

**Develop Natural Language Processing Solutions with Azure AI Services (AI-3003)**

**Course Number:** MOC-AI-3003
**Duration:** 1 day

**Overview**

This official Microsoft course, Develop Natural Language Processing Solutions with Azure AI Services (AI-3003), teaches attendees how to leverage natural language processing (NLP) solutions that use language models to interpret the semantic meaning of written or spoken language. Students learn how to use the Language Understanding service to build application language models.

**Prerequisites**

* Familiarity with Azure and the Azure portal
* Experience programming with C# or Python

**Materials**

All Microsoft Azure AI training students receive Microsoft official courseware.

For all Microsoft Official Courses taught in their entirety that have a corresponding certification exam, an exam voucher is included for each participant.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

* Use the Azure AI Language service to create intelligent apps and services that extract semantic information from text
* Build applications where users ask questions using natural language and receive appropriate answers
* Build a custom text classification project
* Build a custom entity recognition solution to extract entities from unstructured documents
* Create intelligent apps and services that can translate text between languages
* Create apps that are capable of speech recognition and speech synthesis
* Return translations of the transcription in one or more other languages

**Outline**

* Introduction
* Analyze Text with Azure AI Language
	+ Provision an Azure AI Language resource
	+ Detect language
	+ Extract key phrases
	+ Analyze sentiment
	+ Extract entities
	+ Extract linked entities
	+ Analyze text
* Create Question Answering Solutions with Azure AI Language
	+ 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
	+ Create a question answering solution
* 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
	+ Build an Azure AI services conversational language understanding model
* Create a Custom Text Classification Solution
	+ Understand types of classification projects
	+ Understand how to build text classification projects
	+ Classify text
* Create a Custom Named Entity Extraction Solution
	+ Understand custom named entity recognition
	+ Label your data
	+ Train and evaluate your model
	+ Extract custom entities
* 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
	+ Translate text with the Azure AI Translator service
* 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
	+ Create a speech-enabled app
* Translate Speech with the Azure AI Speech Service
	+ Provision an Azure resource for speech translation
	+ Translate speech to text
	+ Synthesize translations
	+ Translate speech
* Conclusion