

AI on Cloud



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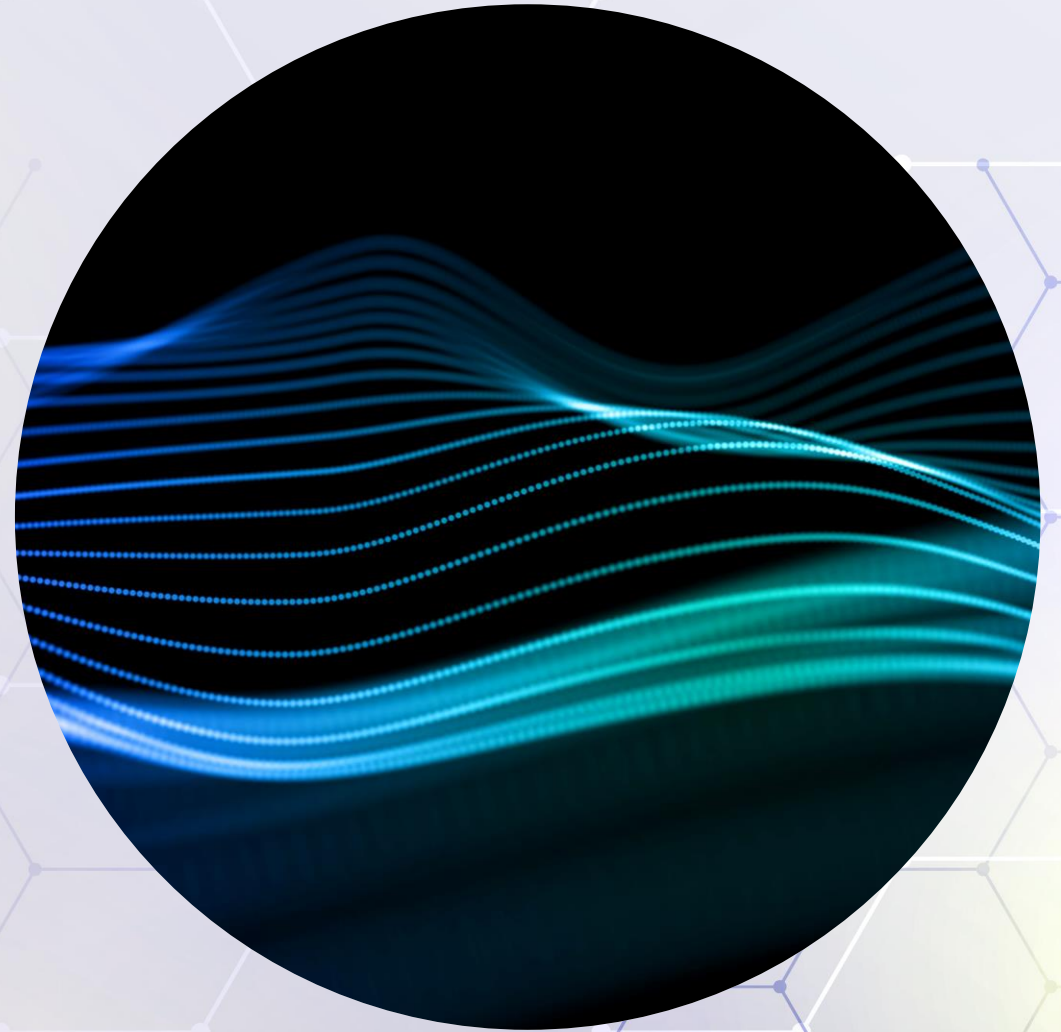


AI on Cloud

Chapter

4

การประมวลผล
ภาษาธรรมชาติ
(Natural Language
Processing (NLP))



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Lab 1: Text Analysis and Sentiment Analysis





Text Analytics

To evaluate different aspects of a document or phrase, in order to gain insights into the content of that text.

Language Service UU Azure

Type	SubType	Example
Person		"Bill Gates", "John"
Location		"Paris", "New York"
Organization		"Microsoft"

Pre-trained models

- Language Detection
- Sentiment analysis
- Key phrase extraction
- Entity recognition



Language Detection

Sentiment Analysis

ໃຊ້ Pre-built Machine Learning Classification Model

- Score ສະແດງ 0 – 1
- 1: Positive Sentiment
- 0: negative sentiment
- 0.5: Neutral ກືຽງ Indeterminate



Language Resource on Azure

ตัวอย่างการประยุกต์ใช้

- Detect Social Media Sentiment: for political campaign or a product in market
- Key phrase extraction / document summarization



Lap 1: Analyze Text

**เป้าหมาย: วิเคราะห์ความพึงพอใจของการเข้าพักที่
โรงแรม**

- Use the Language service to summarize the reviews by extracting key phrases and determine which reviews are positive and which are negative,
- Analyze the review text for mentions of known entities such as locations or people.

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 Analyze-text.ps1

Step 3 Detect language, Extract key phrases, Determine sentiment, and Extract known entities

```
./analyze-text.ps1 review1.txt
```

You will be reviewing this text:

Good Hotel and staff The Royal Hotel, London, UK 3/2/2018 Clean rooms, good service, great location near Buckingham Palace and Westminster Abbey, and so on. We thoroughly enjoyed our stay. The courtyard is very peaceful and we went to a restaurant which is part of the same group and is Indian (West coast so plenty of fish) with a Michelin Star. We had the taster menu which was fabulous. The rooms were very well appointed with a kitchen, lounge, bedroom and enormous bathroom. Thoroughly recommended.

Result

Detecting Language

- Language: English
- Code: en
- Score: 0.99

Analyzing Sentiment

- A positive sentiment based on these scores:
 - Positive: 0.98
 - Neutral: 0.01
 - Negative: 0.01

Identifying known entities

- GOOD Music : https://en.wikipedia.org/wiki/GOOD_Music
- Hotel : <https://en.wikipedia.org/wiki/Hotel>
- The Royal Hotel : https://en.wikipedia.org/wiki/The_Royal_Hotel
- London : <https://en.wikipedia.org/wiki/London>
- Buckingham Palace : https://en.wikipedia.org/wiki/Buckingham_Palace
- Westminster Abbey : https://en.wikipedia.org/wiki/Westminster_Abbey
- India : <https://en.wikipedia.org/wiki/India>
- West Coast Main Line : https://en.wikipedia.org/wiki/West_Coast_Main_Line
- Michelin Guide : https://en.wikipedia.org/wiki/Michelin_Guide

Finding Key Phrases

- Key Phrases:
 - The Royal Hotel
 - Good Hotel
 - good service
 - great location
 - Buckingham Palace
 - Westminster Abbey
 - same group
 - West coast
 - Michelin Star
 - taster menu
 - enormous bathroom
 - Clean rooms
 - staff
 - London
 - UK
 - stay
 - courtyard
 - restaurant
 - part
 - plenty
 - fish
 - kitchen
 - lounge
 - bedroom



End of Lab1

- Language Detection
- Sentiment Scores
- Key Phrase Extraction
- Entity Recognition

Thank you