

AI on Cloud



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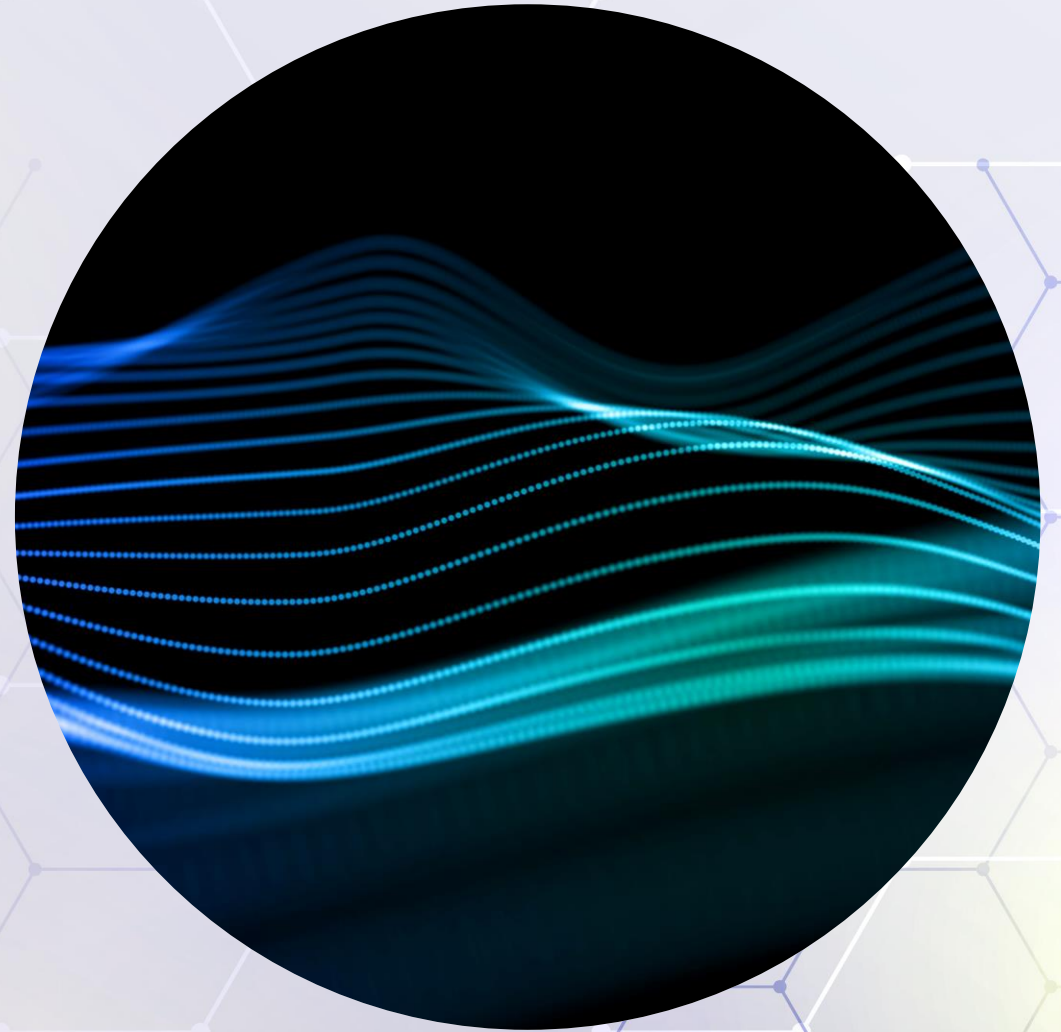


AI on Cloud

Chapter

4

การประมวลผล
ภาษาธรรมชาติ
(Natural Language
Processing (NLP))



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Lab 3: Text Translation and Speech Translation



Text Translation and Speech Translation



Text translation

To translate text from one language to another (Documents, email, web page, etc.)

Speech translation

To translate between spoken languages.
Directly: speech-to-speech translation
Indirectly: speech-to-text translation
(Translating to an intermediary text format)

Translation in Azure

1. The **Translator** service supports text-to-text translation.
2. The **Speech** service enables speech-to-text and speech-to-speech translation.



Text Translation with the Translator Service

- The Translator service ใช้ Neural Machine Translation (NMT) model for translation
- Support text-to-text translation มากกว่า 60 ภาษา
- **กำหนดภาษา *from*** และ ***to*** โดยใช้ ISO 639-1 language codes เช่น *en* for English, *fr* for French.
- สามารถกำหนด cultural variants ของภาษา โดยใช้ 3166-1 cultural code เช่น *en-US* for US English, *en-GB* for British English, or *fr-CA* for Canadian French.
- **สามารถกำหนด การแปลไปหลายภาษาได้ (*multiple to*)**

Speech Translation with the Speech service

The Speech service includes the following APIs:

- Speech-to-text – used to transcribe speech from an audio source to text format.
 - Text-to-speech – used to generate spoken audio from a text source.
 - Speech Translation – used to translate speech in one language to text or speech in another.
- รองรับมากกว่า 60 ภาษา
 - ต้องระบุ Source language พร้อมกำหนด extended language and culture code format เช่น *es-US* for American Spanish
 - This requirement helps ensure that the source is understood properly, allowing for localized pronunciation and linguistic idioms.
 - Target language กำหนดโดย two-character language code เช่น *en* for English หรือ *de* for German.

Lab 3: Text and speech Translation

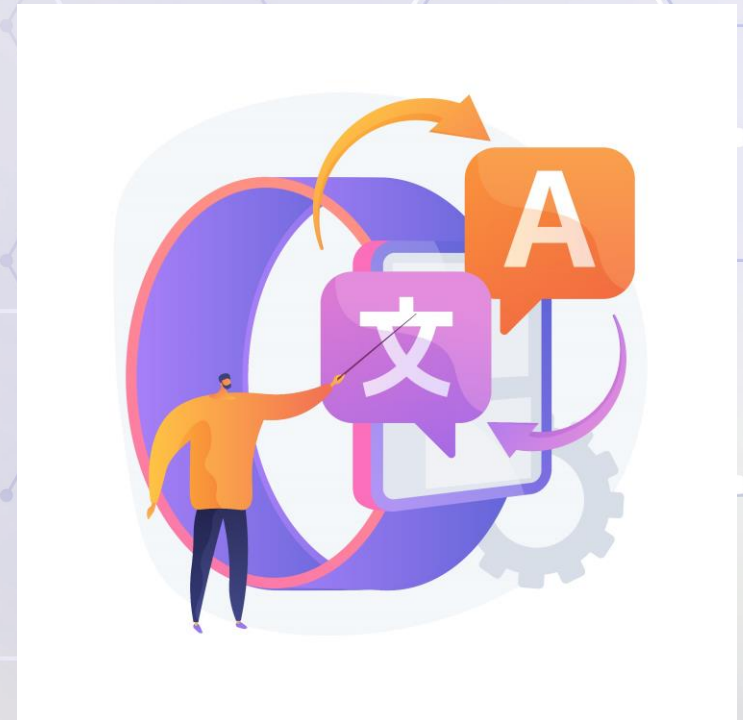
Task: use the Translator service to do several tasks

Translate text from English into French, Italian, and Chinese.

Translate audio from English into text in French

Input: the pre-recorded file said "Hello"

Tool: *Cognitive Service Resource*





Step 1 Create a *Cognitive Services* Resource

Step 2 Configure and Run a Client Application

ใช้ Cloud Shell บน Azure

```
git clone https://github.com/MicrosoftLearning/AI-900-AIFundamentals ai-900
```

Code สำหรับตัวอย่าง application คือ translator.ps1

Step 3 Use the Translator Service to do Several Tasks

```
./translator.ps1
```

```
Translating text...  
Original Text: Hello  
French Translation: Bonjour  
Italian Translation: Ciao  
Chinese Translation: 你好
```

```
Translating audio...  
The audio said 'Hello.'  
Translating text from audio to French...  
Translated text: 'Bonjour.'
```



End of Lab3

- Translate text from English into French, Italian, and Chinese.
- Translate audio from English into text in French