training code: AI-103 / ENG DL 4d / EN

Develop AI apps and agents on Azure

This course is intended for software developers wanting to build AI infused applications that leverage Microsoft Foundry. Topics in this course include developing generative AI apps, building AI agents, and solutions that implement knowledge connections or tools in your agentic applications. This course also covers multimodal capabilities and understanding of complex content.

Training recipients

The training is intended for:

- AI Engineers
- Developers

Benefits

By completing this course, students will achieve the following objectives:

- Build & Orchestrate AI Agents: Master the creation of multi-step reasoning workflows and autonomous agents using the Semantic Kernel and Azure AI Foundry.
- Implement Advanced RAG: Learn to connect AI models to enterprise data using knowledge connections, ensuring grounded and accurate AI responses.
- Deploy Generative AI Apps: Gain proficiency in the full lifecycle of AI applications, from selecting models in the Foundry catalog to production-scale deployment.
- Master Prompt Engineering & Evaluation: Optimize model performance through advanced prompt patterns and evaluate AI outputs for safety and accuracy using Responsible AI safeguards.
- Handle Multimodal Content: Develop solutions that process and generate complex content across text, speech, and vision data.

Training program

1.Develop generative AI apps in Azure

- Plan and prepare to develop AI solutions on Azure
- Select, deploy, and evaluate Microsoft Foundry model
- Develop a generative AI chat app with Microsoft Foundry
- Develop generative AI apps that use tools
- Optimize generative AI model performance with Microsoft Foundry
- Implement a responsible generative AI solution in Microsoft Foundry

2.Develop AI agents on Azure

- Develop AI agents with Microsoft Foundry and Visual Studio Code
- Integrate custom tools into your agent
- Integrate MCP Tools with Azure AI Agents
- Build knowledge-enhanced AI agents with Foundry IQ
- Integrate your agent with Microsoft 365
- Build agent-driven workflows using Microsoft Foundry
- Develop an AI agent with Microsoft Agent Framework
- Orchestrate a multi-agent solution using the Microsoft Agent Framework
- Discover Azure AI Agents with A2A

3.Develop natural language solutions in Azure

- Analyze text with Azure Language in Foundry Tools
- Develop a text analysis agent with the Azure Language MCP server
- Develop a speech-capable generative AI application
- Create speech-enabled apps with Azure Speech in Microsoft Foundry Tools
- Develop a speech agent with the Azure Speech MCP server
- Develop an Azure Speech Voice Live Agent in Microsoft Foundry
- Translate text and speech with Microsoft Foundry Tools

4.Extract insights from visual data on Azure

- Develop a vision-enabled generative AI application
- Generate images with AI
- Generate videos with Microsoft Foundry
- Analyze images with Content Understanding
- Create a multimodal analysis solution with Azure Content Understanding
- Create an Azure Content Understanding client application
- Extract data with Azure Document Intelligence
- Create a knowledge mining solution with Azure AI Search

Expected preparation of the participant

This course was designed for software engineers concerned with building, managing and deploying AI solutions that leverage Microsoft Foundry. They are familiar with Python and have knowledge on using APIs and SDKs to build agents and generative AI solutions on Azure.
To increase the comfort of work and training’s effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.
You can find information and requirements of participation in Distance Learning trainings at: https://www.altkomakademia.pl/en/how-it-works/about-courses/



Training Includes

- manual in electronic form available on the platform: https://learn.microsoft.com/pl-pl/training/
- access to Altkom Akademia's student portal

Training method:

- Lecture and product presentation (50%)
- Exercise (50%)



Duration

4 days / 28 hours

Language

- Training: English
- Materials: English