

Training Program

AI-3026: Develop AI agents on Azure

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DESCRIPTION OF THE TRAINING:

This course will teach you how to build, deploy, and manage intelligent AI agents using Azure AI Foundry. You learned how to integrate advanced AI capabilities through agents into scalable and customizable solutions.

TRAINING OBJECTIVES:

At the end of this training, participants will be able to:

- Develop AI agents on Azure

TEACHING METHODS :

- This training will mainly consist of theory and technical workshops that will allow you to be quickly operational.
- Support: Official Microsoft course materials will be provided to participants in electronic format.
- Evaluation: The achievements are evaluated throughout the training by the trainer (prerequisites evaluated before the training, regular questions, practical work, MCQs or other methods).
- Trainer: all led by an experienced consultant-trainer, with field experience, and Microsoft Certified Trainer accredited.
- Satisfaction: at the end of the training, each participant answers an evaluation questionnaire which is then analysed with a view to maintaining and improving the quality of our training.
- Follow-up: one attendance sheet for each half-day of attendance is signed by each participant.
- This training can be provided in an inter-company or intra-company format on request and in face-to-face or distance mode.

TRAINING PROGRAM:

Get started with AI agent development on Azure

- Describe the fundamental concepts related to AI assistants
- Describe wizard development options
- Create and test an agent in the Microsoft Foundry portal

Develop an AI agent with the Microsoft Foundry Agent service

- Describe the purpose of AI agents
- Explain the key features of the Microsoft Foundry Agent service

- Create an agent using the Foundry Agent Service
- Integrate a Foundry Agent Service agent with your own application.

Develop AI agents with the Microsoft Foundry extension in Visual Studio Code

- Configure and deploy AI agents using the agent designer
- Add tools and features to extend the functionality of your agents
- Test agents using the built-in playground
- Generate sample code to integrate agents into applications

Integrate custom tools with your agent

- Describe the benefits of using custom tools with your agent.
- Explore the different options for custom tools.
- Create an agent that integrates with custom tools by using the Microsoft Foundry Agent service.³

Develop a multi-agent solution with the Microsoft Foundry Agent service

- Describe how connected agents enable modular, collaborative workflows.
- Design a multi-agent solution by defining the primary agent tools and connected agent roles.
- Build and run a connected agent solution

Integrate MCP Tools with Azure AI Agents

- Explain the roles of the MCP server and client in discovering and calling tools.
- Encapsulate MCP tools as asynchronous functions and register them with Azure AI agents.
- Create an Azure AI agent that dynamically accesses and invokes MCP tools during runtime.

Develop an AI agent with the Microsoft Agent Framework

- Use the Microsoft Agent Framework to connect to a Microsoft Foundry project
- Create Microsoft Foundry Agent service agents by using the Microsoft Agent Framework SDK
- Integrate plug-in features with your AI agent

Orchestrate a multi-agent solution using the Microsoft Agent Framework

- Create AI agents using the Microsoft Agent Framework SDK
- Understand how and when to use different orchestration models
- Develop multi-agent solutions

Discover Azure AI agents with A2A

- Understand the A2A protocol and its role in multi-agent orchestration.
- Design discoverable agents for modular, collaborative problem solving.
- Implement A2A policies to discover and invoke remote agents.

Create agent-driven workflows using Microsoft Foundry

- Explain how agent nodes, variables, and outputs control workflow execution
- Route queries using structured output and conditional logic
- Loop across multiple inputs with For-Each nodes
- Put a human in the loop and escalation patterns for low-trust items
- Use Power Fx expressions to manipulate data and control flow.

Build knowledge-enriched AI agents with Foundry IQ

- Explain how RAG solves the knowledge problem by connecting agents to real-time information
- Describe how Foundry IQ provides a shared knowledge platform that multiple agents can access
- Configure data sources for knowledge bases, including Azure AI Search, Blob Storage, SharePoint, and OneLake
- Configure agent statements to control retrieval behavior and ensure consistent citations
- Test and monitor agent recovery to maintain quality in production

Integrate MCP Tools with Azure AI Agents

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PREREQUISITES:

The candidate for this course should have a basic understanding of programming and cloud technologies.

DURATION: 1 day (7 hours)

CONTACT PERSONS: AI engineers, developers.

LEVEL: Intermediate