

# DW-201: Building and Modernizing AI Apps on Azure Workshop

**Duration:** 16 hours

## **Module 1: Introduction to AI Apps**

- Azure AI Services
- Responsible AI
- Well-Architected Framework
- DevOps and Security
- Module 2: DevOps with GitHub
- Plan
- Deliver
- Test
- Operate and Secure
- Module 3: Building and deploying apps on Azure
- Azure App Service
- Azure Kubernetes Service (AKS)
- Azure Functions

## **Hands on Labs**

- Creating and deploying a web app using Azure App Service
  - Autoscaling the web app by using custom metrics
  - Containerizing and migrating to the Azure Kubernetes Service
  - Creating a function app in Azure
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## **Module 4: Azure Data Services**

- Azure SQL Database
- Azure Database for PostgreSQL

## **Module 5: Globally distributed databases**

- Introduction to Azure Cosmos DB
- Choosing the appropriate API
- Data Modeling
- Partitioning

## **Hands on Labs**

- Integrating Azure SQL Database into a web app
  - Deploy Azure Cosmos DB service for an app to store and access data
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## **Module 6: Azure AI Services**

- Introduction and Use cases
- Speech services
- Language services
- Vision

- Decision: Anomaly Detector
- Decision: Content Safety

### **Module 7: Azure OpenAI Service**

- Key concepts and models
- Prompt Engineering
- Embeddings and filtering
- Codex and code generation

### **Hands on Labs**

- Recognizing and translating speech to text using speech translation service
- Recognizing intents with Conversational Language Understanding (CLU)
- Generating e-mail content using Azure OpenAI service
- Utilizing prompt engineering using Chat GPT
- Moderating text and image content using Azure AI Content Safety Studio

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### **Module 8: Well-Architected Framework**

- Reliability
- Security
- Cost optimization
- Operational Excellence
- Performance Efficiency

### **Module 9: Security**

- Azure Key Vault
- Authentication and authorization with Azure AD (Entra ID)

### **Hands on Labs**

- Securing App Service connection to Cognitive Service using Azure Key Vault
- Configuring your App Service or Azure Functions app to use Entra ID login