AI 3003- Develop Natural Language Solutions in Azure

Days: 1

Prerequisites: Familiarity with Azure and the Azure portal. Experience programming with C# or Python.

Description: Natural language processing (NLP) solutions use language models to interpret the semantic meaning of written or spoken language. You can use the Language Understanding service to build language models for your applications.

OUTLINE:

LESSON 1: ANALYZE TEXT WITH AZURE LANGUAGE IN FOUNDRY TOOLS

- Azure Language in Microsoft Foundry Tools
- Detect language
- Extract key phrases
- Analyze sentiment
- Extract entities
- Extract linked entities
- Module assessment

LESSON 2: DEVELOP A TEXT ANALYSIS AGENT WITH THE AZURE LANGUAGE MCP SERVER

- Understand the Azure Language MCP server
- Connect and use the Language MCP server with an agent

LESSON 3: DEVELOP A SPEECH-CAPABLE GENERATIVE AI APPLICATION

- Choose a speech-capable model
- Transcribe speech
- Synthesize speech
- Module assessment

LESSON 4: CREATE SPEECH-ENABLED APPS WITH AZURE SPEECH IN MICROSOFT FOUNDRY TOOLS

- Azure Speech in Foundry Tools
- Use the Speech to Text API
- Use the Text to Speech API
- Configure audio format and voices
- Use Speech Synthesis Markup Language
- Module assessment

LESSON 5: DEVELOP A SPEECH AGENT WITH THE AZURE SPEECH MCP SERVER

- Understand the Azure Speech MCP server
- Connect and use the Speech MCP server with an agent

LESSON 6: DEVELOP AN AZURE SPEECH VOICE LIVE AGENT IN MICROSOFT FOUNDRY

- Explore the Azure Voice Live API
- Explore the AI Voice Live client library for Python
- Create a Voice Live agent
- Module assessment

LESSON 7: TRANSLATE TEXT AND SPEECH WITH MICROSOFT FOUNDRY TOOLS

- Translation in Microsoft Foundry
- Translate text
- Translate speech
- Module assessment