training code: AI-3003 / ENG DL 1d / EN

Develop natural language solutions in Azure

Develop Natural Language Solutions in Azure is an official Applied Skills course that teaches participants how to build intelligent applications based on natural language processing (NLP) using Azure AI Language and Azure AI Speech.

Participants will learn how to design solutions that analyze text, understand conversational language, classify content, and translate both speech and text. The course also covers working with multimodal applications that combine language capabilities with audio features — from speech synthesis to building voice-enabled chat solutions.

The training is delivered in a Distance Learning format and includes hands-on lab exercises as well as a Q&A session with a Microsoft Azure expert.

Training recipients

The training is intended for technical professionals, software developers, and data analysts who want to create modern solutions for natural language and speech processing within the Microsoft Azure environment.

It is especially recommended for:

- Developers and AI engineers who want to build applications using NLP and Azure AI Language services.
- Data scientists planning to develop custom models for text recognition, classification, and analysis.
- Teams developing conversational solutions such as chatbots, FAQ systems, and voice-enabled chat applications.
- Companies implementing AI-powered digital solutions looking to integrate language and speech processing into business applications.
- Individuals pursuing Microsoft Certified AI Engineer roles, interested in mastering Azure language and

speech services.

Benefits

- Building natural language–based applications – learn how to design solutions that analyze text and recognize user intent using Azure AI Language.
- Developing conversational and classification models – discover how to train custom models that answer questions, classify text, and identify named entities.
- Implementing translation and speech recognition features – understand how to convert speech to text, translate spoken or written content in real time, and integrate speech synthesis into your applications.
- Creating AI applications with audio capabilities – gain the skills to build modern, audio-enhanced solutions that combine NLP with multimodal and generative AI features.
- Applying your skills in practice – get hands-on experience with all key functions in the Azure environment through practical labs and ready-to-use deployment scenarios.

Training program

1.Analyze Text with Azure AI Language

- Introduction to text analysis and Azure AI Language platform capabilities
- Preparation and configuration of Azure AI Language resource in your environment
- Language detection in multilingual texts
- Extracting key phrases and main concepts from documents
- Sentiment analysis and emotional tone of texts
- Identification and extraction of entities in content
- Extracting related entities and their relationships
- Labs – comprehensive text analysis

2.Build Question Answering Solutions with Azure AI Language

- Introduction to question answering systems
- Understanding differences between question answering and natural language understanding
- Building and configuring knowledge base for your solution
- Implementing multi-turn conversations with users
- Testing and publishing knowledge base in production environment
- Practical use of knowledge base in applications
- Optimizing question answering system performance
- Labs – creating question answering solution

3.Build Conversational Language Understanding Model

- Introduction to conversational natural language understanding
- Exploring pre-built functionalities of Azure AI Language service
- Preparing resources for building conversational understanding model
- Defining intents, utterances, and entities in your model
- Using patterns to distinguish similar utterances
- Integrating pre-built entity components in solution
- Training, testing, publishing, and improving language understanding model
- Labs – building Azure AI conversational model

4.Create Custom Text Classification Solutions

- Introduction to text classification capabilities
- Understanding different types of classification projects
- Methodology for building text classification projects
- Labs – classifying texts according to custom criteria

5.Custom Named Entity Recognition

- Introduction to custom named entity recognition
- Understanding principles of custom named entity recognition
- Labeling and preparing training data
- Training and evaluating your model’s effectiveness
- Labs – extracting custom entities

6.Translate Text with Azure AI Translator

- Introduction to machine translation capabilities in Azure
- Preparation and configuration of Azure AI Translator resource
- Understanding language detection, translation, and transliteration mechanisms
- Determining translation options and parameters for different scenarios
- Defining and implementing custom translation dictionaries
- Labs – translating texts with Azure AI Translator

7.Create Speech-Enabled Applications with Azure AI Services

- Introduction to speech processing in applications
- Preparing Azure resource for speech functionality
- Using Azure AI Speech to Text API in practice
- Implementing text to speech functionality in applications
- Configuring audio formats and selecting speech synthesis voices
- Using Speech Synthesis Markup Language to control synthesis
- Labs – creating speech-enabled application

8.Translate Speech with Azure AI Speech

- Introduction to real-time speech translation
- Preparing Azure resource for speech translation
- Converting speech to text with simultaneous translation
- Synthesizing translations to audio format
- Labs – implementing speech translation

9.Develop Generative AI Application with Audio Support

- Introduction to multimodal AI applications
- Deploying multimodal model in your environment
- Building chat application with audio support
- Labs – creating chat application with audio features

Expected preparation of the participant

- Familiarity with Microsoft Azure and navigation of the Azure portal
- Proficiency in either C# or Python programming language
- Understanding of JSON and REST programming semantics
- Completion of the introductory courses for C# or Python to gain necessary programming skills
- Consideration of completing the Azure AI Fundamentals (AI-900) certification for an overview of AI capabilities on Azure, if new to artificial intelligence.

Training Includes

Training method:
Theory, demo, exercises

Duration

1 days / 7 hours

Language

- **Szkolenie**: English
- **Materiały**: English