

Build a Copilot App in a Day with Azure OpenAI

Duration: 16 Hours (2 Days)

Overview

The "Build a Copilot App in a Day with Azure OpenAI" course is designed to empower learners with the skills needed to create intelligent applications using Azure OpenAI's services. It covers the language, code, and image capabilities of Azure OpenAI, emphasizing responsible AI practices and compliance with limited access policies. Participants will gain hands-on experience through labs, such as creating Azure OpenAI resources and accessing the Playground. Learners will explore the workflow for Copilot Creation by integrating Azure Storage Account, Azure Cognitive Search, App Services, and App Service Plans. The course delves into effective prompting techniques, teaching iterative, summarization, inference, and transformation methods to refine interactions with AI models. Advanced topics include designing prompt flows using Azure Machine Learning Studio, understanding and applying the Semantic Kernel, and integrating chat plugins. Through various labs, participants will learn to add skillsets, memories, and use connectors in the Semantic Kernel, as well as chain functions and integrate Bing with Azure OpenAI. By the end of the course, learners will be able to deploy a sophisticated chat copilot and leverage Azure OpenAI Studio for building robust AI-powered applications, enhancing their skillset in the burgeoning field of AI and machine learning.

Audience Profile

The "Build a Copilot App in a Day with Azure OpenAI" course offers insights into Azure's AI capabilities and practical labs for building intelligent apps.

Target audience for the course includes:

Software Developers seeking to integrate AI into applications

AI and Machine Learning Enthusiasts exploring Azure OpenAI

Solution Architects designing AI-powered systems

Data Scientists interested in applying OpenAI models

Cloud Engineers focusing on Azure services and AI implementation

Product Managers overseeing AI app development

DevOps Engineers learning about Azure AI deployment

IT Professionals expanding their knowledge in AI and cloud services

Technical Leads guiding teams in AI projects

Business Analysts understanding AI application in business solutions

AI Researchers studying the application of OpenAI models in the real world

Course Syllabus

Pre-requisites:

- Familiarity with Azure and the Azure portal.

- Experience programming with C# or Python.
- Python Check: <https://learn.microsoft.com/en-us/training/paths/beginner-python/>
- C# Check: <https://learn.microsoft.com/en-us/training/paths/get-started-c-sharp-part-1/>

Module 01: Introduction to Azure OpenAI

- Azure OpenAI's language, code, and image capabilities
- Azure OpenAI's responsible AI practices and limited access policies
- Types of Azure OpenAI's base model and its deployment
- Lab: Creation of Azure OpenAI resource/OpenAI & accessing Playground

Module 02: Chat Copilot using Azure OpenAI Studio

- Brief of Azure Storage Account, Azure Cognitive Search, App Services & App Service Plans
- Basic workflow for Copilot Creation
- Lab: Build your own Chat Copilot using various Azure Services (Azure Portal)

Module 03: Art of Effective Prompting Techniques

- Understanding Text Prompting
- Iterative Techniques for Text Prompting
- Using Summarization Techniques
- Inference Techniques in Text Prompting
- Transformation Techniques for Text
- Exercise/Documentation: Effective Prompting Techniques (Jupyter notebook)

Module 04: Prompt Flow Design using Azure Machine Learning Studio

- Introduction to Azure Machine Learning Studio
- Introduction to Prompt flow
- Lab: Prompt flow design and implementation

Module 05: Introduction to Semantic Kernel

- Introduction to Semantic Kernel
- Working and Components of Semantic Kernel
- Concept of Chat Plugin & its Integration into Applications
- Integrating Semantic Kernel with Azure OpenAI models
- Introduction to Autogen in Semantic Kernel
- Native Functions
- Chaining Functions using Azure OpenAI
- Lab: Basic Labs on Semantic Functions
- Lab: Adding skillsets to Semantic Kernel
- Lab: Adding memories to Semantic Kernel
- Lab: Using connectors in Semantic Kernel
- Lab: Chaining concept in Semantic Kernel
- Lab: Integrating Bing with Azure OpenAI using Semantic Kernel