

# AI-900 Agenda

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1: AI Overview ✓

2: Computer Vision ✓

3: Natural Language Processing

4: Document Intelligence and Knowledge Mining

5: Generative AI

OpenAI  
Copilot

AI-900

# Natural Language Processing



# LP Agenda



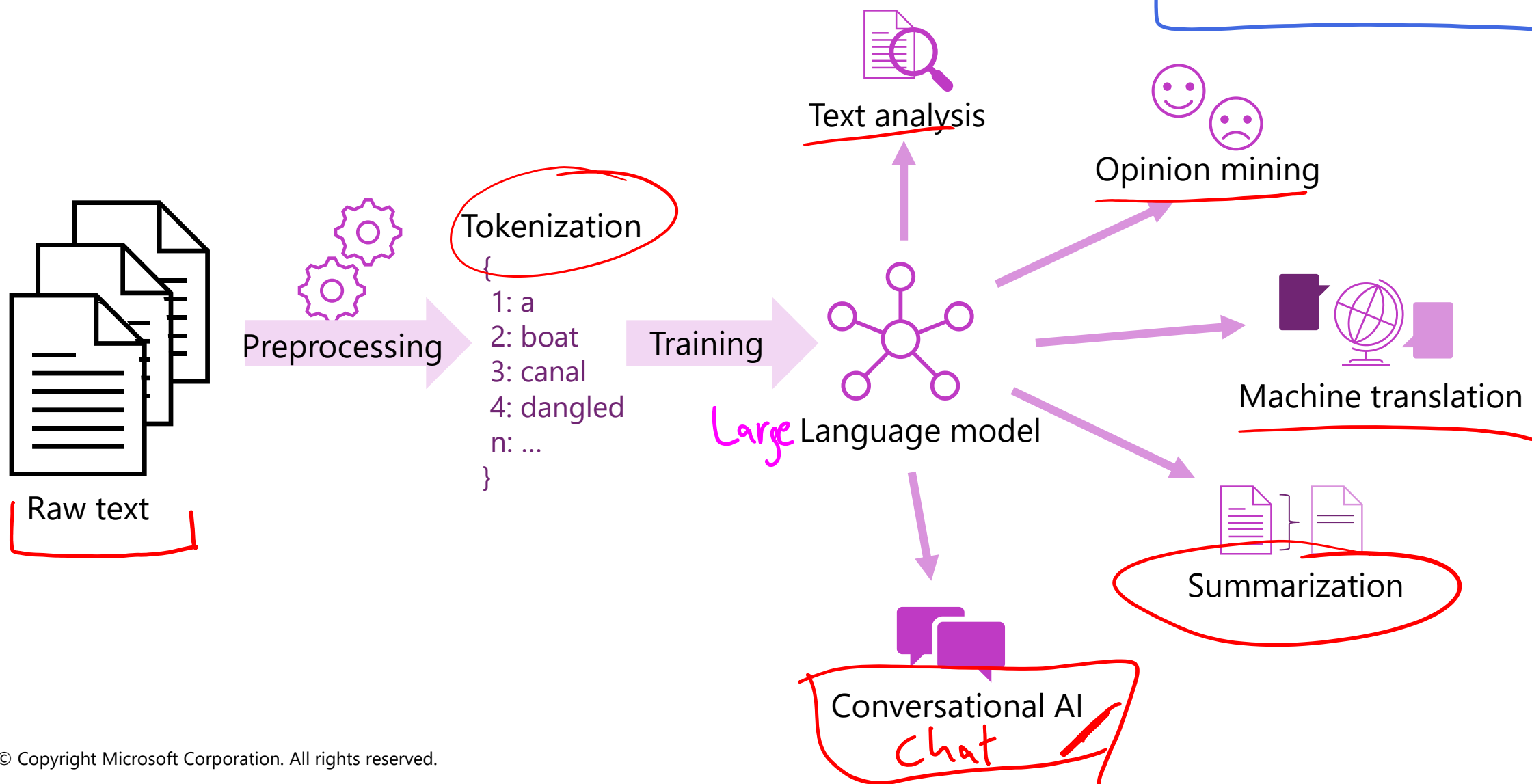
- Natural Language Processing concepts
- Natural Language Processing capabilities in Azure

# Natural Language Processing Concepts


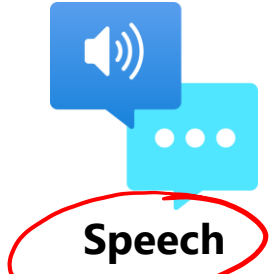



# What is natural language processing?

New:  
Azure Open AI Service



# Natural language processing and conversational AI in Azure

 <p><b>Language</b></p>	 <p><b>Speech</b></p>	 <p><b>Translator</b></p>
<ul style="list-style-type: none"><li>• Language detection</li><li>• Key phrase extraction</li><li>• Named entity detection</li><li>• Sentiment analysis and opinion mining</li><li>• Personal information detection</li><li>• Summarization</li><li>• Question answering</li><li>• Conversational language understanding</li><li>• ...</li></ul>	<ul style="list-style-type: none"><li>• Text to speech</li><li>• Speech to text</li><li>• Speech translation</li><li>• Speaker identification</li><li>• Language identification</li><li>• ...</li></ul>	<ul style="list-style-type: none"><li>• Text translation</li><li>• Document translation</li><li>• Custom translation</li><li>• ...</li></ul>

# Natural Language Processing capabilities in Azure



# Analyzing text

I had a wonderful vacation in France.

- **Predominant Language:** English
- **Sentiment:** .88 (positive)
- **Key Phrases:** “wonderful vacation”
- **Entities:** France

Azure AI | Language Studio

Language Studio

Welcome to Language Studio

Recent custom projects you've worked on

+ Create new ▾

Name ▾	Type ▾
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View all projects

☆ Featured   📄 Extract information   ≡ Classify text   ⚙️ Understand questions and conversational language

**Analyze sentiment and mine opinions**

Detect positive, negative and neutral sentiment in text. Get more insights by mining opinions.

[Try it out](#)

**Detect language**

Evaluate text and detect a wide range of languages and variant dialects.

[Try it out](#)

**Custom text classification**

Train a classification model to classify text using your own data.

[Open Custom text classification](#)

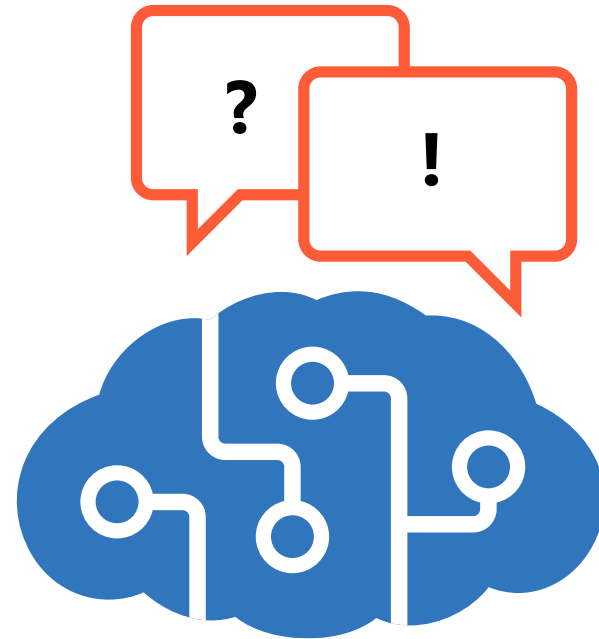


# Question answering

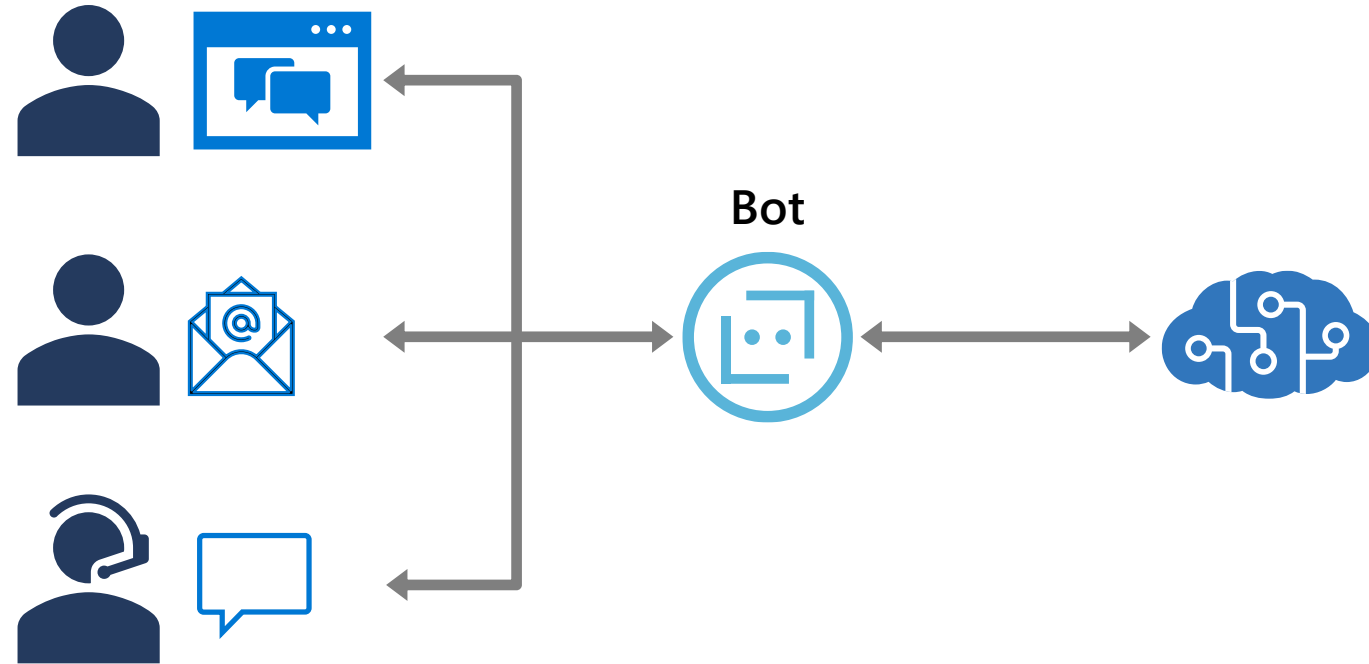
Define a *knowledge* base of question and answer pairs:

- By entering questions and answers
- From an existing FAQ document
- By using built-in *chit-chat*

Consume the knowledge base from client apps, including bots.

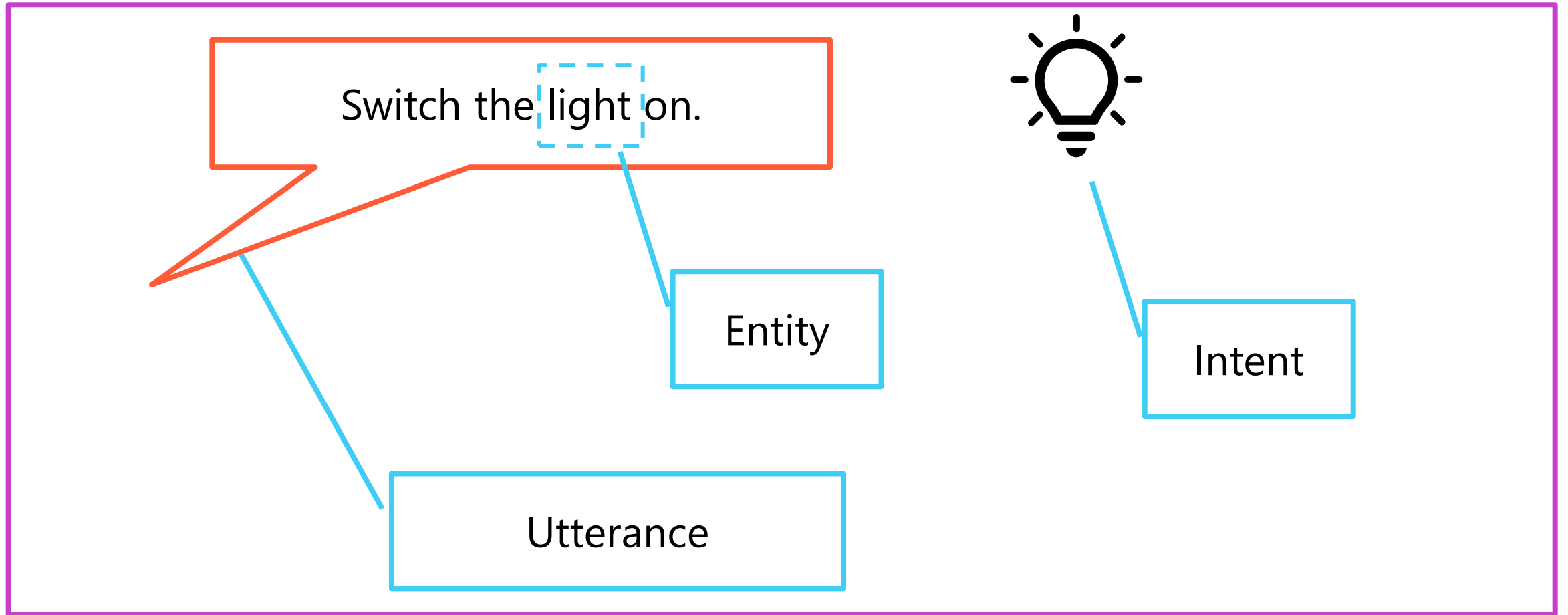


# Azure bot service



- Cloud-based platform for developing and managing bots
- Integration with **AI Language** and other services
- Connectivity through multiple channels

# Conversational language understanding

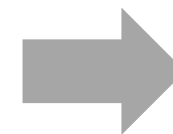


# Speech recognition and synthesis



Use the *speech-to-text* capabilities of the **Speech** service to transcribe audible speech to text

Use the *text-to-speech* capabilities of the **Speech** service to generate audible speech from text



# Exercise: Analyze text with Language Studio



In this exercise, you will use the **Azure AI Language** service to analyze text.

1. Use the hosted environment and Azure credentials provided for this exercise.
2. The instructions are also available on Learn: <https://aka.ms/ai900-text-analysis>

# Knowledge check



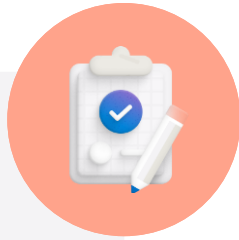
- 1** What are some capabilities included in the Azure AI Language service?
  - ☐ Translation and bot deployment
  - ☐ Speech recognition
  - ☐ Text analysis, custom question answering, conversational language understanding
  
- 2** You want to use the Azure AI Language service to determine the key talking points in a text document. Which feature of the service should you use?
  - ☐ Sentiment analysis
  - ☐ Key phrase extraction
  - ☐ Entity detection
  
- 3** You want to create a knowledge base for bots. What service would you use?
  - ☐ Conversational Language Understanding with the Azure AI Language service
  - ☐ Question Answering with the Azure AI Language service
  - ☐ Azure AI Document Intelligence

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  - ☐ Azure AI Document Intelligence

# Summary



## Natural Language Processing concepts

- What is Natural Language Processing?
- What is Conversational AI?
- Natural Language Processing and conversational AI in Azure

## Natural Language Processing capabilities in Azure

- Analyzing text
- Speech recognition and synthesis
- Conversational language understanding
- Question answering
- Azure Bot service



