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Building AI Agents with Azure AI Foundry and Copilot Studio

Class Duration

21 hours of live training delivered over 3 days.

Student Prerequisites

- Professional software development experience (C#, Python, or TypeScript is helpful)
- Familiarity with REST APIs and cloud fundamentals
- An Azure subscription with access to Azure AI Foundry

Target Audience

Developers, solution architects, and platform teams building enterprise AI agents on Microsoft's stack. Relevant for teams creating low-code agents in Copilot Studio that extend Microsoft 365 Copilot with enterprise data, and for engineers building pro-code agents on Microsoft Foundry (Azure AI Foundry) with the Foundry Agent Service. Equally useful for organizations standardizing agent governance, evaluation, and deployment across the Microsoft ecosystem.

Description

Microsoft Foundry (formerly Azure AI Foundry) provides a unified, Azure-based platform for enterprise AI: model deployment, agents, governance, monitoring, and evaluation under one framework. This three-day course teaches building agents two complementary ways. The low-code path uses Copilot Studio to author agents in a graphical environment, automate workflows through Power Platform, and extend Microsoft 365 Copilot with enterprise data. The pro-code path uses the Foundry Agent Service and the Foundry Toolkit for VS Code to create, test, and debug agents with full trace visualization, then deploy them. The course covers connecting agents to tools, knowledge, and external systems, multi-agent orchestration with the Microsoft Agent Framework and patterns such as Magentic-One, selecting and deploying models from the Foundry catalog, evaluating agents at scale



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before release, and applying content safety, identity, governance, and monitoring for enterprise deployment.

Learning Outcomes

- Navigate Microsoft Foundry: projects, the model catalog, and the Foundry Agent Service.
- Build low-code agents in Copilot Studio and extend Microsoft 365 Copilot with enterprise data.
- Build pro-code agents with the Foundry Agent Service and the Foundry Toolkit for VS Code.
- Connect agents to tools, knowledge, and external systems through Power Automate, plugins, and MCP.
- Orchestrate multi-agent systems with the Microsoft Agent Framework and patterns such as Magentic-One.
- Select and deploy models from the Foundry catalog with sound cost and performance tradeoffs.
- Evaluate agents at scale for reliability, hallucination, and policy compliance before deployment.
- Apply content safety, identity, governance, and monitoring controls for enterprise deployment.

Training Materials

Comprehensive courseware is distributed online at the start of class. All students receive a downloadable MP4 recording of the training.

Software Requirements

An Azure subscription with Azure AI Foundry access, Copilot Studio access and a Microsoft 365 tenant for the Microsoft 365 Copilot topics, VS Code with the Foundry Toolkit, .NET and/or Python, the Azure CLI, and Git.

Training Topics

Microsoft Foundry and the Agent Platform in 2026

- Microsoft Foundry as a unified enterprise AI platform
- Low-code and pro-code paths to building agents
- How Copilot Studio, the Foundry Agent Service, and Microsoft 365 Copilot relate
- Reference architectures for enterprise agents



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Foundry Projects, Model Catalog, and Deployment

- Projects, resources, and workspace organization
- The model catalog and choosing a model
- Deploying and versioning models
- Cost and capacity considerations

Low-Code Agents with Copilot Studio

- The graphical agent-building environment
- Topics, triggers, and conversational flows
- Actions and Power Automate integration
- Publishing and channel configuration

Extending Microsoft 365 Copilot

- Grounding Copilot in enterprise data
- Declarative agents and connectors
- Scoping access and permissions
- Surfacing agents inside Microsoft 365

Connecting Tools, Knowledge, and Data

- Tool and plugin connections
- Knowledge sources and grounding
- Model Context Protocol (MCP) integration
- External systems through Power Platform

Pro-Code Agents with the Foundry Agent Service

- The Foundry Agent Service model
- Defining agents, tools, and instructions in code
- Threads, runs, and state
- Integrating the GitHub Copilot and Claude Agent SDKs

The Foundry Toolkit for VS Code

- Creating agents from templates or with GitHub Copilot
- Running and debugging locally with trace visualization
- Inspecting agent behavior step by step
- Deploying to the Foundry Agent Service

Multi-Agent Orchestration

- The Microsoft Agent Framework
- Orchestration patterns including Magentic-One

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- Supervisor, worker, and handoff designs
- Coordinating and merging multi-agent work

Retrieval and Grounding on Enterprise Data

- Indexing and retrieval over enterprise content
- Citations and source attribution
- Freshness and access control
- Evaluating grounding quality

Agent Evaluation at Scale

- Simulating large volumes of interactions
- Measuring reliability and hallucination rates
- Checking compliance with corporate policy
- Gating deployment on evaluation results

Content Safety and Guardrails

- Azure AI Content Safety integration
- Input and output moderation
- Prompt injection and scope controls
- Safe handling of sensitive data

Identity, Governance, and Monitoring

- Identity and access with Microsoft Entra
- Governance, auditing, and policy
- Monitoring, tracing, and cost tracking
- Operations and lifecycle management