

## Develop Generative AI Solutions with Azure OpenAI Service (AI-050)

Duration: 1 Day    Course Code: M-AI050

### Overview:

Azure OpenAI Service provides access to OpenAI's powerful large language models such as ChatGPT, GPT, Codex, and Embeddings models. These models enable various natural language processing (NLP) solutions to understand, converse, and generate content. Users can access the service through REST APIs, SDKs, and Azure OpenAI Studio.

### Target Audience:

The audience for this course includes software developers and data scientists who need to use large language models for generative AI. Some programming experience is recommended, but the course will be valuable to anyone seeking to understand how the Azure OpenAI service can be used to implement generative AI solutions.

### Objectives:

- Students will learn how to,
- Get started with Azure OpenAI Service
- Build natural language solutions with Azure OpenAI Service
- Apply prompt engineering with Azure OpenAI Service
- Generate code with Azure OpenAI Service
- Generate images with Azure OpenAI Service
- Implement Retrieval Augmented Generation (RAG) with Azure OpenAI Service
- Fundamentals of Responsible Generative AI

### Prerequisites:

Before starting this learning path, you should already have:

- Familiarity with Azure and the Azure portal.
- Experience programming with C# or Python. If you have no previous programming experience, we recommend you complete the Take your first steps with C# or Take your first steps with Python learning path before starting this one.

## Content:

### Module 1 : Get started with Azure OpenAI Service

- Create an Azure OpenAI Service resource and understand types of Azure OpenAI base models.
- Use the Azure OpenAI Studio, console, or REST API to deploy a base model and test it in the Studio's playgrounds.
- Generate completions to prompts and begin to manage model parameters.

### Module 2 : Build natural language solutions with Azure OpenAI Service

- Integrate Azure OpenAI into your application
- Differentiate between different endpoints available to your application
- Generate completions to prompts using the REST API and language specific SDKs

### Module 3 : Apply prompt engineering with Azure OpenAI Service

- Understand the concept of prompt engineering and its role in optimizing Azure OpenAI models' performance.
- Know how to design and optimize prompts to better utilize AI models.
- Include clear instructions, request output composition, and use contextual content to improve the quality of the model's responses.

### Module 4 : Generate code with Azure OpenAI Service

- Use natural language prompts to write code
- Build unit tests and understand complex code with AI models
- Generate comments and documentation for existing code

### Module 5 : Generate images with Azure OpenAI Service

- Describe the capabilities of DALL-E in the Azure openAI service
- Use the DALL-E playground in Azure OpenAI Studio
- Use the Azure OpenAI REST interface to integrate DALL-E image generation into your apps

### Module 6 : Implement Retrieval Augmented Generation (RAG) with Azure OpenAI Service

- Describe the capabilities of Azure OpenAI on your data
- Configure Azure OpenAI to use your own data
- Use Azure OpenAI API to generate responses based on your own data

### Module 7: Fundamentals of Responsible Generative AI

- Describe an overall process for responsible generative AI solution development
- Identify and prioritize potential harms relevant to a generative AI solution
- Measure the presence of harms in a generative AI solution
- Mitigate harms in a generative AI solution
- Prepare to deploy and operate a generative AI solution responsibly

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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