MS-A13003: DEVELOP NATURAL LANGUAGE PROCESSING SOLUTIONS WITH AZURE AI SERVICES

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Azure AI	Instructor Led	NA

INTRODUCTION

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.

PREREQUISITES

Before attending this course, delegates must know:

- 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.

COURSE CONTENT

Module 1: 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.

Lessons

- Introduction.
- Provision an Azure AI Language resource.
- Detect language.
- Extract key phrases.
- Analyze sentiment.
- Extract entities.
- Extract linked entities.
- Exercise - Analyze text.
- Knowledge check.

By the end of this module, you'll be able to:

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

Module 2: 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.

Lessons

- Introduction.
- 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.
- Exercise - Create a question answering solution.
- Knowledge check.

By the end of this module, you'll 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.

Module 3: 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.

Lessons

- Introduction.
- 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.
- Exercise - Build an Azure AI services conversational language understanding model.
- Knowledge check.

By the end of 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.

Module 4: 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.

Lessons

– Introduction.
– Understand types of classification projects.
– Understand how to build text classification projects.
– Exercise - Classify text.
– Knowledge check.

By the end of 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.

Module 5: Create a custom named entity extraction solution

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

Lessons

– Introduction.
– Understand custom named entity recognition.
– Label your data.
– Train and evaluate your model.

Module 8: 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.

Lessons

– Introduction

– Exercise - Extract custom entities.
– Knowledge check.

By the end of this module, you'll be able to:

– Understand custom named entities and how they're labeled.
– Build a Language service project.
– Label data, train, and deploy an entity extraction model.
– Submit extraction tasks from your own app.

Module 6: Translate text with Azure AI Translator service

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

Lessons

– Introduction.
– Provision an Azure AI Translator resource.
– Understand language detection, translation, and transliteration.
– Specify translation options.
– Define custom translations.
– Exercise - Translate text with the Azure AI Translator service.
– Knowledge check.

In this module, you'll practice how to:

– Provision a Translator resource.
– Understand language detection, translation, and transliteration.
– Specify translation options.
– Define custom translations.
– Provision an Azure resource for speech translation.
– Translate speech to text.
– Synthesize translations.
– Exercise - Translate speech.
– Knowledge check.

In this module, you'll practice how to:

– Provision Azure resources for speech translation.

Module 7: 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.

Lessons

– Introduction.
– 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.
– Exercise - Create a speech-enabled app.
– Knowledge check.

In this module, you'll practice how to:

– Provision an Azure AI Translator resource.
– Understand language detection, translation, and transliteration.
– Specify translation options.
– Define custom translations.
– Exercise - Translate text with the Azure AI Translator service.

– Generate text translation from speech.
– Synthesize spoken translations.

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated certification & Exam for this course, however, there is an assessment to achieve your Applied Skills credential. (Assessment Link)