Design and implement multi-agent AI solutions (AI-500T00) Training

Duration: **4 Day**

BİLGİNÇ IT Academy
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The **Design and Implement Multi-Agent AI Solutions (AI-500T00)** course equips participants with the practical skills required to architect and develop multi-agent AI solutions using Microsoft Foundry and Azure.

Throughout the course, participants develop expertise in **designing logical architectures for multi-agent systems, building and integrating tool ecosystems, and implementing advanced multi-agent orchestration**. The training also explores how monitoring, security, and governance capabilities can be incorporated into enterprise AI solutions.

Delivered by Bilginç IT Academy, this course focuses on developing scalable, production-ready**multi-agent AI systems**.

Prerequisites

- Completion of **AI-103: Develop AI Agents on Azure** and **AI-300: Operationalize Generative AI Applications**, or equivalent knowledge
- Experience with OpenTelemetry instrumentation, Azure Monitor, and Log Analytics workspaces
- Familiarity with Microsoft Foundry agent evaluation runs and portal-based evaluation workflows
- Hands-on experience using GitHub Actions to implement**CI/CD pipelines**
- Basic knowledge of Power Automate workflow design
- Proficiency in **Python programming**

Who Should Attend

This course is intended for expert-level practitioners with specialized experience in designing, developing, and optimizing scalable, production-ready **multi-agent AI systems, solutions, and workflows**.

It is particularly suitable for professionals who collaborate closely with developers, machine learning engineers, platform engineers, data scientists, and business stakeholders to transform complex business requirements into production-ready multi-agent AI solutions.

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Training Outline

Architect Production-Ready Multi-Agent AI Solutions on Azure

- Design stateful agentic loops using Microsoft Foundry Agent Service
- Implement advanced **multi-agent orchestration patterns** within Microsoft Foundry
- Develop task decomposition and agent collaboration strategies in Microsoft Foundry
- Design enterprise-scale agent communication on Azure using **Agent-to-Agent (A2A)**

Develop Production-Grade Multi-Agent Capabilities with Microsoft Foundry

- Design advanced prompting strategies for production-ready AI agents
- Create enterprise-grade tool ecosystems using **Model Context Protocol (MCP)** and Microsoft Foundry
- Implement advanced **Retrieval-Augmented Generation (RAG)** pipelines with Azure AI Search and Microsoft Foundry
- Architect multi-agent memory solutions using Azure Cosmos DB

Deploy and Govern Enterprise Agentic AI Solutions on Azure

- Implement CI/CD pipelines for multi-agent systems using GitHub Actions
- Protect multi-agent systems through Azure **Zero Trust architecture**
- Scale responsible AI governance using Azure AI Content Safety and Microsoft Foundry
- Manage and govern the enterprise AI agent lifecycle within Microsoft Foundry

Monitor, Evaluate, and Operate Multi-Agent AI Solutions on Azure

- Implement **distributed observability** across multi-agent solutions using OpenTelemetry
- Design evaluation frameworks for multi-agent systems with Microsoft Foundry
- Optimize multi-agent system performance and operational costs in Microsoft Foundry
- Create **Human-in-the-Loop (HITL)** approval workflows using Power Automate and Microsoft Teams
- Troubleshoot and respond to multi-agent incidents in Azure production environments