International Institute of Information Technology Bangalore

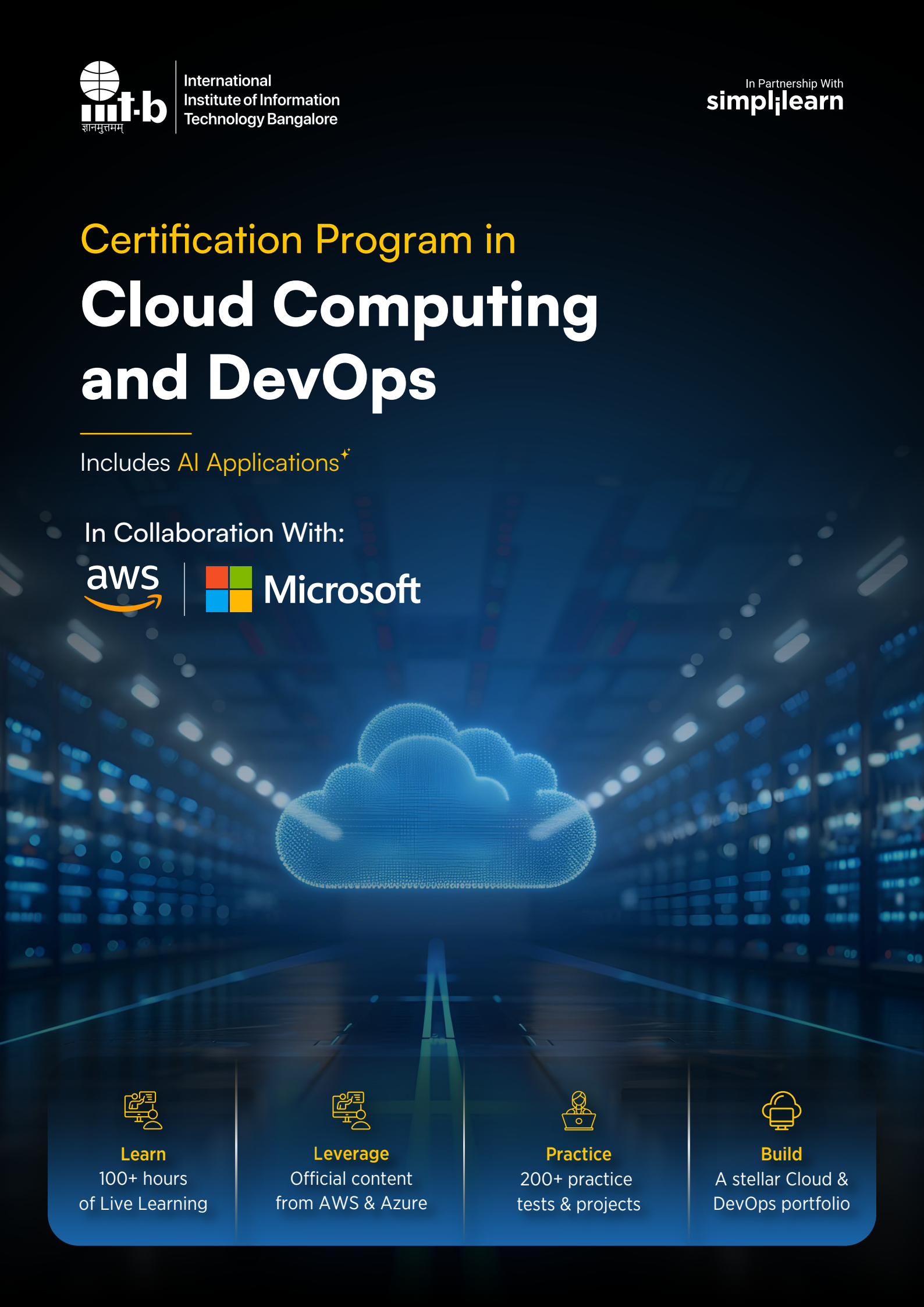
In Partnership With simplilearn

Certification Program in Cloud Computing and DevOps

Includes AI Applications

In Collaboration With:

aws | Microsoft



Learn
100+ hours of Live Learning

Leverage
Official content from AWS & Azure

Practice
200+ practice tests & projects

Build
A stellar Cloud & DevOps portfolio

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Table of Content

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The Cloud and DevOps Opportunity

The demand for Cloud and DevOps professionals continues to grow across startups, enterprises, and global technology companies.

Cloud Computing	DevOps
60,000+ Cloud roles open in India Source : Naukri Job Trends	**25,000+** DevOps roles actively hiring in India Source : Naukri Job Trends
₹10–60+ LPA Career progression from Cloud Engineer to Cloud Architect Source : AmbitionBox & Industry Salary Reports	**₹8–50+ LPA** Career progression from DevOps Engineer to Senior DevOps / SRE roles Source : AmbitionBox & Industry Salary Reports
₹1,05,600 Crore AWS planned investment in India by 2030 Source : AWS India	**Core to Modern Engineering** CI/CD, Kubernetes, Automation, and Platform Engineering are becoming standard practices across technology teams
High-Growth Areas AI Infrastructure • Data Centers • FinTech • SaaS Platforms	**High-Growth Areas** Kubernetes • Platform Engineering • SRE • Cloud Automation

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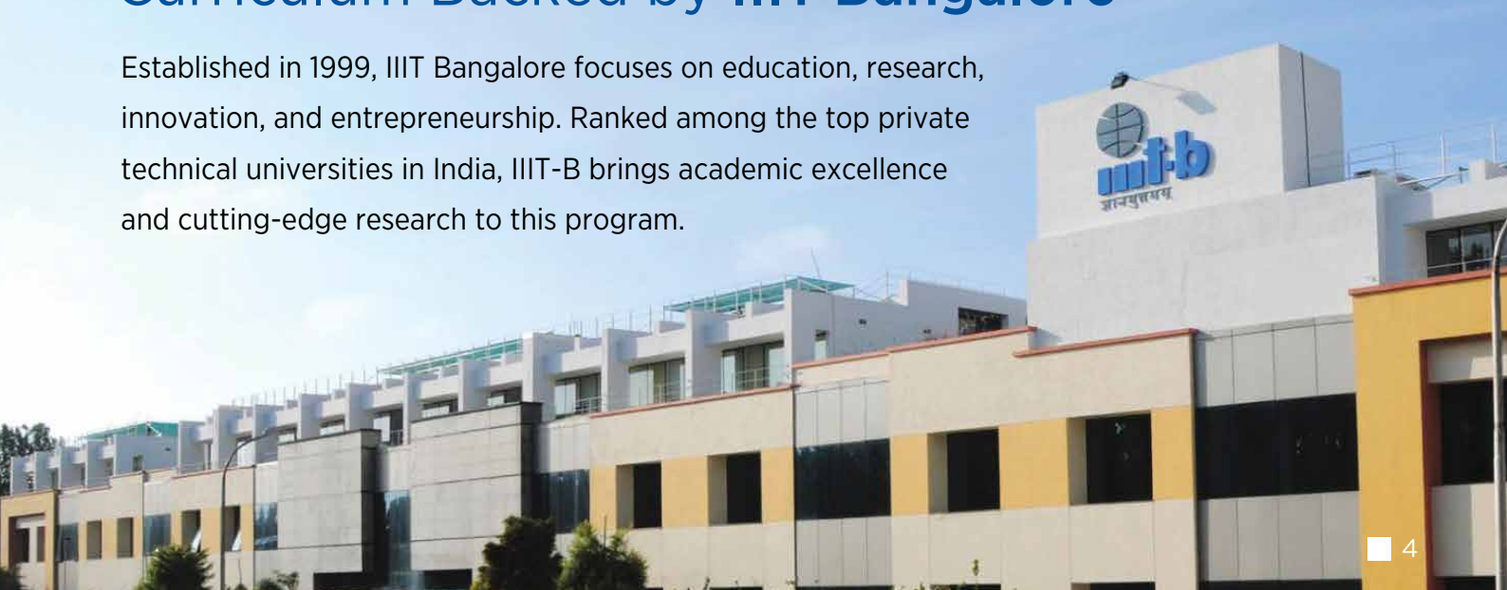
About the Program:

The Certification Program in Cloud Computing and DevOps , delivered by Simplilearn in collaboration with IIIT Bangalore, is designed to help professionals build end-to-end expertise in modern cloud and DevOps technologies. From day one, learners gain access to on-demand training covering AWS and Azure fundamentals, Linux basics, core cloud concepts, and the foundations of Generative AI with applications on AWS. The program also includes the latest self-paced learning videos from IIIT Bangalore faculty for key cloud and DevOps modules, enabling learners to strengthen their concepts through academic and industry-aligned learning.

As the live training begins, learners gain hands-on experience designing, deploying, and managing cloud architectures across AWS and Azure, while implementing real-world DevOps practices such as CI/CD, containerization, orchestration, infrastructure as code, and monitoring. Through interactive sandbox labs, official AWS and Microsoft Azure learning content, live virtual classes by industry experts, IIIT Bangalore self-learning modules, and peer collaboration, learners develop practical skills to apply DevOps best practices and explore emerging trends including AI-driven cloud innovation.

Curriculum Backed by **IIIT Bangalore**

Established in 1999, IIIT Bangalore focuses on education, research, innovation, and entrepreneurship. Ranked among the top private technical universities in India, IIIT-B brings academic excellence and cutting-edge research to this program.



Key Features of the Program

Expert-led Cloud and DevOps learning

Comprehensive Curriculum

- 200+ hours of comprehensive learning content on cloud computing (AWS, Azure, Google Cloud) and DevOps
- GenAI in the cloud and the latest trends in cloud computing, including DevSecOps, Quantum Computing, Edge Computing, AIOps, MLOps, GitOps, and more

Includes GenAI-powered Cloud & DevOps Applications

- Generative AI fundamentals & applications on AWS
- AI development & fundamentals on Azure
- AI-powered containerization & orchestration
- Monitoring AI services
- Building intelligent AI agents for automation

Complimented by Official Content from Industry Leaders

- Official self-paced content by AWS Skillbuilder and Microsoft Azure

Delivered through Live Virtual Classes with Hands-on learning

- Live instructor-led training by industry experts
- 30+ projects and 200+ guided practices integrated free labs for 20+ cloud and DevOps services

Dedicated Learning Support

- Dedicated cohort manager
- Flexi-Learn - Access recordings to always maintain learning progress
- Mentoring session(s)
- 24x7 chat support
- Slack-based peer-to-peer learning and engagement

Opportunity to Build a Cloud and DevOps Portfolio

- Build a strong project portfolio with 30+ Cloud and DevOps projects and 200+ practice assessments
- Official Microsoft Azure-branded certificates

Career Support

AI-Powered Simplilearn Career Assistance

- Networking & Group Mentoring Session by Industry Experts
- Exhaustive Q Bank for Aptitude Assessment
- Soft Skills Interview Preparation
- AI-powered Resume-Building Assistance
- AI-powered LinkedIn Profile Optimization
- 1:1 AI-Powered Mock Interview
- 1:1 Mentoring Session with Industry Experts

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Learning Path

Core Courses

1. Linux Training (Prerequisite)
2. Foundations Track – AWS (Solutions Architect) & Azure (AZ-900, AZ-305) (Optional)
3. Generative AI Foundations on AWS
4. AWS Solutions Architect
5. Applied Generative AI with AWS
6. DevOps Foundations: Version Control and CI/CD with Jenkins
7. Configuration Management with Ansible and Terraform
8. Containerization with Docker
9. Container Orchestration using Kubernetes
10. Monitoring in DevOps
11. Microsoft Azure Administrator (AZ-104)
12. DevOps on AWS
13. Containerizing AI Services with Docker and Azure
14. Monitoring and Managing AI Services on Azure
15. AI Orchestration on Azure
16. Capstone Project

Electives

- Academic Masterclasses by IIIT Bangalore
- Generative AI Masterclass
- Gen AI on Cloud
- Designing Microsoft Azure Infrastructure Solutions (AZ-305)
- DevSecOps
- Google Cloud Platform Architect Training
- Python Training
- Microsoft Azure DevOps Engineer Expert (AZ-400)
- Data Migration and Resilience
- MLOps
- Latest Trends in Cloud and DevOps

Core Courses

Prerequisite: Linux Training

Step 1

Foundations & Preparatory Module – AWS & Azure

- Complete the foundation course at your own pace to delve into the basics of AWS and Azure.
- Establish a strong foundation in AWS and Azure Cloud.
- This course can be used as a benchmark for upcoming courses.
- We recommend completing each self-learning module before attending the respective live classes.

Step 2

Generative AI foundations on AWS

- Generative AI Foundations on AWS Build a strong foundation in on AWS, including core concepts, business use cases, and real-world applications of content generation.
- Understand the key benefits, risks, and practical implications of implementing generative AI in business environments.

Step 3

AWS Solutions Architect

- Design, deploy, and migrate scalable, highly available, and fault-tolerant applications on AWS, following architectural best practices.
- Select the right AWS services, manage data flow, and optimize costs based on compute, database, security, and business requirements.

Course End Projects:

Set Up and Monitor a WordPress Instance

Set up a WordPress instance on AWS using EC2 and RDS to ensure a reliable and secure online presence. Monitor the instance using CloudWatch to track performance, uptime, and security.

Real-time Data Management

Deploy AWS infrastructure for real-time data management using services like Kinesis or Kafka to process streaming data.

Step 4

Applied Generative AI with AWS

- Understand AWS Cloud fundamentals, including key characteristics, core benefits, and how it compares to on-premises infrastructure.
- Apply AWS services in practice by implementing solutions such as static website hosting using Amazon S3.

Step 5

DevOps Foundations: Version Control and CI/CD with Jenkins

- Understand the core principles, benefits, and challenges of adopting a DevOps approach.
- Develop practical skills in leveraging DevOps tools and technologies, including Jenkins, GitHub Actions, and version control systems.

Course End Projects:

Jenkins Backup and Restore on AWS S3

Implement automated backups for Jenkins data using AWS S3 to ensure data is securely stored. This setup allows for easy recovery in case of failure, protecting critical application data.

CI/CD Pipeline Implementation for Software on AWS EC2

Build a CI/CD pipeline using Jenkins to automate testing, building, and deploying a software application on AWS EC2. This ensures rapid and continuous delivery of updates with minimal manual intervention.

Step 6

Configuration Management with Ansible and Terraform

- Build a strong foundation in configuration management and Infrastructure as Code (IaC), using tools like Ansible and Terraform to automate and orchestrate complex IT environments.
- Gain hands-on expertise in Ansible and Terraform, while comparing them with tools like Puppet, Chef, CloudFormation, and Pulumi for efficient infrastructure automation.

Course End Projects:

Deploying a Web Application Using Ansible

As a DevOps engineer, deploy a blogging platform using Ansible to automate the setup on an Nginx server. This ensures the application is ready for use with minimal manual configuration.

InfraPro: Automate Infrastructure Provisioning with Terraform and Ansible

Use Terraform for infrastructure provisioning and Ansible for configuration management, enabling automated and consistent deployment of environments. This ensures smooth scaling and management of infrastructure resources.

Step 7

Containerization with Docker

- Build a strong foundation in Docker, covering architecture, image management, networking, and orchestration with Swarm and Kubernetes for managing containerized applications.
- Explore advanced concepts including storage, microservices architecture, and security best practices to deploy robust and secure containerized environments.

Course End Projects:

Swarm Microservice Deployment

Deploy a scalable, multi-service voting application on a Docker Swarm manager node. Ensure efficient orchestration, fault tolerance, and seamless monitoring with Docker Visualizer.

Deploying a Multi-Tier Application

Demonstrate the deployment of a multi-tier application using Docker Compose. Configure public IP addresses and set up security group rules for accessing the frontend, API, and database services.

Step 8

Container Orchestration using Kubernetes

- Build a strong foundation in Kubernetes, including architecture, core components, container runtimes, networking models, and security practices such as RBAC and secrets management.
- Learn to deploy, scale, and manage containerized applications using Kubernetes, with expertise in deployment strategies, self-healing mechanisms, load balancing, and configuration management.

Course End Projects:

Deploy the Application Using the Kubernetes Dashboard: Deploy a multi-tier PHP and MySQL application using Kubernetes. Configure user roles, storage, service verification, namespace restrictions, quota limits, and data management to ensure secure and efficient application deployment.

Step 9

Monitoring in DevOps

- Understand the core concepts and principles of monitoring in modern systems.
- Learn to set up and use Prometheus for effective metrics collection and management.

Step 10

DevOps on AWS

- Build a strong foundation in DevOps on AWS, covering core principles, infrastructure as code (CloudFormation), CI/CD automation, and application deployment using services like CodePipeline, CodeBuild, and CodeDeploy.

Gain hands-on experience in monitoring, security, troubleshooting, and deploying real-world AWS applications, ensuring scalable, secure, and reliable DevOps workflows.

Course End Projects:

Automating CI/CD Pipeline for Spring Boot Application Deployment on AWS. Integrate CodePipeline, CodeBuild, and ECR to enable seamless application updates with Docker containerization.

Step 11

Microsoft Certified Azure Administrator AZ-104

- Manage Azure resources and services, including Azure AD, subscriptions and governance, storage (Blob, Files), containers, App Services, and virtual machines, along with automating deployments using Azure Resource Manager templates.
- Implement and secure Azure infrastructure by configuring virtual networking, load balancing, hybrid connectivity, backup and recovery, access control, and monitoring performance using Azure Monitor.

Course End Projects:

Connecting Internet Workloads with VNet Peering and Custom RBAC Role Assignment

Project Description

This project focuses on enabling secure and efficient connectivity between virtual networks using VNet peering for Rand Enterprises. It includes creating virtual networks, establishing peering, and onboarding a user with a custom RBAC role to manage network and storage within a VM, ensuring least-privilege access and enhanced security.

High Availability Architecture with Load Balancer and Command-Line Automation

Project Description

This project focuses on building a highly available web application architecture for Rand Enterprises by distributing traffic across healthy VM instances using an Azure public load balancer. It ensures minimal downtime with health probes and enables secure communication, while leveraging command-line tools to automate deployments.

Step 12

Containerizing AI Services with Docker and Azure

- Build a strong foundation in AI concepts, including generative AI, computer vision, NLP, and responsible AI and learn to integrate AI solutions effectively into software development workflows.
- Gain hands-on experience with Azure AI services and Docker to containerize, deploy, and manage intelligent applications across cloud, on-premises, and edge environments.

Step 13

Monitoring and Managing AI Services on Azure

- Monitor application performance and availability using Azure Monitor, leveraging dashboards, metrics, and logs for complete visibility.
- Collect and analyze data across Azure, cloud, and on-premises environments to ensure efficient monitoring and insights.

Step 14

AI Orchestration on Azure

- Design, build, and deploy intelligent AI agents on Azure for real-world applications.
- Extend and optimize agents using advanced tools, multi-agent architectures, and effective management practices.

Step 15

Capstone Project

- The project is the final step in the learning path and will enable you to showcase your expertise to future employers.
- Dedicated mentoring sessions will teach you how to solve real-world, industry-aligned problems.

Microservice Containerization with AWS CodePipeline and ECS Cluster

Set up a DevOps pipeline to automate CI/CD for containerized microservices using AWS CodePipeline and ECS Cluster. The project handles complex builds, code validation, and deployment across application servers.

Automated Azure Web App Deployment with Containers

Automate infrastructure provisioning and microservices deployment on Azure Cloud using Azure Web App and Pipeline. The project includes containerization and CI/CD automation.

Multi-Cloud Deployment for a Web Application

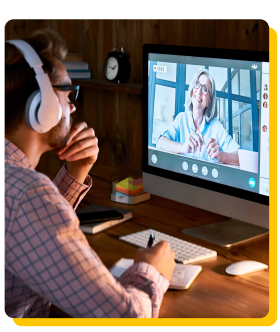
Implement a DevOps pipeline to migrate monolithic applications to microservices using AWS and Azure, with automated deployments using Jenkins and Ansible playbooks.

*The sessions will be delivered by industry experts**

Electives

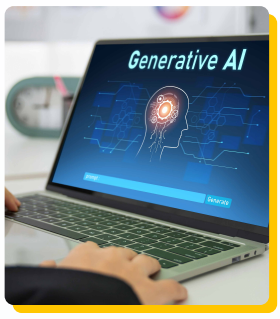
Academic Masterclasses by IIIT Bangalore faculty

- Attend live academic masterclasses by the top faculty and staff of IIIT Bangalore.
- Gain insights about advancements in cloud computing and understand why it has become essential for any organization to understand, implement, and invest in cloud computing and DevOps skills to scale up.



Generative AI Masterclass

- Attend live GenAI masterclasses & learn how you can leverage it to streamline workflows and enhance efficiency.
- These cutting-edge masterclasses are conducted by industry experts, where you delve deep into AI-powered creativity, understanding various concepts & topics related to generative AI.



Gen AI on Cloud

- Understand the evolving Cloud & DevOps landscape, including multi-cloud, hybrid cloud, serverless, edge computing, and emerging innovations like sustainable cloud, quantum computing, and platform engineering.
- Explore AI-driven advancements on the cloud, including AI-as-a-Service, AIOps, AI/ML integration, IoT, GitOps, FinOps, low-code applications, and cost optimization strategies.

Designing Microsoft Azure Infrastructure Solutions AZ:305

- Design and manage secure, scalable Azure infrastructure by implementing governance, identity (Azure AD), networking, application architecture, and high availability, along with backup, recovery, and monitoring solutions.
- Build end-to-end cloud solutions by integrating data services, automating compute and provisioning, enabling migrations, and optimizing costs across Azure environments.

DevsecOps

- Build a strong foundation in DevSecOps by understanding security principles, threat modeling techniques, and integrating security across the DevOps pipeline.
- Implement security on AWS using services like IAM, CodePipeline, EKS, and Security Hub, while applying best practices for secure cloud and application environments.

Google Cloud Platform Architect Training

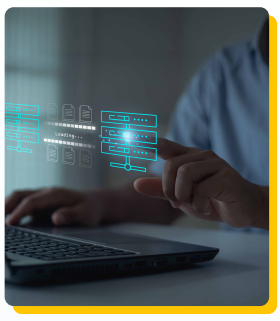
- Understand core GCP services, including Identity and Access Management (IAM), networking, and cloud storage for building secure and scalable architectures.
- Design and manage GCP environments by configuring access control, network infrastructure, and storage solutions to support business applications.

Python Training

- Build a strong foundation in Python, covering core concepts, data operations, and conditional logic for effective programming.
- Apply Python in real-world scenarios using shell scripting and frameworks like Django to develop and automate applications.

Microsoft Azure DevOps Engineer Expert AZ-400

- Develop and implement SRE and instrumentation strategies to ensure reliability, performance monitoring, and continuous improvement.
- Integrate security practices across the DevOps lifecycle to build secure, resilient Azure-based applications.



Data Migration and Resilience

- Plan and execute cloud data migration using best practices, automation, and DevOps strategies for seamless transitions.
- Ensure resilience and high availability in cloud environments, supported by real-world case studies and proven approaches.

MLOps

- Understand the evolving MLOps landscape, including multi-cloud and hybrid environments, serverless and edge computing, platform engineering, and practices like GitOps and Infrastructure as Code (IaC).
- Explore advanced innovations such as AI-as-a-Service, AIOps, DevSecOps, IoT, FinOps, low-code applications, sustainable cloud, and quantum computing for scalable and efficient ML operations.

Latest Trends in Cloud and DevOps

- Learn modern Cloud and DevOps practices including cloud-native development, CI/CD, containerization, and automation.
- Explore emerging trends such as Quantum computing, platform engineering, serverless computing, and multi-cloud strategies for faster and reliable software delivery.

40+ Skills Covered

- Cloud Application Migration
- Multi-Cloud & Hybrid Cloud Architecture
- Infrastructure as Code (IaC)
- CI/CD (Continuous Integration & Delivery)
- Containerization (Docker)
- Container Orchestration (Kubernetes)
- Microservices Architecture
- DevSecOps Implementation
- Cloud Workload Management
- Database Management (SQL & NoSQL)
- Azure Active Directory (IAM)
- Infrastructure Provisioning & Automation
- Disaster Recovery & Backup (Azure Backup, Site Recovery)
- Autoscaling & High Availability
- Monitoring & Performance Optimization
- Web Services & API Integration
- Configuration Management
- AI/ML Integration in Cloud Systems
- Responsible & Explainable AI
- AIOps & AI-as-a-Service
- GitOps
- Platform Engineering
- Edge Computing
- FinOps (Cost Optimization)
- Generative AI on Cloud (Azure OpenAI, AWS, GCP)

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Program Outcomes

Curriculum Expertise

- Master AWS, Azure & Google Cloud and get ready for official industry-aligned cloud certifications

- Understand the DevOps lifecycle from CI/CD to container orchestration and the principles of DevOps applications on AWS and Microsoft Azure
- Learn about the impact of GenAI on cloud computing and the latest trends and technologies

Industry-Recognized Learning

- Strengthen your AWS cloud fundamentals via on-demand content from AWS Skillbuilder for specified modules
- Access official on-demand content from Microsoft Azure for specified modules and earn Microsoft-branded certificates

University-Recognized Learning

- Earn an IIIT Bangalore Program Completion Certificate & Official Transcript
- Learn through exclusive self-paced content by IIIT Bangalore faculty
- Attend live online masterclasses by distinguished IIIT Bangalore experts
- Benefit from an industry-relevant curriculum backed by IIIT Bangalore

Career Accelerator Services

- Latest job listings with a job tracker & a job board
- AI resume builder
- Cover letter builder
- Text-based mock interviews and personalized coaching with AI coach
- Career services workshops
- Community channel

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Tools Covered

AWS

- amazon EC2
- Amazon ECS
- Amazon DynamoDB
- AWS Fargate
- Amazon Elastic Block Store (EBS)
- Amazon EFS
- aws Lambda
- Amazon Route 53
- amazon RDS
- amazon S3
- AWS CloudFormation
- AWS CloudWatch
- AWS IAM
- AWS Elastic Beanstalk

DevOps & Engineering Tools

- maven
- GitLab
- Jenkins
- Terraform
- docker
- kubernetes
- Prometheus
- git
- ANSIBLE

Azure

- Azure Resource Manager
- Microsoft Azure Blob Storage
- Azure Container Service
- Azure Cosmos DB
- Microsoft Azure DNS
- Azure Functions
- Azure App Service
- Azure Security Center
- Azure SQL

AI Tools

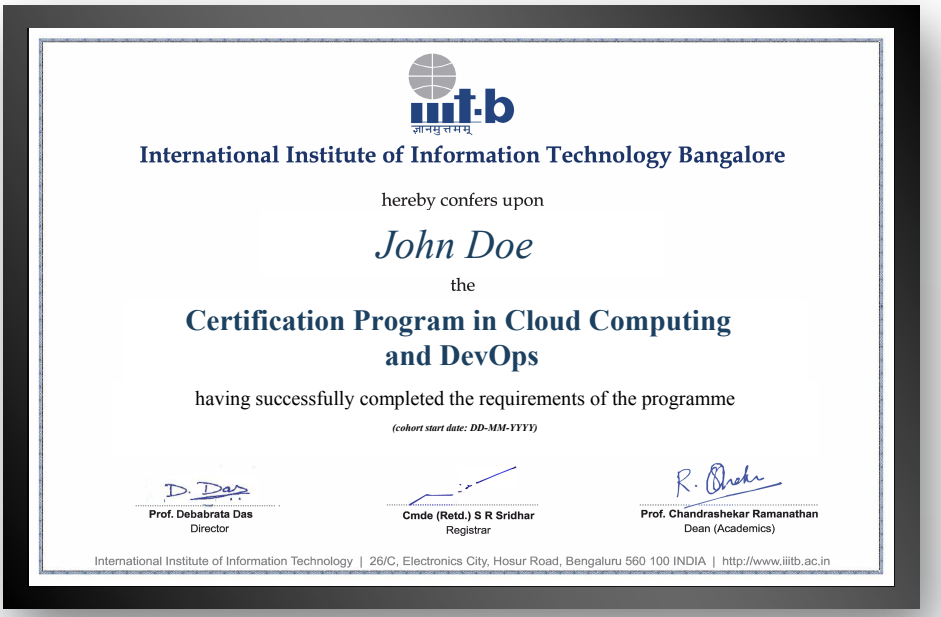
AWS

- Amazon Bedrock
- Amazon SageMaker
- Amazon Q
- LLaMA
- Mistral AI

Azure

- OpenAI
- Microsoft Azure Cognitive Services
- Azure AI Containers

Certificates



International Institute of Information Technology Bangalore

hereby confers upon

John Doe

the

Certification Program in Cloud Computing and DevOps

having successfully completed the requirements of the programme

(cohort start date: DD-MM-YYYY)

Prof. Debabrata Das
Director

Cmde (Retd.) S R Sridhar
Registrar

Prof. Chandrashekar Ramanathan
Dean (Academics)

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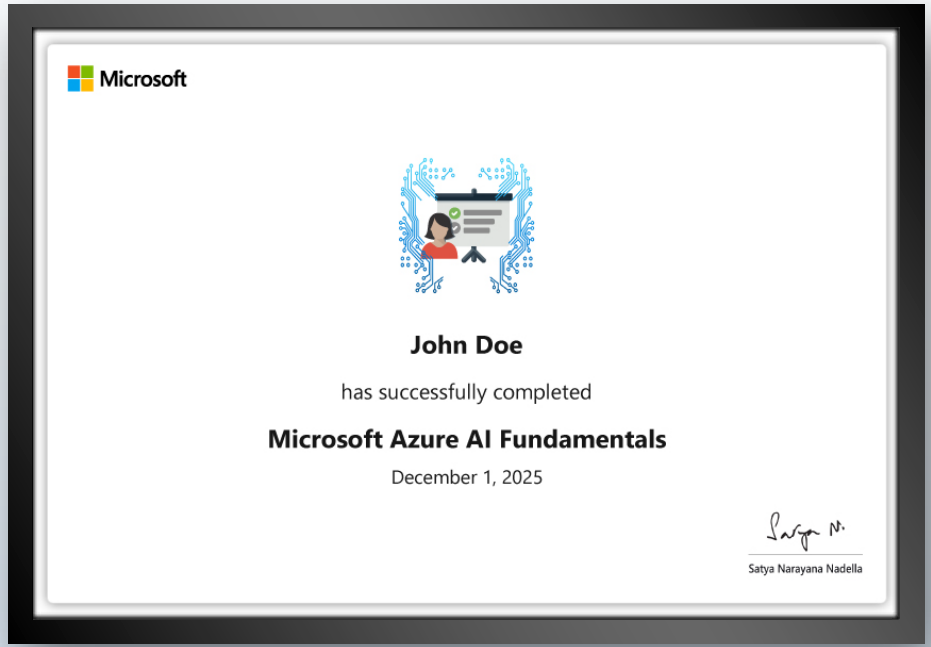
Partnership With Microsoft:



Microsoft

John Doe

has successfully completed

Microsoft Azure AI Fundamentals

December 1, 2025

Satya Narayana Nadella

Career Outlook

Role	Entry Level (0–2 yrs)	Mid-Level (2–5 yrs)	Senior (5+ yrs)	High-End / Top Companies
Cloud Engineer	₹4L – ₹8L	₹8L – ₹16L	₹16L – ₹28L	₹30L+
Cloud Architect	₹8L – ₹15L	₹15L – ₹28L	₹28L – ₹45L	₹50L+
DevOps Engineer	₹5L – ₹10L	₹10L – ₹20L	₹20L – ₹35L	₹40L+
Cloud Security Engineer	₹6L – ₹12L	₹12L – ₹22L	₹22L – ₹38L	₹40L+

Sources:

- Glassdoor India Salary Reports (2025)
- AmbitionBox Salary Insights (2025–26)
- Indeed India Pay Trends (2025)
- Naukri Hiring & Salary Trends (2025–26)

Program Advisors

Prof B Thangaraju

Professor at IIITB

Education : Ph.D. (Bharathidasan University)

Dr. B. Thangaraju is a seasoned academic and industry expert with a Ph.D. in Physics and over two decades of experience spanning research, industry, and academia. He has previously worked as a Research Associate at the Indian Institute of Science (IISc), Bengaluru, and as part of Talent Transformation at Wipro Technologies. Currently a Professor at IIIT Bangalore, he also coordinates the Open Source Technology Lab. His expertise includes the Linux kernel, embedded and real-time systems, open source software, and DevOps. Dr. Thangaraju has authored over 60 publications and presented extensively at national and international conferences.

Prof. Vivek Yadav

Technology Officer and Adjunct Faculty at IIIT-Bangalore

Vivek Yadav is a Technology Officer at IIIT Bangalore and an experienced software professional with a strong foundation in computer science and programming. An alumnus of the International Institute of Information Technology Bangalore, he brings deep expertise in algorithms, data structures, and programming languages such as C/C++, Python, and Java. He has contributed to academic research and actively mentored students for competitive programming platforms like ACM-ICPC. With industry-recognized certifications from IBM and Oracle, Vivek combines strong technical depth with a practical, problem-solving approach to real-world applications.

Eligibility Criteria

- Preferably, 1+ years of full-time work experience
- Don't need prior coding experience or technology know-how
- A bachelor's degree with an average of 50% or higher marks

Application Process

The application process consists of three simple steps.

1

Submit an Application

Complete the application, including a brief statement of purpose explaining your interest and qualifications for the program.

2

Application Review

A panel of admissions counselors will review your application and statement of purpose to determine whether you qualify for acceptance.

3

Admission

Qualified candidates will be offered admission. You can accept this offer by paying the program fee.

Talk to an Admissions Counselor

We have a team of dedicated admissions counselors who can help you with the application process and related matters.

Our team is available to:

- Answer your questions about the application process
- Discuss your financing options
- Provide insight into the curriculum, program outcomes, and more

Inquire Now

simplilearn

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For more information, please visit:
www.simplilearn.com