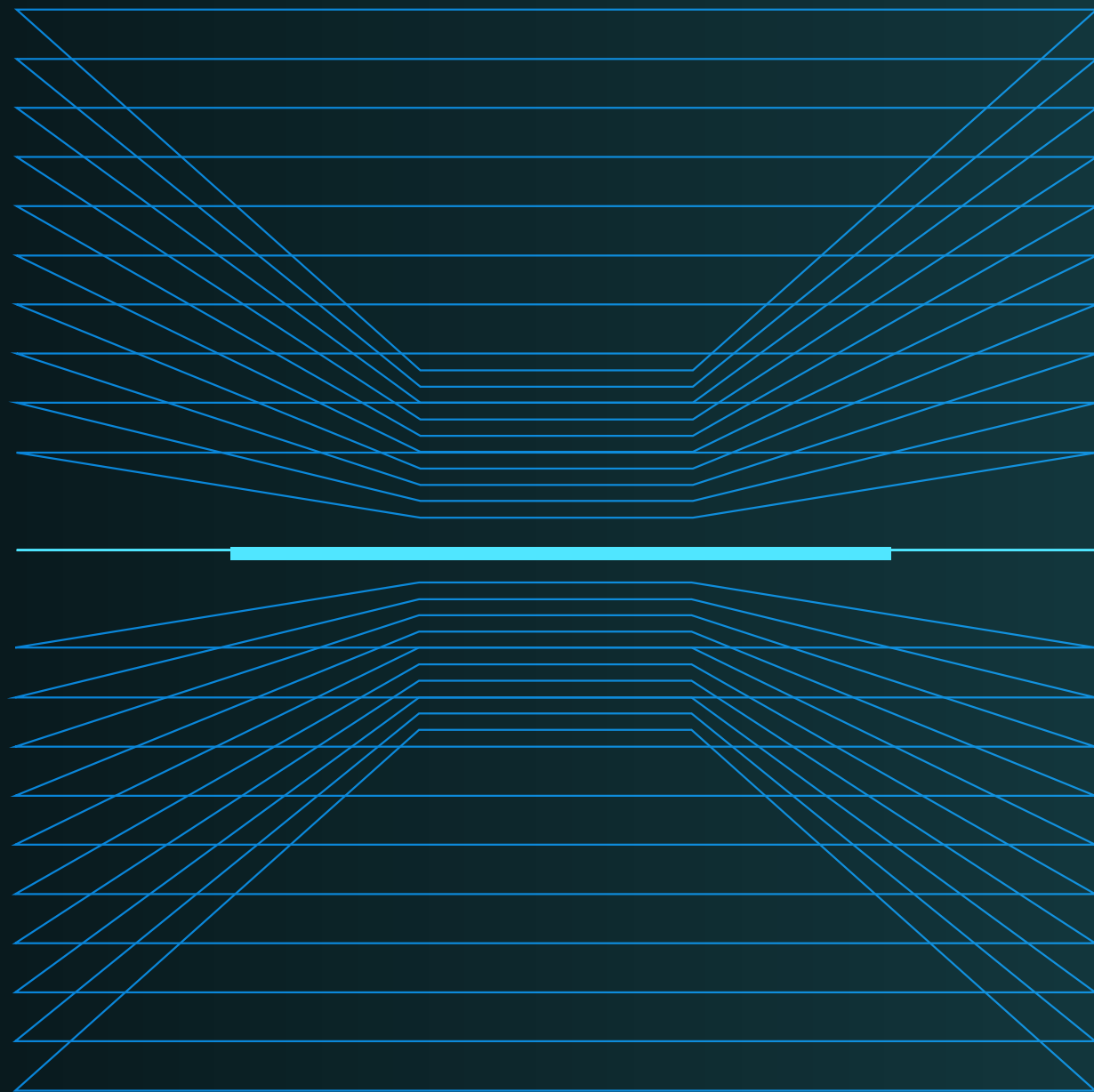




# Stepping into the future.

## Azure OpenAI Service

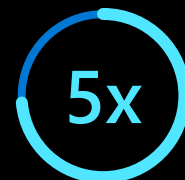
Diego Diaz  
Data & AI Specialist



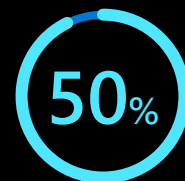
# AI is everywhere



AI private investments have doubled in one year<sup>1</sup>



Research on AI fairness and transparency has increased fivefold since 2014



50% of organizations have adopted AI in at least one business area

1. [Artificial Intelligence Index Report 2022, Stanford University HAC 2022](#)
2. [S Leadership IT Investment Survey 2022 \(CSS Insights\); McKinsey; EY March Report](#)
3. [The state of AI in 2022--and a half decade in review | McKinsey](#)

# Artificial Intelligence

## Machine Learning

### Deep Learning

#### Generative AI



## Artificial Intelligence

the field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence

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## Machine Learning

subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions

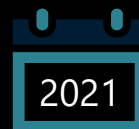
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## Deep Learning

a machine learning technique in which layers of neural networks are used to process data and make decisions

---



## Generative AI

Create new written, visual, and auditory content given prompts or existing data.

How the tech behind ChatGPT could change the world—an

[How the tech behind ChatGPT could change the world—an updated episode from our archive | The Economist](#)

*Microsoft Bets Big on the Creator of ChatGPT in Race to Dominate A.I.*

[Microsoft Bets Big on the Creator of ChatGPT in Race to Dominate A.I. - The New York Times \(nytimes.com\)](#)

**ChatGPT has given everyone a glimpse at AI's astounding progress**

[OpenAI's ChatGPT is a fascinating glimpse into the scary power of AI - Vox](#)

**OpenAI's new DALL-E model draws anything — but bigger, better and faster than before**

[dall-e | TechCrunch](#)

**GPT-3: We're at the very beginning of a new app ecosystem**

[GPT-3: We're at the very beginning of a new app ecosystem | VentureBeat](#)

*A.I. Can Now Write Its Own Computer Code. That's Good News for Humans.*

[A.I. Can Now Write Its Own Computer Code. That's Good News for Humans. - The New York Times \(nytimes.com\)](#)

# What is ChatGPT?

Human-like Responses

Contextual Awareness

Trained on large data

## GPT-3 vs ChatGPT : Know the difference

### GPT-3: Make smarter apps



An AI model accessible through an API for on-demand intelligence

### ChatGPT: Get more productive



A GPT-3 model used to build Chatbots you can interact with and ask to perform tasks

### Can be used for:



Implementing semantic text understanding



Internal Information search & extraction



Building copilot-like applications



Can be used for a lot more including what ChatGPT can do



Ideation for content creation



General question answering



Assistance in code generation and conversation



*Ensure that artificial  
general intelligence (AGI)  
benefits humanity.*



*Empower every person and  
organization on the planet  
to achieve more*

---

**GPT-3**

Generate and Understand Text

**Codex**

Generate and Understand Code

**DALL·E**

Generate images from text prompts

## Generative AI

### GPT-3

Prompt:

Write a tagline for an ice cream shop.

Response:

We serve up smiles with every scoop!

### Codex

Prompt:

Table customers, columns =  
[CustomerId, FirstName,  
LastName, Company, Address,  
City, State, Country,  
PostalCode]

Create a SQL query for all  
customers in Texas named Jane  
query =

Response:

```
SELECT *  
FROM customers  
WHERE State = 'TX' AND  
FirstName = 'Jane'
```

### DALL·E

Prompt: A white Siamese cat

Response:



# Azure AI

## Applications



Partner Solutions



Business Users

## Application Platform

AI Builder



Power BI



Power Apps



Power Automate



Power Virtual Agents

## Scenario-Based Services

Applied AI Services



Bot Service



Cognitive Search



Form Recognizer



Video Indexer



Metrics Advisor



Immersive Reader

## Customizable AI Models

Cognitive Services



Vision



Speech



Language



Decision



OpenAI Service



Developers & Data Scientists

## ML Platform



Azure Machine Learning



# Azure OpenAI Service

GPT-3

Codex

DALL·E *(preview)*



Deployed within your Azure subscription, secured by you, accessed only by you, and tied to your datasets and applications



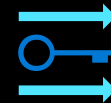
Large, pretrained AI models to unlock new scenarios



Custom AI models fine-tuned with your data and hyperparameters



Built-in responsible AI to detect and mitigate harmful use



Enterprise-grade security with role-based access control (RBAC) and private networks

# | Azure OpenAI | Capabilities

Creative Ideation Subject Research

Essay outlines Extracting insights Semantic search

Summarizing text Code generation

**Limitless generation with a few lines of input**

Virtual Assistants Language Translation Writing assistance

Classifying text Answering questions Poem creation

Comments from code Code refactoring Image Generation

# | Azure OpenAI | Top 4 Capabilities & Use Cases



## Content Generation

Call Center Analytics:  
Automatically generate responses to customer inquiries

Generate personalised UI for your website



## Summarization

Call Center Analytics: Summary of customer support conversation logs

Subject Matter Expert Document Summarization (e.g. financial reporting, analyst articles)

Social Media Trends Summarization



## Code generation

Convert Natural Language to SQL (or vice versa) for telemetry data

Convert Natural Language to Query Proprietary Data Models

Code Documentation



## Semantic Search

Search reviews for a specific product / service

Information Discovery and Knowledge Mining

## Examples of Multiple Model Use Cases

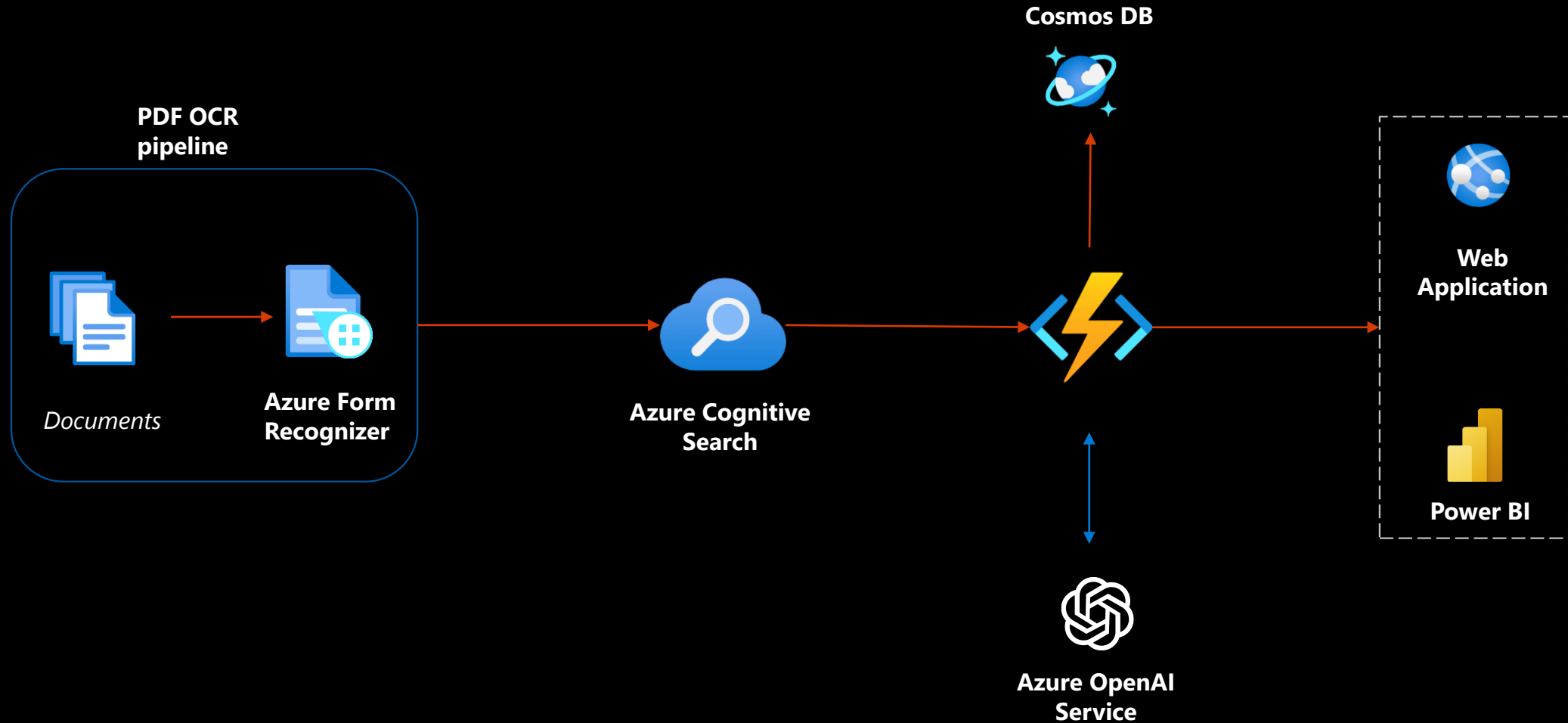
End to End Call Center Analytics: Classification, Sentiment, Entity Extraction, Summarization and Email Generation

Customer 360: Hyper-personalisation using timely Summarization of customer queries & trends, Search, and Content Generation

Business Process Automation: Search through structured & unstructured documentation, Generate Code to query data models, Content Generation

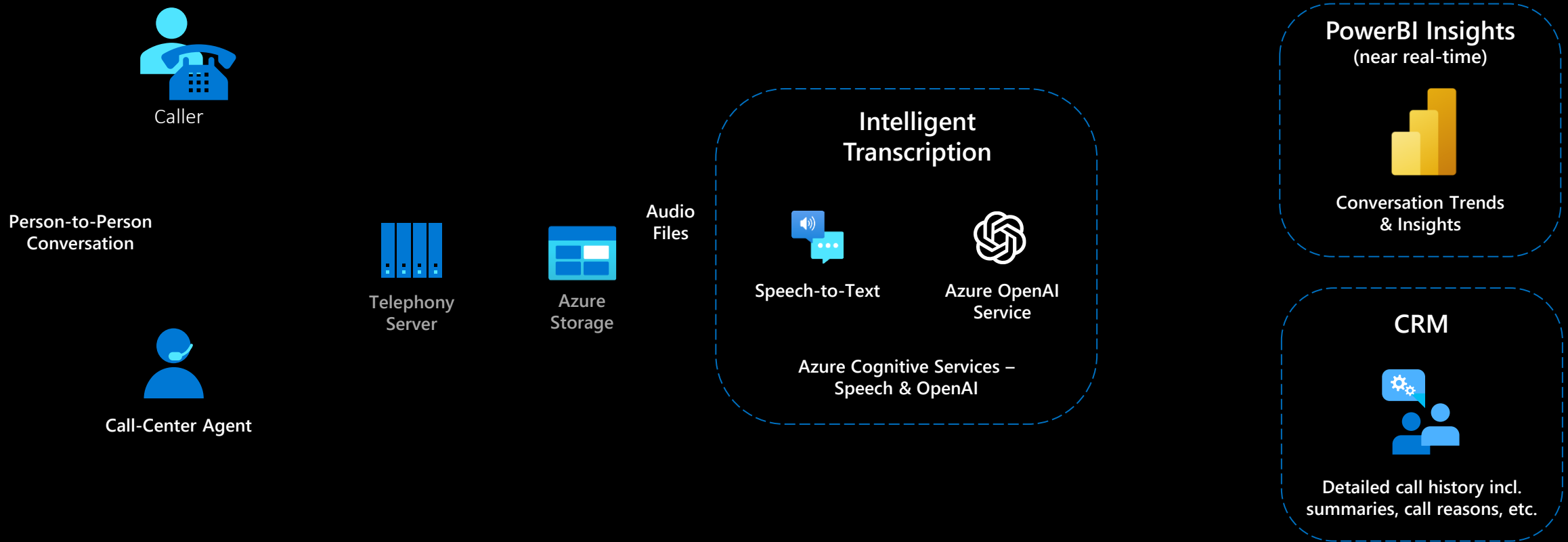
# Document Process Automation

Extract rich insights from documents and summarizing them



# Contact Center Analytics using Speech API & OpenAI

Extract rich insights from call transcripts



# Azure OpenAI | Sample Use Cases

## Playground

Deployments

text-davinci-002

Examples

Load an example

 Code View

### Customer conversation

Hi there I just had a car accident and wanted to report it. OK, I hope you're alright and in safe place to have this conversation.  
Yes, I'm fine thank you. Can you please describe to me what happened? I was driving on the M23 and I hit another car. Are you OK? Yeah, I'm just a little shaken up. That's understandable. Can you give me your full name? Sure, it's Sarah Standl. Do you know what caused the accident? I think I might have hit a pothole. OK, where did the accident take place? On the M23 near junction 10. Was anyone else injured? I don't think so. But I'm not sure. OK, well we'll need to do an investigation. Can you give me the other drivers information? Sure, his name is John Radley. And your insurance policy number. OK. Give me a minute. OK, it's 546452.  
OK, is there any damage to your car? Yes, Headlights are broken and the airbags went off. Are you going to be able to drive it? I don't think so. I'm going to have to have it towed. Well, we'll need to get it inspected. I'll go ahead and order you a tow van. I'll also start the claim and we'll get everything sorted out. Thank you.

### Azure OpenAI Instruction

Extract the following from the conversation:

1. Main reason of the conversation
2. Sentiment of the customer
4. How did the agent handle the conversation?
5. what was the Final outcome of the conversation
6. create a short summary of the conversation

### Output

1. The main reason of the conversation was to report a car accident.
2. The sentiment of the customer was shaken up but OK.
4. The agent handled the conversation well and was empathetic.
5. The final outcome of the conversation was that the agent started a claim and ordered a tow truck.
6. The customer was in a car accident and the agent started a claim and ordered a tow truck. The customer was shaken up but OK.

**Example:**  
Extract  
information  
from text  
and  
summarize  
it

# Azure OpenAI | Sample Use Cases

## Playground

Deployments

text-davinci-002

Examples

Summarize Text

 Code View

You must extract the following information from the phone conversation below:

1. Call reason (key: reason)
2. Cause of the incident (key: cause)
3. Names of all drivers as an array (key: driver\_names)
4. Insurance number (key: insurance\_number)
5. Accident location (key: location)
6. Car damages as an array (key: damages)
7. A short, yet detailed summary (key: summary)

Make sure fields 1 to 6 are answered very short, e.g. for location just say the location name. Please answer in JSON machine-readable format, using the keys from above. Format the output as JSON object called "results". Pretty print the JSON and make sure that is properly closed at the end.

Phone conversation:

Hi I just had a car accident and wanted to report it. OK, I hope you're alright, what happened? I was driving on the I-18 and I hit up. That's understandable. Can you give me your full name? Sure, it's Sarah Standl. Do you know what caused the accident? I think I might have hit a pothole. OK, where did the accident take place? On the I-18 freeway. Was anyone else injured? I don't think so. But I'm not sure. OK, well we'll need to do an investigation. Can you give me the other drivers information? Sure, his name is John Radley. And your insurance number. OK. Give me a minute. OK, it's 546452. OK, what type of damages has the car? Headlights are broken and the airbags went off. Are you going to be able to drive it? I don't know. I'm going to have to have it towed. Well, we'll need to get it inspected. I'll go ahead and start the claim and we'll get everything sorted out. Thank you.

```
results = {  
  "reason": "car accident",  
  "cause": "hit a pothole",  
  "driver_names": ["Sarah Standl", "John Radley"],  
  "insurance_number": 546452,  
  "location": "I-18 freeway",  
  "damages": ["headlights broken", "airbags went off"],  
  "summary": "Sarah Standl was driving on the I-18 when she hit another car. She thinks she hit a pothole. John Radley was the other driver. There were no injuries but both cars have damage."  
}
```

**Azure OpenAI  
Instruction in English**

**Customer conversation in  
English (or other language)**

**Output as JSON**

**Call Center  
Automation**

**Example:  
OpenAI  
Prompt**

# Azure OpenAI | Sample Use Cases

## Playground

Deployments

text-davinci-002

Examples

Load an example

 Code View

Wartungsfenster für den 14. Januar von 14 bis 15 Uhr geplant, erwarten Sie Ausfallzeiten.

Input - German

Generate a formal customer communication in English

- offer help at info@operations.com
- be apologetic where possible
- use 0:00 as time format

Azure OpenAI  
Instruction - English

Please output in a letter format.

Dear Customer,

We are writing to inform you that we have scheduled maintenance for January 14th from 14:00 to 15:00. We apologize for any inconvenience this may cause and offer help at info@operations.com should you have any questions.

Sincerely,

Your Operations Team

Output - English

Example:  
Generate  
auto text in  
any  
language



# | Azure OpenAI | Considerations



I need a **general-purpose model that can handle multiple tasks.**  
e.g. translation+entity recognition+sentiment analysis



I need to **generate human-like content, whilst preserving data privacy and security**  
e.g., abstractive summarization, content writing, paraphrasing, code



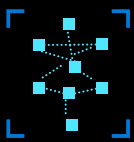
I need **rapid prototyping and quick time to market for many use cases**



I could use a model with **little or no training**



I want to explore solutions / use cases that have been described previously



Vision



Speech



OpenAI Service



Language



Decision

Azure AI Cognitive Services

# | Azure OpenAI | Benefits

Increased efficiency and productivity by getting more done in lesser time through rapid prototyping and quicker time to market\*

Faster time to realize value

Enhanced customer experience with a greater focus on customer-centric services and products, whilst utilizing feedback and trends better

Easy to use:  
Even junior data scientists or business users can use Azure OpenAI Service Playground

Ensure data privacy & security, and implement it in a responsible manner using a Trusted Cloud Provider

Does not require a long tedious annotation process\*

Less training data is required for many relevant use cases\*

Ability to perform text analytics and generation tasks that up until now were reserved only to humans

\* in most relevant use cases observed

To learn more, please visit Azure OpenAI Service's [product page](#).

## Next steps

Have a use case? Speak to your Specialist / AE and sign up for access here: [aka.ms/oai/access](https://aka.ms/oai/access)