**Cloud Computing**

**Month 1: Cloud Fundamentals and Introduction to Cloud Service Models**

Week 1: Introduction to Cloud Computing

* Definition and characteristics of cloud computing
* Evolution and significance of cloud computing
* Cloud deployment models: public, private, hybrid

Week 2-3: Cloud Service Models

* Infrastructure as a Service (IaaS)
* Platform as a Service (PaaS)
* Software as a Service (SaaS)
* Function as a Service (FaaS) / Serverless

Week 4-5: Major Cloud Service Providers

* Overview of major cloud providers (AWS, Azure, Google Cloud)
* Comparative analysis of services offered by each provider
* Selecting the right cloud provider for specific use cases

Week 6: Cloud Security Fundamentals

* Basics of cloud security
* Identity and Access Management (IAM)
* Encryption and compliance

**Month 2: Key Cloud Services and Advanced Topics**

Week 1-2: Compute Services

* Virtual machines and containers
* Serverless computing
* Auto-scaling and load balancing

Week 3-4: Storage Services

* Object storage (e.g., Amazon S3, Azure Blob Storage)
* Block storage and file storage
* Database services (e.g., Amazon RDS, Azure SQL Database)

Week 5-6: Networking Services and Advanced Cloud Concepts

* Virtual Private Cloud (VPC)
* Content Delivery Network (CDN)
* Advanced cloud concepts: Hybrid cloud, multi-cloud, and edge computing