

MS-AI3016: DEVELOP GENERATIVE AI APPS IN AZURE AI FOUNDRY PORTAL



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Azure AI	Instructor-led	NA

INTRODUCTION

Generative Artificial Intelligence (AI) is becoming more accessible through easy-to-use platforms like Azure AI Studio Foundry. Learn how to build generative AI applications that use language models and prompt flow to provide value to your users.

AUDIENCE PROFILE

This course is ideal for anyone looking to enhance their skills in developing advanced AI applications, particularly using Azure AI Studio.

PREREQUISITES

Before starting this module, you should be familiar with fundamental AI concepts and services in Azure. Consider completing the [Get started with Artificial Intelligence Learning](#) path first.

COURSE OBJECTIVES

After attending this course, delegates will be able to:

- Learn to use the core features and capabilities of Azure AI Foundry.
- Understand how to provision and manage AI resources and projects within Azure AI Foundry.
- Create and manage language model applications using prompt flow.
- Enhance language models with custom data using RAG techniques.
- Identify and mitigate potential harms in generative AI solutions.
- Gain Practical experience through hands-on labs to reinforce theoretical knowledge.

COURSE CONTENT

Module 1: Introduction to Azure AI Foundry

Microsoft Azure offers multiple services that enable developers to build amazing AI-powered solutions. Azure AI Foundry brings these services together in a single unified experience for AI development and the Azure cloud platform.

Lessons

- Introduction.
- What is Azure AI Foundry?
- How does Azure AI Foundry work?
- When to use Azure AI Foundry.
- Exercise - Explore Azure AI Foundry portal.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Describe core features and capabilities of Azure AI Foundry.
- Use Azure AI Foundry to provision and manage an Azure AI resource.

- Use Azure AI Foundry to create and manage an AI project.
- Understand when to use Azure AI Foundry.

Module 2: Explore and deploy models from the model catalog in Azure AI Foundry Portal

Explore the various language models that are available through the Azure AI Foundry's model catalog. Understand how to select, deploy, and test a model, and to improve its performance.

Lessons

- Introduction.
- Explore the language models in the model catalog.
- Deploy a model to an endpoint.
- Improve the performance of a language model.
- Exercise - Explore, deploy, and chat with language models.
- Knowledge check
- Summary.

By the end of this module, you'll be able to:

- Select a language model from the model catalog.
- Deploy a model to an endpoint.
- Test a model and improve the performance of the model.

Module 3: Get started with prompt flow to develop language model apps in the Azure AI Foundry

Learn about how to use prompt flow to develop applications that leverage language models in the Azure AI Foundry.

Lessons

- Introduction.
- Understand the development lifecycle of a large language model (LLM) app.
- Understand core components and explore flow types.
- Explore connections and runtimes.
- Explore variants and monitoring options.
- Exercise - Get started with prompt flow.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Understand the development lifecycle when creating language model applications.
- Understand what a flow is in prompt flow.
- Explore the core components when working with prompt flow.

Module 4: Build a RAG-based copilot solution with your own data using Azure AI Foundry

Agents can work alongside you to provide suggestions, generate content, or help you make decisions. Agents use language models as a form of generative artificial intelligence (AI) and will answer your questions using the data they were trained on. To ensure an agent retrieves information from a specific source, you can add your own data when building an agent with the Azure AI Foundry.

Lessons

- Introduction.
- Understand how to ground your language model.
- Make your data searchable.
- Build an agent with prompt flow.
- Exercise - Create a custom agent that uses your own data.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Identify the need to ground your language model with Retrieval Augmented Generation (RAG).
- Index your data with Azure AI Search to make it searchable for language models.
- Build an agent using RAG on your own data in the Azure AI Foundry portal.

Module 5: Fine-tune a language model with Azure AI Foundry

Train a base language model on a chat-completion task. The model catalog in the Azure AI Foundry offers many open-source models that can be fine-tuned for your specific model behaviour needs.

Lessons

- Introduction.
- Understand when to fine-tune a language model.
- Prepare your data to fine-tune a chat completion model.
- Explore fine-tuning language models in Azure AI Foundry.
- Exercise - Fine-tune a foundation model.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Understand when to fine-tune a model.
- Prepare your data to fine-tune a chat completion model.
- Fine-tune a base model in the Azure AI Foundry portal.

Module 6: Evaluate the performance of your custom copilot in the Azure AI Foundry

Evaluating copilots is essential to ensure your generative AI applications meet user needs, provide accurate responses, and continuously improve over time. Discover how to assess and optimize the performance of your generative AI applications using the tools and features available in the Azure AI Studio.

Lessons

- Introduction.
- Assess the model performance.
- Manually evaluate the performance of a model.
- Assess the performance of your generative AI apps.

- Exercise - Evaluate the performance of your generative AI app.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Understand model benchmarks.
- Perform manual evaluations.
- Assess your generative AI apps with AI-assisted metrics.
- Configure evaluation flows in the Azure AI Foundry portal.

Module 7: Responsible generative AI

Generative AI enables amazing creative solutions but must be implemented responsibly to minimize the risk of harmful content generation.

Lessons

- Introduction.
- Plan a responsible generative AI solution.
- Identify potential harms.
- Measure potential harms.
- Mitigate potential harms.
- Operate a responsible generative AI solution.
- Exercise - Explore content filters in Azure AI Studio.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- 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.

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course.