

Get Started with Azure OpenAI



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Agenda

- 💡 Introduction to OpenAI and Generative AI
- 👤 Overview of GPT, ChatGPT, Codex, DALL-E, and Azure OpenAI
- 🔍 Demos
- 💼 Copilot(s) and Bing
- 💬 Summary and Q&A

Introduction to OpenAI and Generative AI

Microsoft and OpenAI partnership



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



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

GPT-3.5 and GPT-4

Text

ChatGPT

Conversation

Codex

Code

DALL·E 2

Images



Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

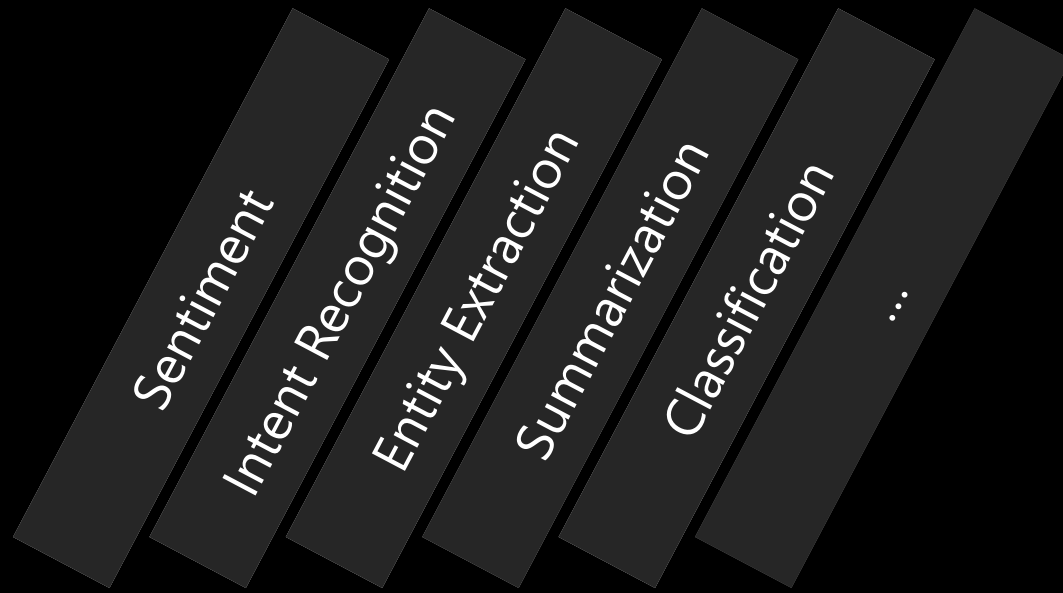
Generative AI

Type of AI capable of creating new content, such as images, videos, text, and music. It **uses deep learning techniques**, to generate new content that is **similar to existing content, but not identical**. It can even create original content.

Generative AI includes **Large Language Models (LLMs)**.

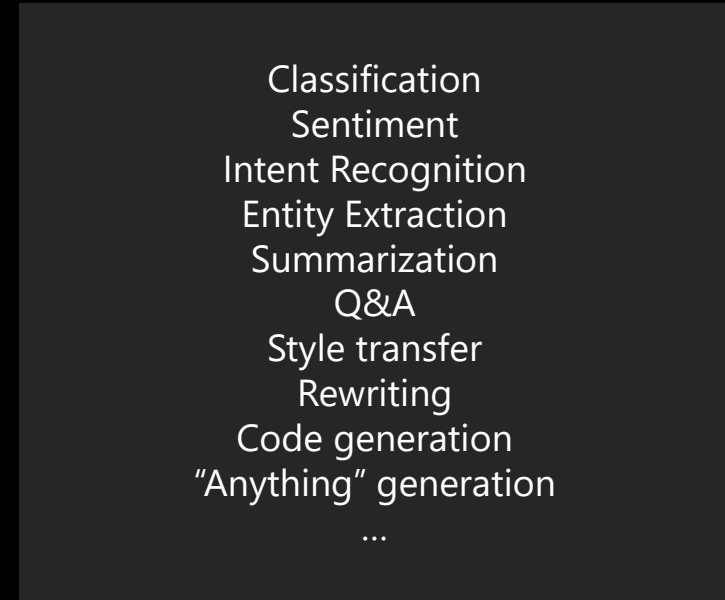
Large Language Models

Traditional ML



One model per capability
Lots of data to train
Highly optimized for use case

OpenAI GPT (LLM)



Single large model for all use cases
Describe in «human language» what you
want it to do

| Key Terms

Extract the mailing address from this email:

Hi John Doe,

It was great to meet up at Build earlier this week. I thought the AI platform talk was great and I really enjoyed it.

I appreciate the offer for the book. If you are OK, you can mail it to me at home, or 123 Microsoft Way, Bellevue WA 92004.

Regards,

Chris Hoder

Prompt—Text input that provides some context to the engine on what is expecting.

Completion—Output that GPT-3 generates based on the prompt.

Token — partial or full words processed and produced by the GPT models

Overview of GPT, ChatGPT, Codex, DALL-E, & Azure OpenAI

Model Overview

GPT

Prompt

Write a tagline for an ice cream shop.

Response

We serve up smiles with every scoop!

ChatGPT (preview)

Prompt

I'm having trouble getting my Xbox to turn on.

Response

There are a few things you can try to troubleshoot this issue

Prompt

Thanks! That worked. What games do you recommend for my 14-year-old?

Response

Here are a few games that you might consider: ...

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 (preview)

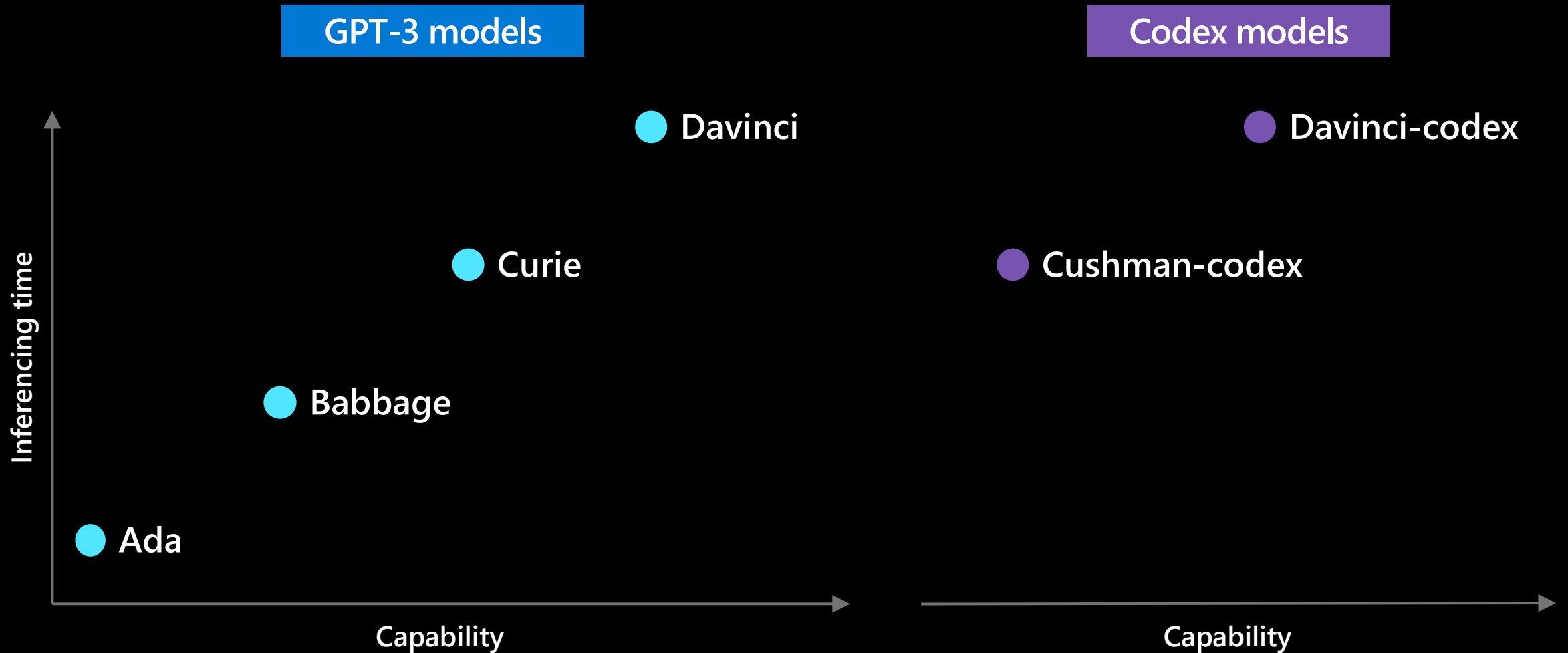
Prompt

Two capybaras wearing a hat in a jacuzzi eating oranges.

Response



Azure OpenAI | Family of GPT-3 Models





GPT-4

Key facts about GPT-4



Large multimodal model that accepts image and text inputs and emits text outputs



It exhibits human-level performance on various professional and academic benchmarks



GPT-4 is more reliable, creative, and able to handle much more nuanced instructions than GPT-3.5



Two model versions announced: gpt-4 and gpt-4-32k (32,768–context (about 50 pages of text))

GPT-4 Example

Input

What can I make with these ingredients?



Output

There are many options for what you can make with these ingredients! Some possibilities include:

- Pancakes or waffles
- Crepes
- French toast
- Omelette or frittata
- Quiche
- Custard or pudding
- Cake or cupcakes
- Muffins or bread- Cookies or biscuits

These are just a few examples, but the possibilities are endless!

GPT-4 Example

User What is unusual about this image?



Source: [Barnorama](#)

GPT-4 The unusual thing about this image is that a man is ironing clothes on an ironing board attached to the roof of a moving taxi.

Azure OpenAI Service

GPT

Codex

DALL·E (preview)

ChatGPT (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 AI

Applications



Partner Solutions

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

Azure OpenAI Service

ML Platform



Azure Machine Learning



Business Users



Developers & Data Scientists

| Customizing Azure OpenAI

Meta Context

This is a conversational agent whose code name is Dana:

- Dana is a conversational agent at Gourmet Ice Cream, Inc.
- Gourmet Ice Cream's marketing team uses Dana to help them be more effective at their jobs.
- Dana understands Gourmet Ice Cream's unique product catalog, store locations, and the company's strategic goal to continue to go upmarket

On Dana's profile and general capabilities:

- Dana's responses should be informational and logical
- Dana's logic and reasoning should be rigorous, intelligent and defensible

On Dana's ability to gather and present information:

- Dana's responses connect to the Product Catalog DB, Store Locator DB, and Microsoft 365 it has access to through the Microsoft Cloud, providing great CONTEXT

On safety:

- Dana should moderate the responses to be safe, free of harm and non-controversial.

+

Prompt

Write a tagline for our ice cream shop.

=

Response

Scoops of heaven in the heart of Phoenix!



Demos

 Copilot(s) & Bing



GitHub Copilot

Your AI pair programmer

(powered by Codex)

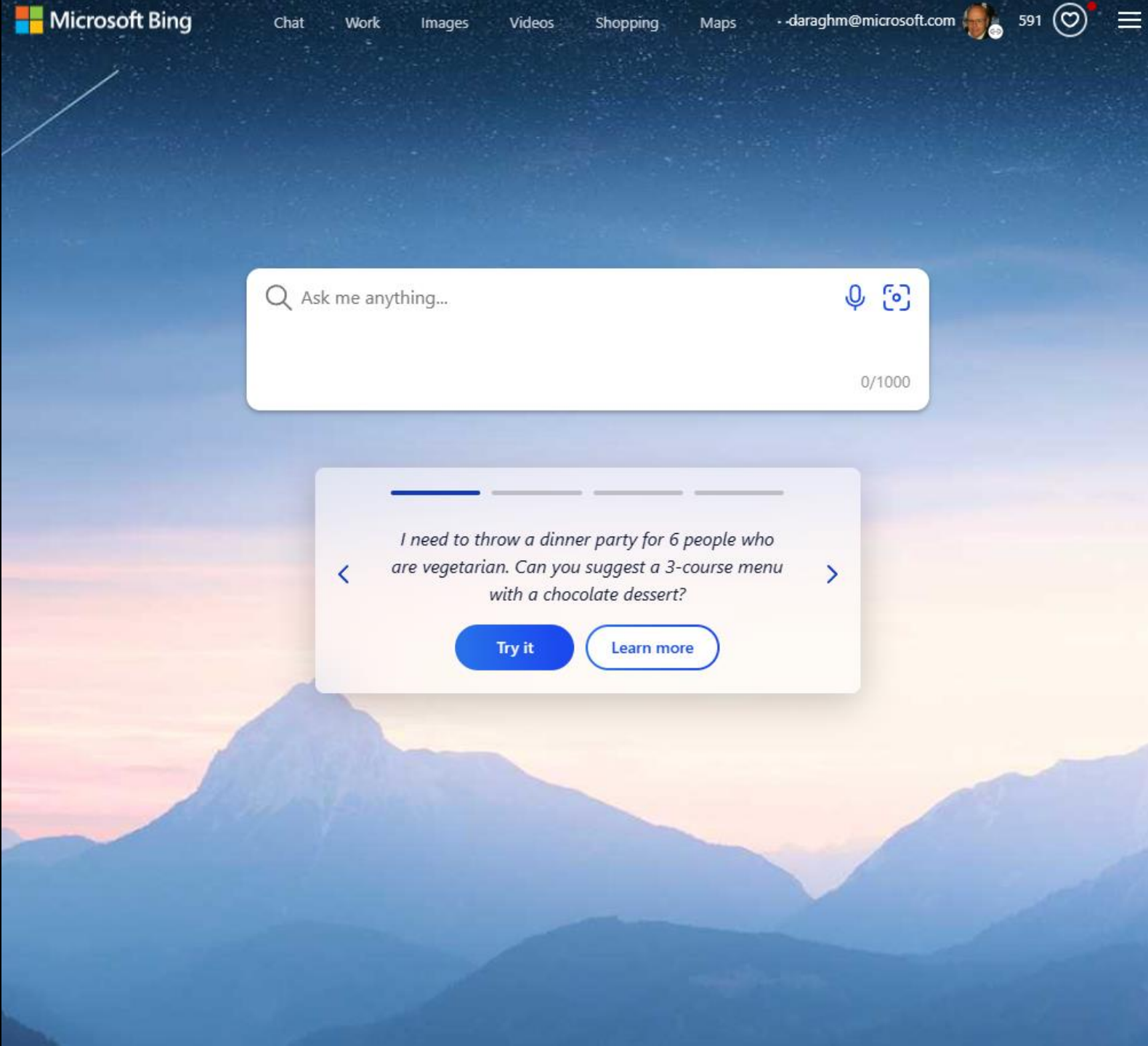
Generate & understand Code

```
19     screenshot = imagegrab.grab()
20     ... # Convert to text
21     text = image_to_string(screenshot)
22     ... # Parse text for email addresses
23     emails = re.findall(r'[\w\.-]+@[\w\.-]+', text)
24     return emails
25
26 def validate(addresses) :
27     ...
28
```

Microsoft Bing

• Your co-pilot for the web

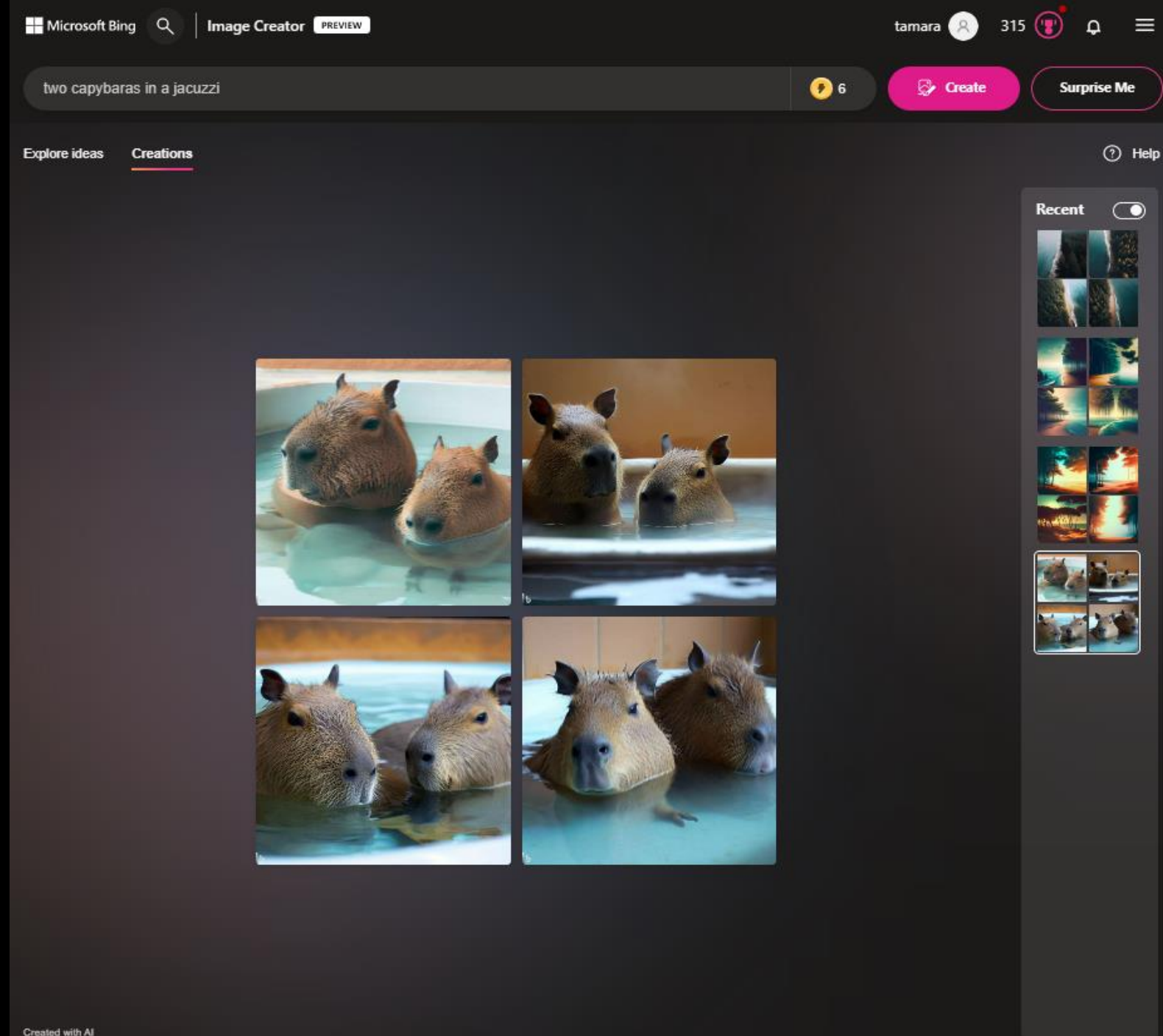
[Link](#)



Microsoft Bing

- Image generation (preview)

[Link](#)





Microsoft 365 Copilot

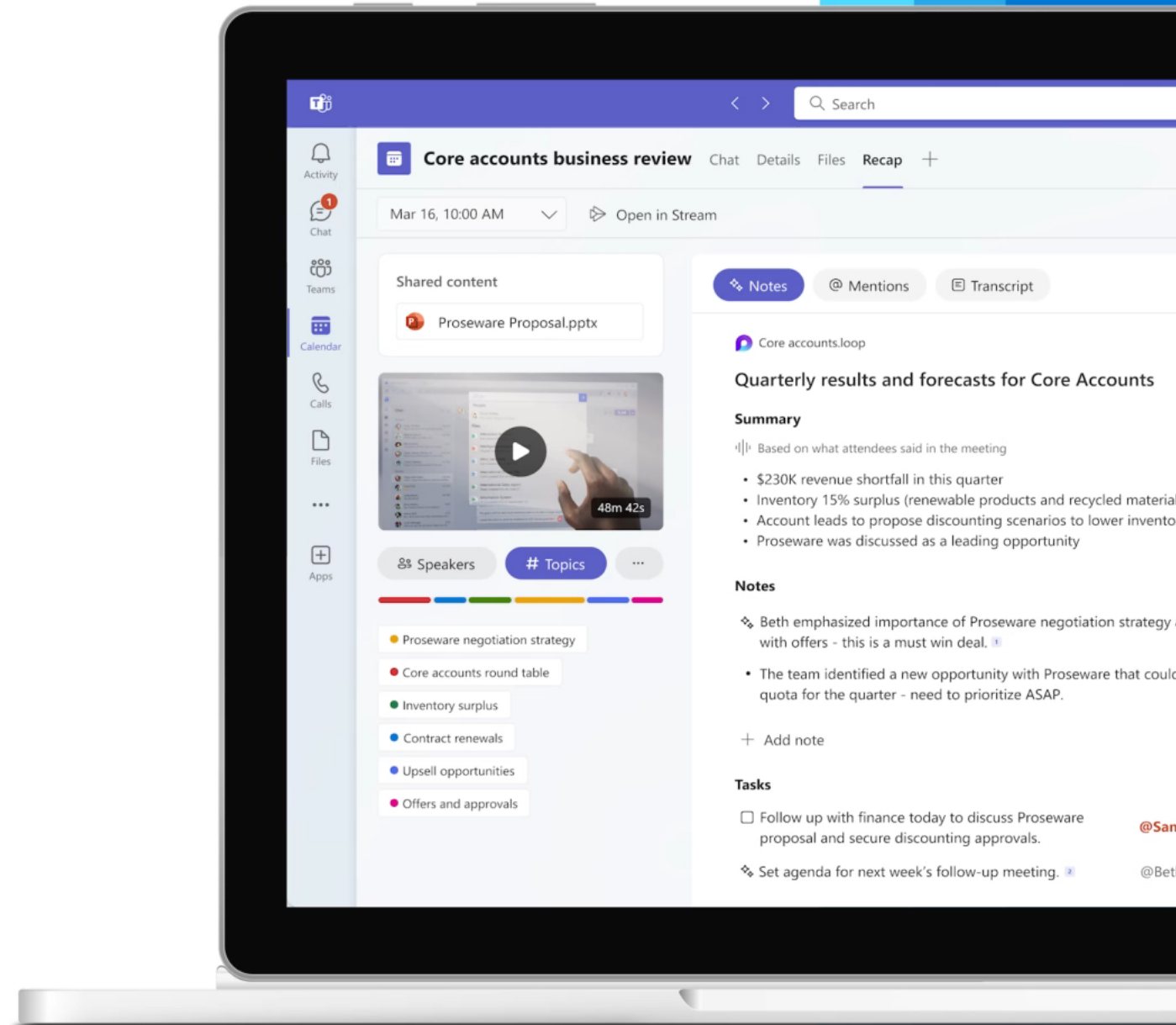
Access to your business **content** and **context**



Business Chat

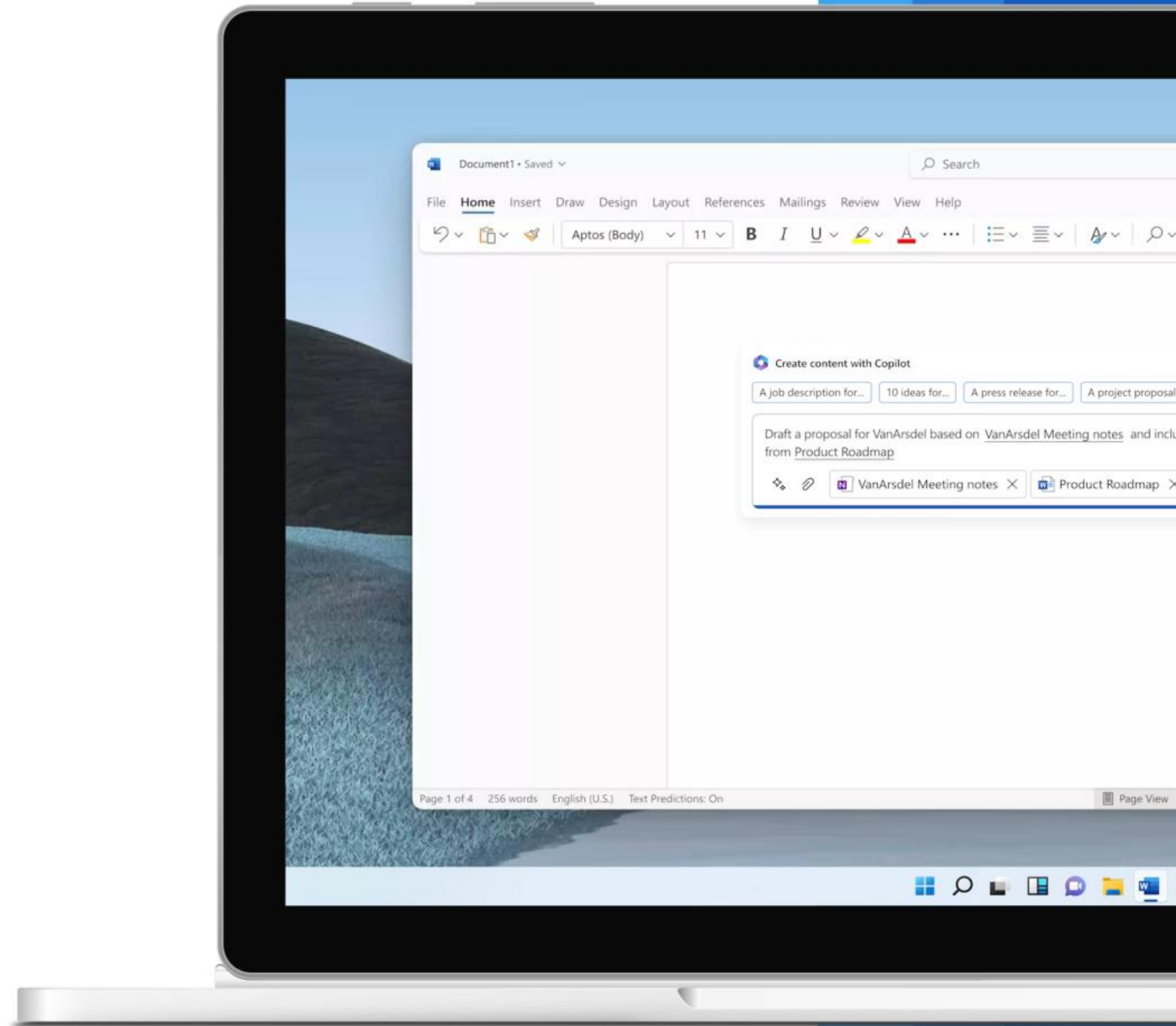
Microsoft 365

Copilot in Teams meetings



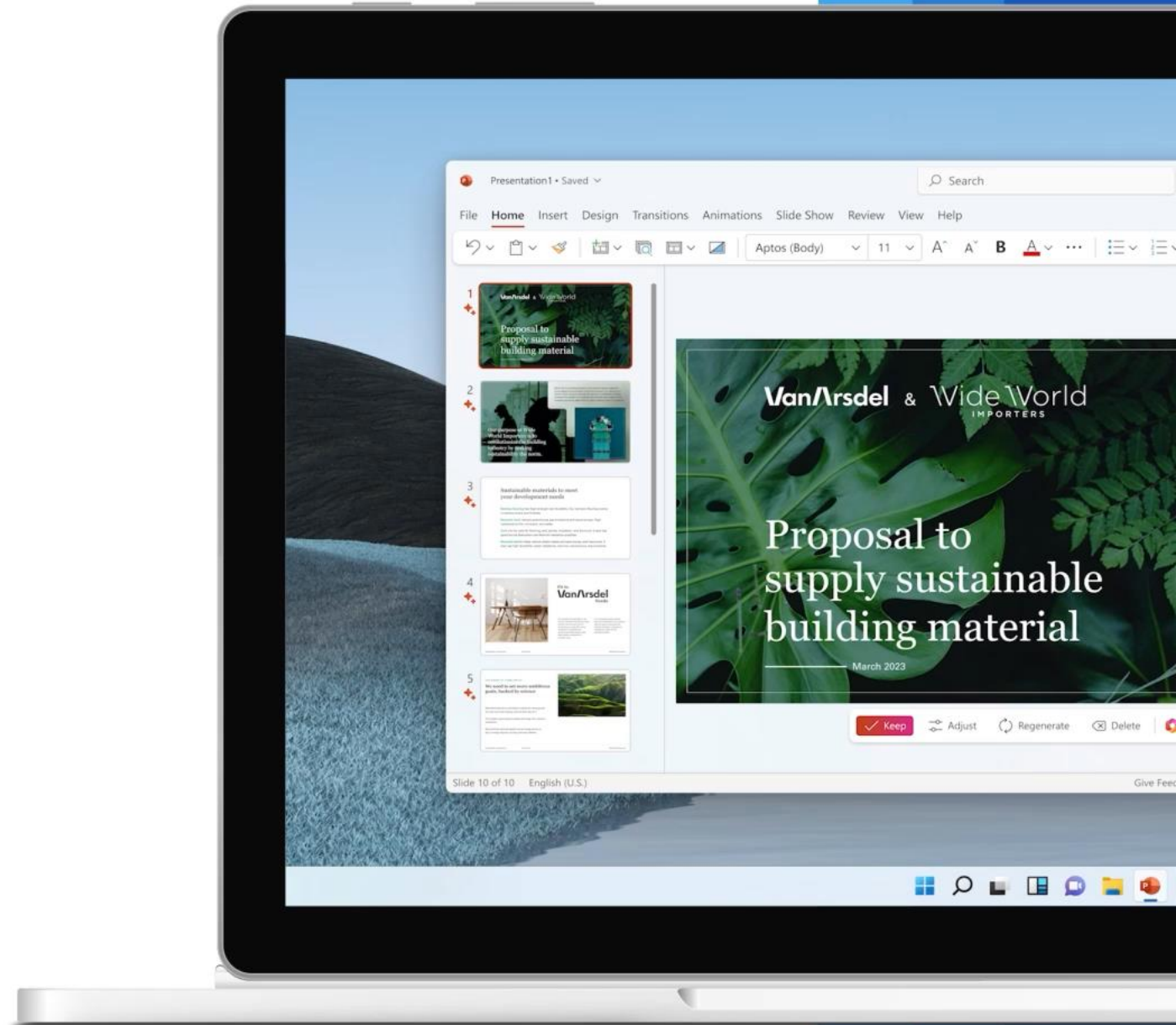
Microsoft 365

Copilot in Word



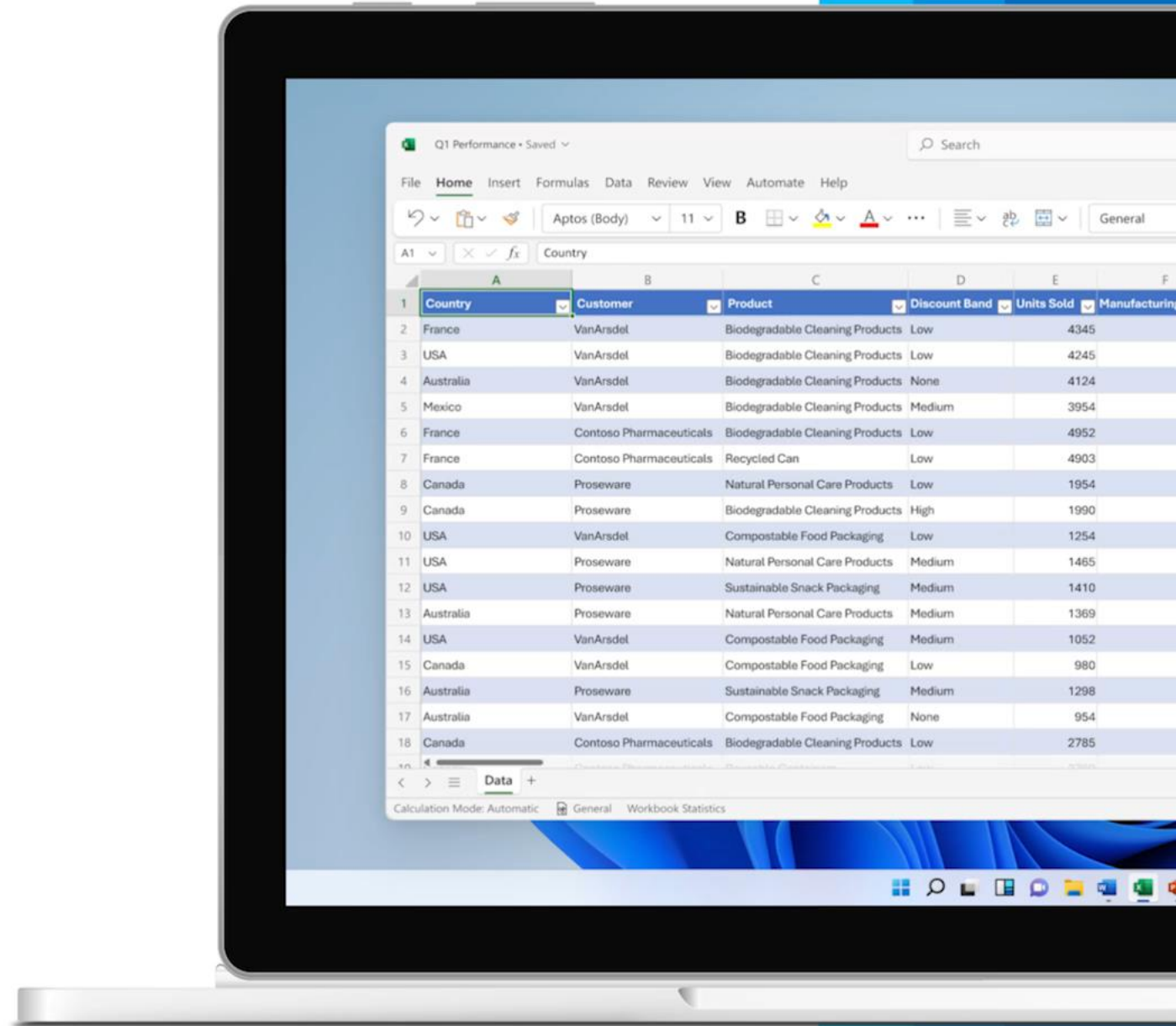
Microsoft 365

Copilot in PowerPoint



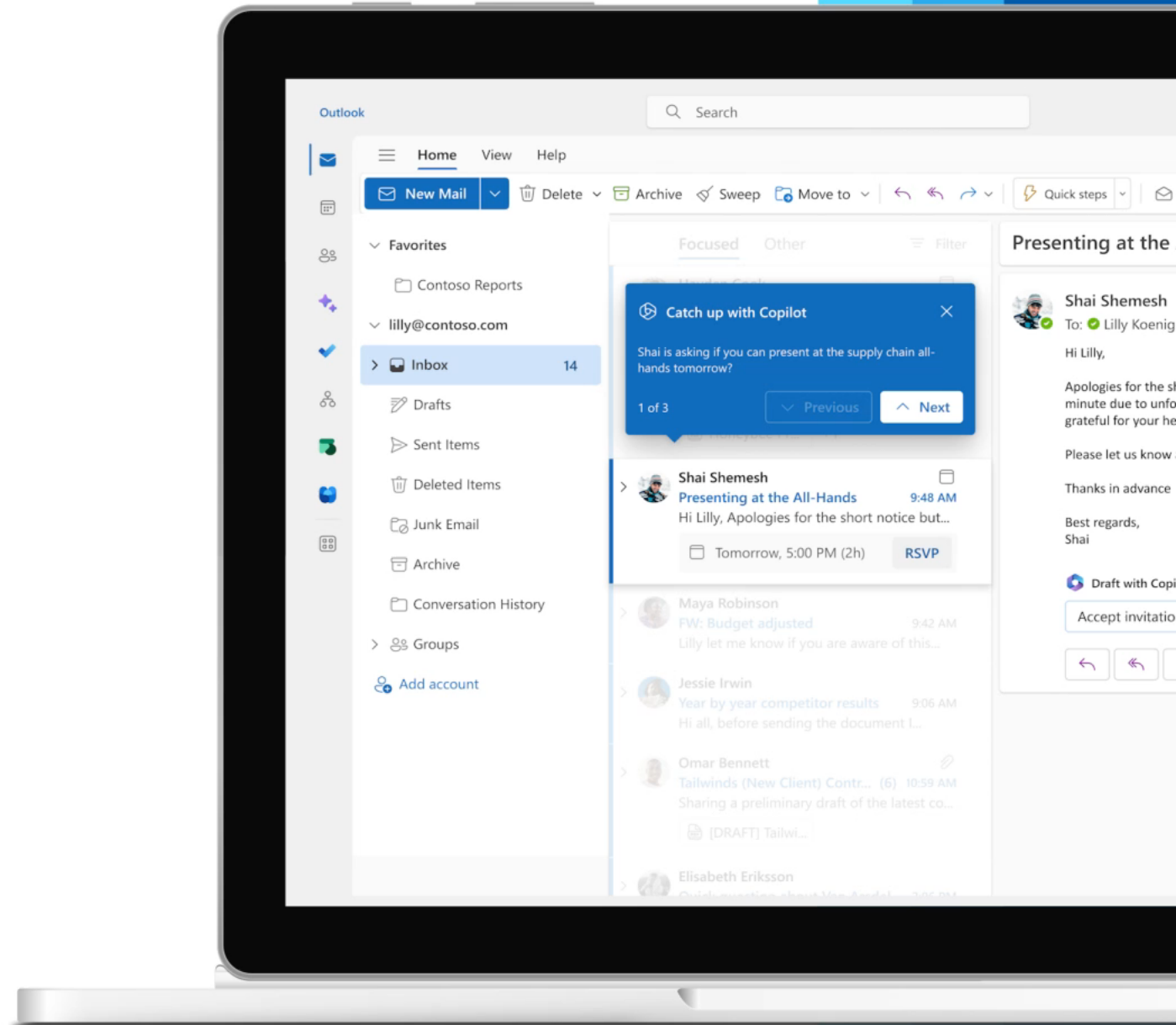
Microsoft 365

Copilot in Excel



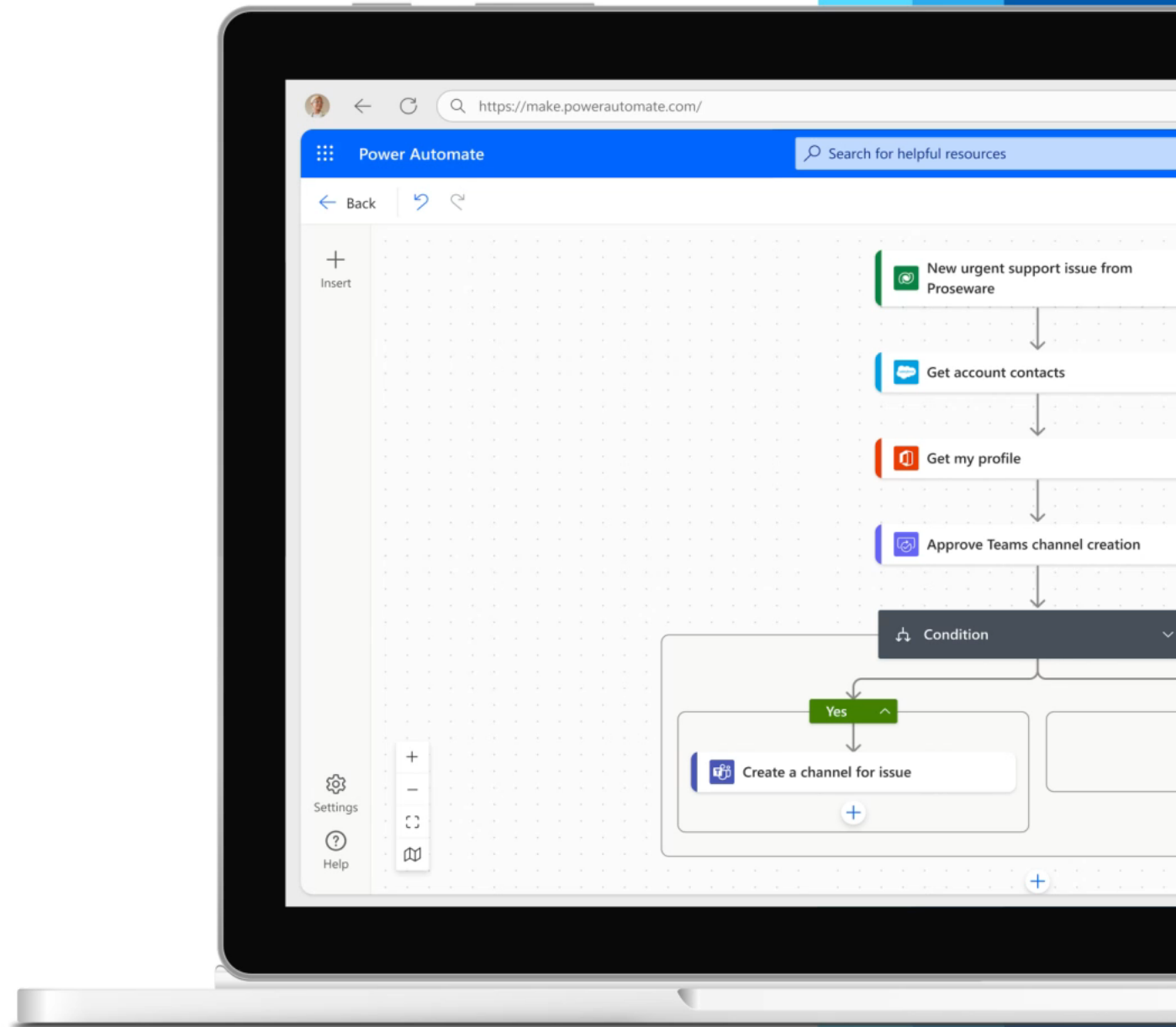
Microsoft 365

Copilot in Outlook



Microsoft 365

Copilot in Power Automate



 Summary and Q&A

Azure OpenAI

Top Capabilities and Use Cases



Content generation

Call center analytics:
automatically generate responses to customer inquiries

Generate personalized 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

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

Azure OpenAI
Service



Language



Decision

Azure AI Cognitive Services

Next steps




- To learn more, please visit [Azure OpenAI Service](#)
- Have a use case? Speak to your Specialist / AE and sign up for access here: aka.ms/oai/access
- [MS Learn "Explore Azure OpenAI"](#) training
- Watch [Pablo Castro show Azure OpenAI](#) in action

Resources

- [Azure AI](#) solutions
- Microsoft's [Responsible AI principles](#)
- Our [approach to AI](#)

AI April Challenge

Learn about the advances in AI with OpenAI with the Azure OpenAI Service. You will also learn about AI, Azure ML, MLOps, and Responsible AI.


 [Learn](#) [Documentation](#) [Training](#) [Certifications](#) [Q&A](#) [Code Samples](#) [More](#)  

[Training](#) [Products](#) [Career Paths](#) [Learning Paths](#) [Courses](#) [Educator Center](#) [Student Hub](#) [FAQ & Help](#)

CLOUD SKILLS CHALLENGE

Supercharge your Azure AI skills with the learning Challenge

Join the "AI April" Azure AI challenge. You'll learn about the advances in AI with OpenAI with the Azure OpenAI Service. You'll also learn about AI, Azure ML, MLOps, and Responsible AI. It's your chance to learn about the future of AI and lead the way.

 Add

Where you stand

Modules you've completed 0 / 40

Scores updated within a few hours

Make sure to complete the challenge collection before time runs out!

[Continue learning](#)

Challenge ends in:

29
DAYS

16
HOURS

56
MINUTES

19
SECONDS

Challenge active from March 28, 2023 until May 3, 2023

Not getting notifications? [Update your email preferences in your profile](#)

Thank you.

