

AI-200T00: Develop AI cloud solutions on Azure

Duration: 5 days (40 hours)

AI Cloud Solutions Developer Role

Responsibilities for this role include participating in all phases of implementing AI solutions on Azure, with an emphasis on back-end services and components. You're responsible for participating in all phases of the development lifecycle including requirements gathering, design, development, deployment, security, and monitoring.

Audience Profile

Students in this course are interested in developing scalable solutions, or in obtaining the Azure AI Cloud Developer Associate certification.

Audience Prerequisites

Successful students in this course have at least 1-2 years professional development experience and some experience with Microsoft Azure. In addition, the student should have experience programming in Python.

If you are new to AI development, Azure, or cloud computing, consider one of the following resources:

- At least two years of experience in Python
- Fundamental proficiency in Azure: Microsoft Certified: Azure Fundamentals
- Fundamental proficiency in AI: Microsoft Certified: Azure AI Fundamentals
- Fundamental proficiency in Azure Data: Microsoft Certified: Azure Data Fundamentals
- Fundamental proficiency in app containerization concepts and practices.

Course Outline

Day 1

Learning Path 1: Implement container application hosting on Azure

- **Module 1:** Store and manage containers in Azure Container Registry
- **Module 2:** Deploy containers to Azure App Service

Learning Path 2: Deploy and manage apps on Azure Container Apps

- **Module 1:** Deploy containers to Azure Container Apps
- **Module 2:** Manage containers in Azure Container Apps
- **Module 3:** Scale containers in Azure Container Apps

Day 2

Learning Path 3: Deploy and monitor apps on Azure Kubernetes Service

- **Module 1:** Deploy and verify apps on Azure Kubernetes Service
- **Module 2:** Configure apps on Azure Kubernetes Service
- **Module 3:** Monitor and troubleshoot apps on Azure Kubernetes Service

Learning Path 4: Develop AI solutions with Azure Cosmos DB for NoSQL

- **Module 1:** Build queries for Azure Cosmos DB for NoSQL
- **Module 2:** Implement vector search with Azure Cosmos DB for NoSQL
- **Module 3:** Optimize query performance for Azure Cosmos DB for NoSQL

Day 3

Learning Path 5: Develop AI solutions with Azure Database for PostgreSQL

- **Module 1:** Build and query with Azure Database for PostgreSQL
- **Module 2:** Implement vector search with Azure Database for PostgreSQL
- **Module 3:** Optimize performance, indexing, and scaling for Azure Database for PostgreSQL

Learning Path 6: Enhance AI solutions with Azure Managed Redis

- **Module 1:** Implement data operations in Azure Managed Redis
- **Module 2:** Stream and Coordinate Events in Azure Redis
- **Module 3:** Implement vector storage in Azure Managed Redis

Day 4

Learning Path 7: Integrate backend services for AI solutions

- **Lesson 1:** Queue and process AI operations with Azure Service Bus
- **Lesson 2:** Develop event-driven AI workflows with Azure Event Grid
- **Lesson 3:** Build serverless AI backends with Azure Functions

Learning Path 8: Manage application secrets and configuration for AI solutions

- **Module 1:** Manage app secrets with Azure Key Vault
- **Module 2:** Manage application settings with Azure App Configuration

Day 5

Learning Path 9: Observe and troubleshoot apps on Azure

- **Module 1:** Instrument an app with OpenTelemetry
- **Module 2:** Analyze app telemetry with logs and metrics