

AI-102: Designing and Implementing a Microsoft Azure AI Solution

Duration: 4 days

Module 1:- Introduction to AI and AI on Azure

- **Introduction to AI**
- **Considerations for responsible AI**
- **Azure Machine Learning**
- **Introduction to azure ai services**
- **Azure AI services rest API and sdk**
- **Considerations of azure ai services security**
- **Monitor azure ai services**
- **Deploy azure ai services in containers**
- **Exercise: Get started with azure ai services**
- **Exercise: Manager azure ai service security**
- **Exercise: Monitor azure ai services**
- **Exercise: Use azure ai services container**

Module 2:- Develop computer vision solutions with azure ai vision

- **Azure AI Vision – Image Analysis**
- **Image analysis API and options**
- **Azure AI vision OCR**
- **Face detection, analysis and recognition**
- **Custom azure ai vision model for classification and object detection**
- **Introduction to video indexer for video analysis**
- **Exercise: Explore features in Vision Studio**
- **Exercise: Analyze Images with Azure AI Vision**
- **Exercise: Read text in images**
- **Exercise: Detect and analyze faces**
- **Exercise: Classify Images with Azure AI Vision custom model**
- **Exercise: Analyze the video using video indexer**

Module 3:- Develop natural language processing solutions

- **Introduction to azure ai language service for language analysis**
- **Text translation using translator service**
- **Introduction to question and answering**
- **Creating a knowledge base**
- **Introduction to the language understanding**
- **Custom text classification**
- **Introduction to the speech service**
- **Introduction to speech synthesis markup language**
- **Translating speech to text**

- Exercise: Analyse text
- Exercise: Translate text
- Exercise: Create a question and answering solution
- Exercise: Create a conversational language understanding app
- Exercise: Recognize and Synthesize Speech

Module 4:- Develop generative ai solutions with azure openai service

- Introduction to generative ai
- Introduction to azure openai studio
- Various different types of models in azure openai
- Various api's in azure openai
- Testing models in azure openai studio playground
- Integrating Azure OpenAI into your app
- Using the Azure OpenAI REST API: completion, chatcompletion
- Prompt engineering in azure openai
- Implement Retrieval Augmented Generation (RAG) with Azure OpenAI Service
- Exercise: Provision an Azure OpenAI resource in Azure
- Exercise: Get started with Azure OpenAI Service
- Exercise: Integrate Azure OpenAI into your app
- Exercise: Utilize prompt engineering in your app
- Exercise: Implement Retrieval Augmented Generation (RAG) with Azure OpenAI Service

Module 5:- Creating the knowledge mining solution

- Introduction to the azure ai search
- Core Components of a AI Search Solution
- How an Enrichment Pipeline Works
- Introduction to Custom Skills
- What is a Knowledge Store?
- Implementing a Knowledge Store
- Exercise – Create an Azure Cognitive Search Solution
- Exercise – Create a Custom Skill for Azure AI Search

Module 6:- Develop solutions with azure ai document intelligence

- Introduction to Document Intelligence Service
- Prebuilt models in document intelligence service
- Custom models in document intelligence service
- Exercise – Use prebuilt Document Intelligence models
- Exercise – Extract Data from Forms

