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Learning Style: Virtual Classroom

Technology: Microsoft

Difficulty: Intermediate

Course Duration: 1 Day

Build a natural language processing solution with Azure AI Services (AI-3003)

About This Course:

The AI-3003 training focuses on using Azure AI Services to construct NLP solutions. It covers the application of Azure Cognitive Services, such as Language Understanding (LUIS) and Text Analytics, for extracting insights from text, building

chatbots, and automating Q&A tasks. Participants learn to implement sentiment analysis, language detection, translation services, and apply custom machine learning models. The training aims to equip learners with skills to leverage Azure's AI capabilities for real-world language processing tasks, following best practices in model training and deployment.

Course Objectives:

- Analyze text with Azure AI Language
- Build a question answering solution
- Build a conversational language understanding model
- Create a custom text classification solution
- Create a custom named entity extraction solution
- Translate text with Azure AI Translator service
- Create speech-enabled apps with Azure AI services
- Translate speech with the Azure AI Speech service

Audience:

- Data scientists and AI professionals
- Cloud solution architects
- Developers interested in NLP
- IT professionals working on Azure
- Individuals seeking AI implementation skills
- Technical managers overseeing AI projects
- Professionals looking to upskill in AI/ML on Azure

Prerequisites:

- Basic understanding of machine learning concepts
- Familiarity with Azure fundamentals
- Experience with Python programming
- Knowledge of REST APIs
- Grasp of data science workflows
- Prior exposure to NLP principles
- Comfort with Azure Cognitive Services

Course Outline:

Analyze text with Azure AI Language

- Provision an Azure AI Language resource
- Detect language
- Extract key phrases
- Analyze sentiment
- Extract entities
- Extract linked entities

Build a question answering solution

- Understand question answering
- Compare question answering to Azure AI Language understanding
- Create a knowledge base
- Implement multi-turn conversation
- Test and publish a knowledge base
- Use a knowledge base
- Improve question answering performance

Build a conversational language understanding model

- Understand prebuilt capabilities of the Azure AI Language service
- Understand resources for building a conversational language understanding model
- Define intents, utterances, and entities
- Use patterns to differentiate similar utterances
- Use pre-built entity components
- Train, test, publish, and review a conversational language understanding model

Create a custom text classification solution

- Understand types of classification projects
- Understand how to build text classification projects

Create a custom named entity extraction solution

- Understand custom named entity recognition
- Label your data
- Train and evaluate your model

Translate text with Azure AI Translator service

- Provision an Azure AI Translator resource

- Understand language detection, translation, and transliteration
- Specify translation options
- Define custom translations

Create speech-enabled apps with Azure AI services

- Provision an Azure resource for speech
- Use the Azure AI Speech to Text API
- Use the text to speech API
- Configure audio format and voices
- Use Speech Synthesis Markup Language

Translate speech with the Azure AI Speech service

- Provision an Azure resource for speech translation
- Translate speech to text

- Synthesize translations