DW-104 - Build and extend your own agents using pro-code capabilities

Duration 12 hrs

Agenda:

- Extend Microsoft 365 Copilot with declarative agents
- The Copilot Stack
- Microsoft 365 Copilot - extensibility options
  - Declarative agents
  - Custom engine agents
- Building declarative agents using natural language coding approach
- Building declarative agents using Teams Toolkit for Visual Studio
- Adding skills with plugins
- Extending Copilot's knowledge through Microsoft Graph connectors
- Building your own agents using Copilot Studio (natural language coding approach)
- **Build custom engine agents with Teams AI and Microsoft 365 Agents SDK**
  - Developing agents on your custom engine using Teams AI Library
  - Developing agents using Microsoft 365 Agents SDK

Course Plan and Learning Objectives

Day 1
Extend Microsoft 365 Copilot and develop custom engine agents

Module 1
Extend Microsoft 365 Copilot with declarative agents
The Copilot Stack
Microsoft 365 Copilot - extensibility options
- Declarative agents
- Custom engine agents
Building declarative agents using natural language coding approach
Building declarative agents using Teams Toolkit for Visual Studio
Adding skills with plugins
Extending Copilot's knowledge through Microsoft Graph connectors
Building your own agents using Copilot Studio (natural language coding approach)

Module 2
Build custom engine agents with Teams AI library and Microsoft 365 Agents SDK
Developing agents on your custom engine using Teams AI Library
Developing agents using Microsoft 365 Agents SDK

Hands on Labs
Streamlining IT Support Operations with Autonomous Copilot Agent using Copilot Studio
Build a declarative agent for Microsoft 365 Copilot using Teams Toolkit
Build your first custom Microsoft Graph connector

Day 2
Develop your own agents with Azure AI Foundry

Module 3
Develop your own agents with Azure AI Foundry
Understanding Azure AI Foundry and Azure AI Foundry SDK
Develop AI agents with Azure AI Agent Service in Azure AI Foundry
Explore and deploy models from the model catalog in Azure AI Foundry portal
Getting started with prompt flow in the Azure AI Foundry
Implementing Retrieval Augmented Generation (RAG)
Fine-tuning in Azure AI Foundry
Understanding Synthetic data generation and Distillation
Understanding Retrieval-Augmented Fine-Tuning
Evaluate the performance of your custom agent in Azure AI Foundry

Hands on Labs
Build, evaluate and deploy a RAG-based agent with the prompt flow in Azure AI Foundry

Day 3
Build your own multi agents with Semantic Kernel or AutoGen and implement security and governance

Module 4
Build your own multi agents with Semantic Kernel or AutoGen
Understanding Semantic Kernel
Adding AI services to Semantic Kernel
What are Filters and Semantic Kernel Vector Store connectors?
Prompt Engineering with Semantic Kernel
Create plugins for Semantic Kernel
Semantic Kernel Frameworks
AutoGen Framework

Module 5
Secure and govern copilots and agents
Securing and governing copilots with Microsoft Security
Implementing Responsible AI, Trustworthy AI and AI Safety

Hands on Labs
Build a custom engine agent to chat with your data using Teams AI library and Teams Toolkit
Creating a Custom AI Agent with Azure AI Foundry and Search Integration
Develop a Contoso AI Travel Agent with Azure OpenAI and the Semantic Kernel SDK