

AI-3003: Develop natural language processing solutions with Azure AI Services

Course Details

Course Code: AI-3003

Duration: 1 day

Notes:

- This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.
- Course content, prices, and availability are subject to change without notice.
- Terms and Conditions apply

Elements of this syllabus are subject to change.

About this course

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.

This learning path helps prepare you for Exam AI-102: Designing and Implementing a Microsoft Azure AI Solution.

Prerequisites

Before starting this learning path, you should already have:

- Familiarity with Azure and the Azure portal.
- Experience programming with C# or Python. If you have no previous programming experience, we recommend you complete the Take your first steps with C# or Take your first steps with Python learning path before starting this one.

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Analyze text with Azure AI Language

The Azure AI Language service enables you to create intelligent apps and services that extract semantic information from text.

Learning objectives

In this module, you'll learn how to use the Azure AI Language service to:

- Detect language from text
- Analyze text sentiment
- Extract key phrases, entities, and linked entities

Build a question answering solution

The question answering capability of the Azure AI Language service makes it easy to build applications in which users ask questions using natural language and receive appropriate answers.

Learning objectives

After completing this module, you will be able to:

- Understand question answering and how it compares to language understanding
- Create, test, publish and consume a knowledge base
- Implement multi-turn conversation and active learning
- Create a question answering bot to interact with using natural language

Build a conversational language understanding model

The Azure AI Language conversational language understanding service (CLU) enables you to train a model that apps can use to extract meaning from natural language.

Learning objectives

After completing this module, you'll be able to:

- Provision Azure resources for Azure AI Language resource
- Define intents, utterances, and entities
- Use patterns to differentiate similar utterances
- Use pre-built entity components
- Train, test, publish, and review an Azure AI Language model

Create a custom text classification solution

The Azure AI Language service enables processing of natural language to use in your own app. Learn how to build a custom text classification project.

Learning objectives

After completing this module, you'll be able to:

- Understand types of classification projects
- Build a custom text classification project
- Tag data, train, and deploy a model
- Submit classification tasks from your own app

Custom named entity recognition

Build a custom entity recognition solution to extract entities from unstructured documents

Learning objectives

After completing this module, you'll be able to:

- Understand tagging entities in extraction projects
- Understand how to build entity recognition projects

Translate text with Azure AI Translator service

The Translator service enables you to create intelligent apps and services that can translate text between languages.

Learning objectives

After completing this module, you'll be able to:

- Provision a Translator resource
- Understand language detection, translation, and transliteration
- Specify translation options
- Define custom translations

Create speech-enabled apps with Azure AI services

The Azure AI Speech service enables you to build speech-enabled applications. This module focuses on using the speech-to-text and text to speech APIs, which enable you to create apps that are capable of speech recognition and speech synthesis.

Learning objectives

In this module, you'll learn how to:

- Provision an Azure resource for the Azure AI Speech service

- Use the Azure AI Speech to text API to implement speech recognition
- Use the Text to speech API to implement speech synthesis
- Configure audio format and voices
- Use Speech Synthesis Markup Language (SSML)

Translate speech with the Azure AI Speech service

Translation of speech builds on speech recognition by recognizing and transcribing spoken input in a specified language, and returning translations of the transcription in one or more other languages.

Learning objectives

In this module, you will learn how to:

- Provision Azure resources for speech translation.
- Generate text translation from speech.
- Synthesize spoken translations.