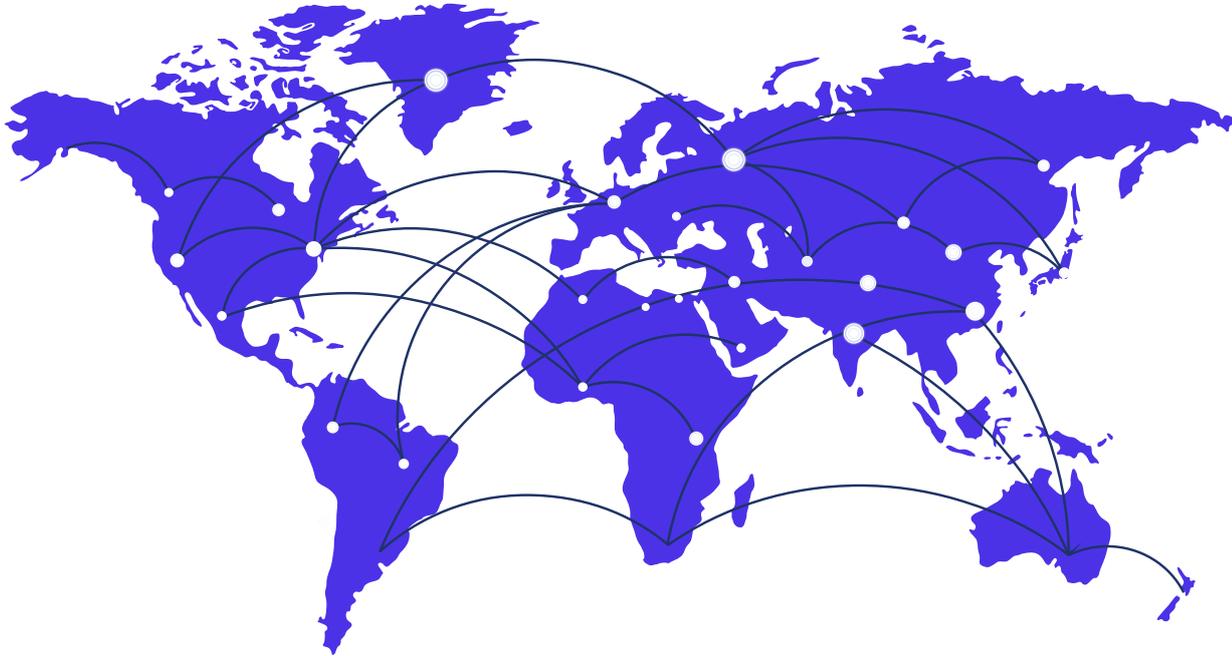
Course Duration : 8 Months

Connect With Us



Our Global Network

We Have Students Thriving in Over 180 countries, Supported By Our Offices In Six Key Locations Worldwide!



Contact Us

SOUTH AFRICA:

165 West Street, Sandton Johannesburg,
South Africa

KENYA:

1203, 12th Floor, GTC Office Tower Intersection
of Waiyaki Way, Chiromo Ln, Nairobi, Kenya

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2nd Floor, Ocean Residence Building, Plot 418,
Toure Drive, Masaki, Dar Es Salaam, Tanzania.

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Botswana

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Park, Moka, Mauritius