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Technology: Microsoft
Difficulty: Intermediate
Course Duration: 1 Day

# **Build a natural language processing solution with Azure Al Services (Al-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 Al 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 Al Translator service
- Create speech-enabled apps with Azure AI services
- Translate speech with the Azure Al Speech service

#### **Audience:**

- Data scientists and Al professionals
- Cloud solution architects
- Developers interested in NLP
- IT professionals working on Azure
- Individuals seeking AI implementation skills
- Technical managers overseeing Al 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 Al Language

- Provision an Azure Al 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 Al 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 Al 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 Al Translator service

- Provision an Azure Al 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 Al 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 Al Speech service

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

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