



# Data in the Era of AI

## Digital Real Estate Summit

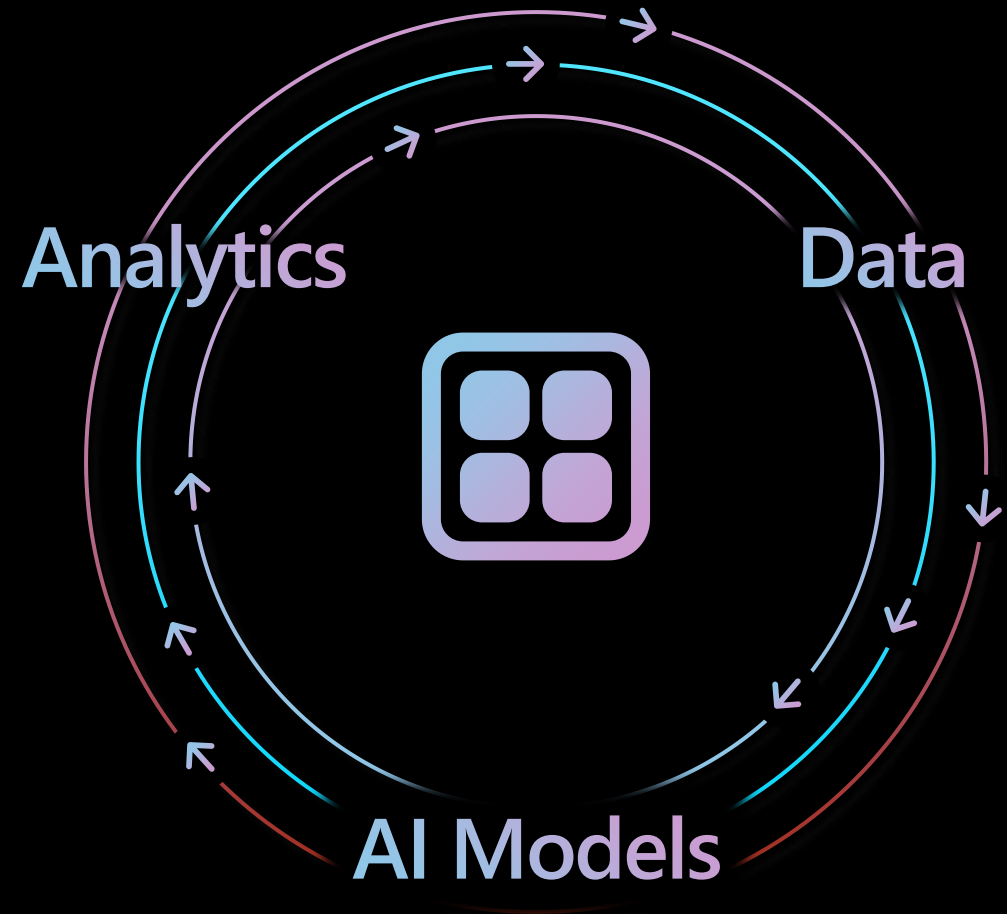


Claudio Mirti  
Sr. Advanced Analytics & AI Specialist EMEA  
Global Black Belt



Created with Microsoft Designer

In the age of AI,  
every data should  
be intelligent



OrderTypeCategory  
Multiple selections

35,731  
Orders since 01.01.2018

142

Beverages Today

127

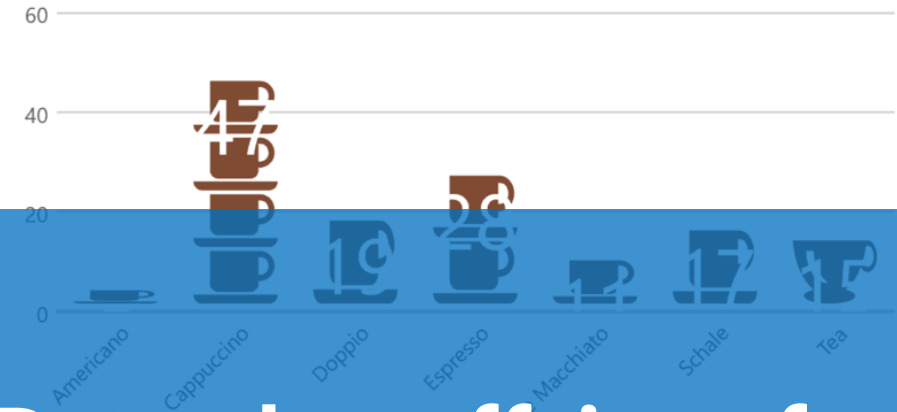
Coffees Today

15

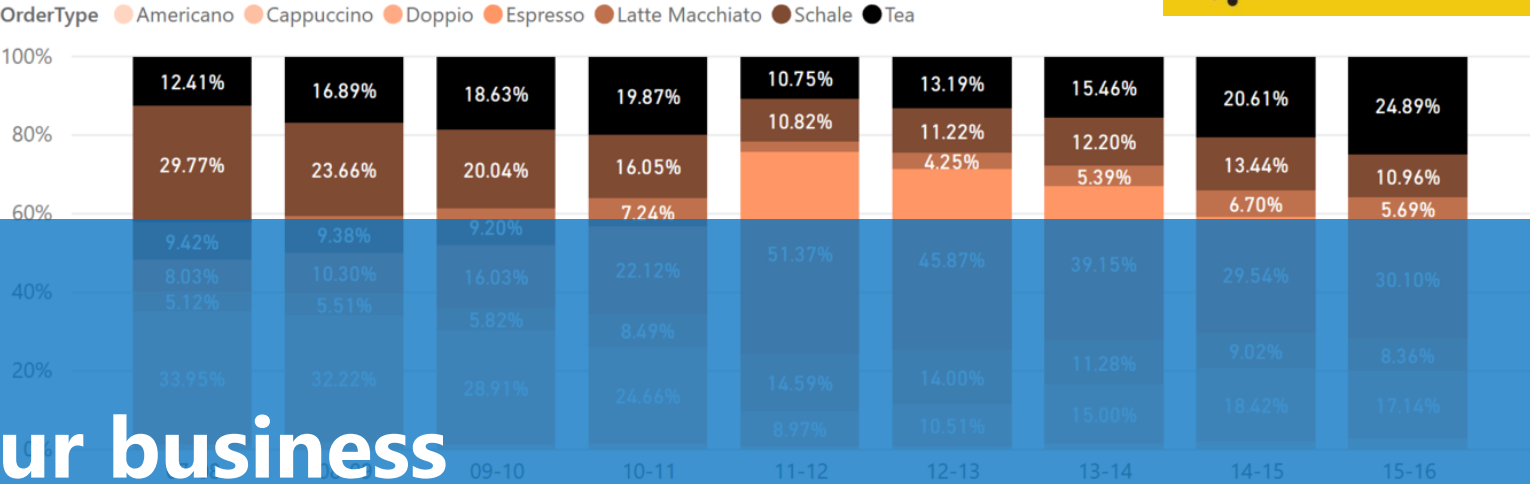
Tea Today



Count of OrderType by OrderType

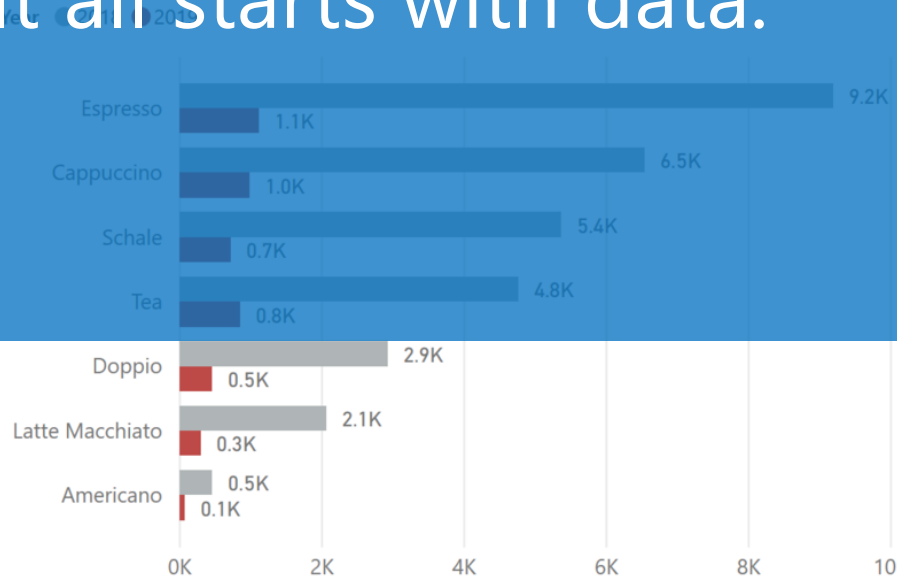


Count of OrderType by HourRange and OrderType

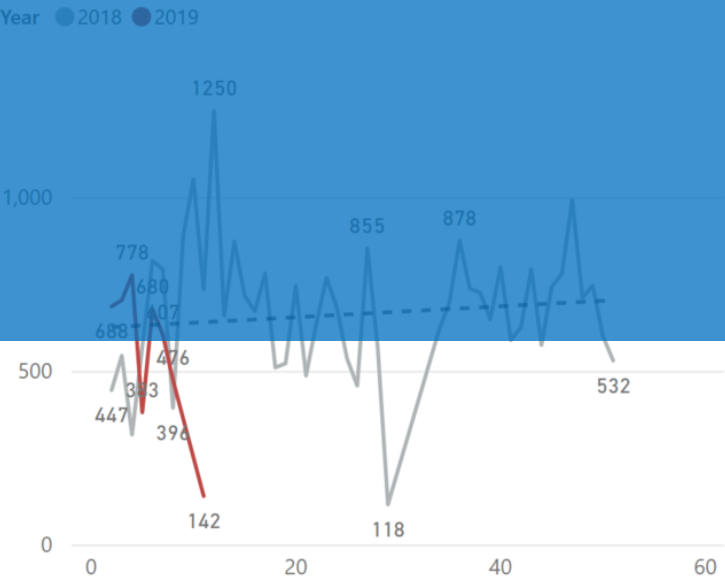


Data, the caffeine of your business  
It all starts with data.

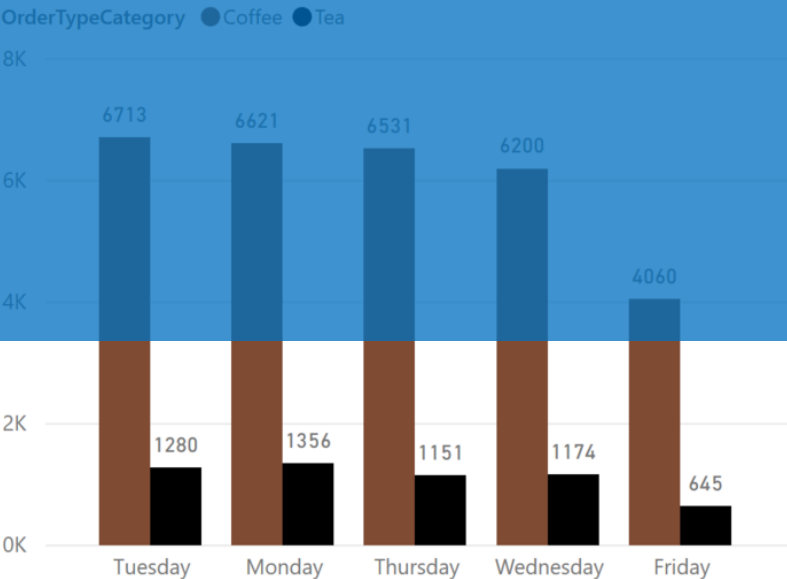
Count of OrderType by OrderType and Year



Count of OrderType by Week and Year



Count of OrderType by WeekdayName and OrderTypeCategory



# Azure AI

## Applications

 Microsoft 365



Power BI



Power Apps

 Microsoft Dynamics 365



Power Automate



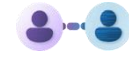
Power Virtual Agents



ISV ecosystem



Customer Solutions



Partner Solutions

## Azure AI Services



Bot Service



Cognitive Search



Document Intelligence



Video Indexer



Metrics Advisor



Immersive Reader



Vision



Speech



Language



Decision



Azure Open AI

## Machine Learning Platform



Azure Machine Learning

## Data Platform



Fabric

## AI Infrastructure



Azure

Azure AI Studio

# We partner at scale to drive innovation



OpenAI forms exclusive computing partnership with Microsoft to build new Azure AI supercomputing technologies

July 22, 2019 | Microsoft News Center



## Hugging Face Collaborates with Microsoft to Launch Hugging Face Endpoints on Azure

Published May 24, 2022.



## Meta selects Azure as strategic cloud provider to advance AI innovation and deepen PyTorch collaboration

Posted on May 25, 2022

[Eric Boyd](#), Corporate Vice President, AI Platform



## Azure Scales 530B Parameter GPT-3 Model with NVIDIA NeMo Megatron

Posted on October 24, 2022

[Rachel Pruitt](#), Product Marketing Manager, Azure Marketing, HPC + AI



# We partner at scale to drive innovation



[AI + Machine Learning](#), [Announcements](#), [Azure AI](#), [Azure AI Studio](#), [Azure Machine Learning](#), [Partners](#)

## Microsoft and Mistral AI announce new partnership to accelerate AI innovation and introduce Mistral Large first on Azure

By [Eric Boyd](#), Corporate Vice President, Azure AI Platform, Microsoft

[Introducing Mistral-Large on Azure in partnership with Mistral AI | Microsoft Azure Blog](#)

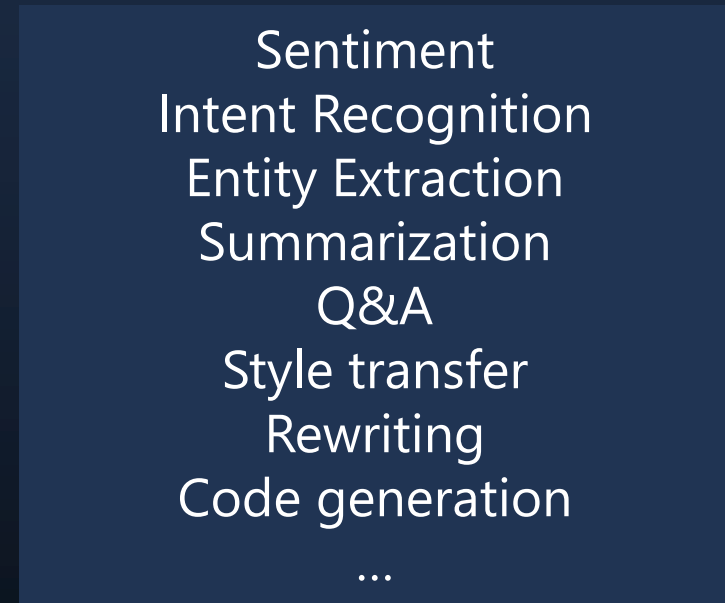
# Why is OpenAI different?

## Typical ML for NLP



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

## OpenAI GPT-4



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

## Already Uploaded Brand Guidelines

01 VISION & MISSION STATEMENT 2023-04-24.pdf  
02 BRAND PERSONALITY & VALUES 2023-05-18.pdf  
03 BRAND IDENTITY SYSTEM 2023-06-28.pdf  
04 BRAND VOICE & TONE 2023-03-05.pdf  
05 BRAND EXPERIENCE PRINCIPLES 2023-01-29.pdf

## Upload Supplementing Documents

Submit Documents

There is nothing attached.

 Attach file

I need ideas for my marketing campaign

## Show Current Brand Essence ✨



## Summarized Document Contents

Append To Final Brand Essence

I have ideas and only need the post generated

# Top use cases for Generative AI



**Enterprise ChatGPT**  
Better knowledge mining

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**Intelligent Call Centers**  
Better analytics and service

---



**Build your own copilot**  
Your data. Your apps. Your people

---



**Content Generation**  
New products and services

---



**Hyper-personalization**  
Better sales and marketing

By [Eric Boyd](#) Corporate Vice President, AI Platform



youtube.com

Asset Management Wealth Management Digital Investing Platforms Insights About Vontobel

[Home](#) > [About Vontobel](#) > [Media](#) > [Media releases and news](#) > [Vontobel to increase use of AI through cooperation with Microsoft](#)

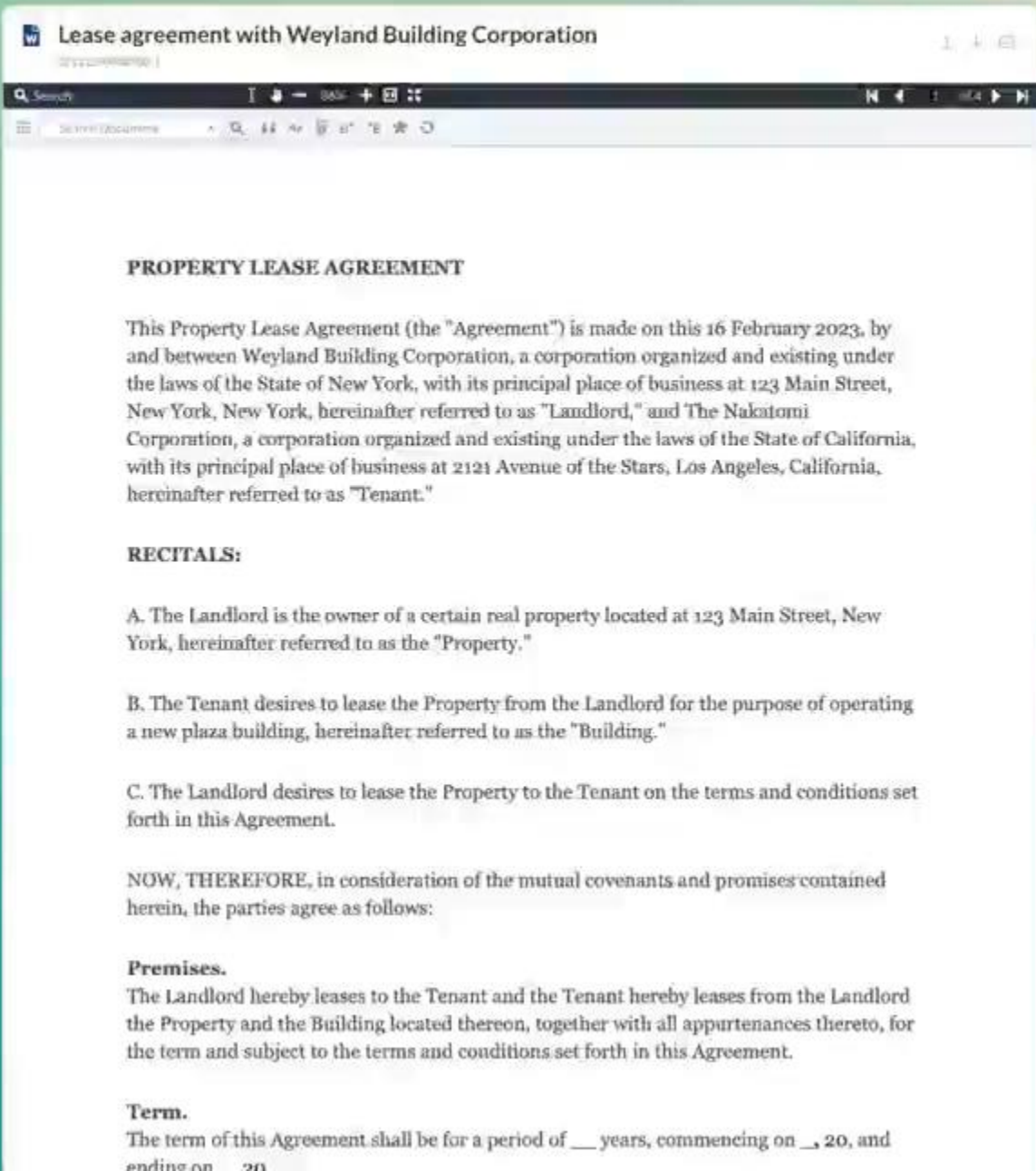
[— Back to the overview](#)

**MEDIA RELEASE**









# LawVu AI Assist

The AI powered conversational tool  
for in-house legal teams





# Chat with your data

Ask anything or try an example

What is included in my Northwind Health Plus plan that is not in standard?

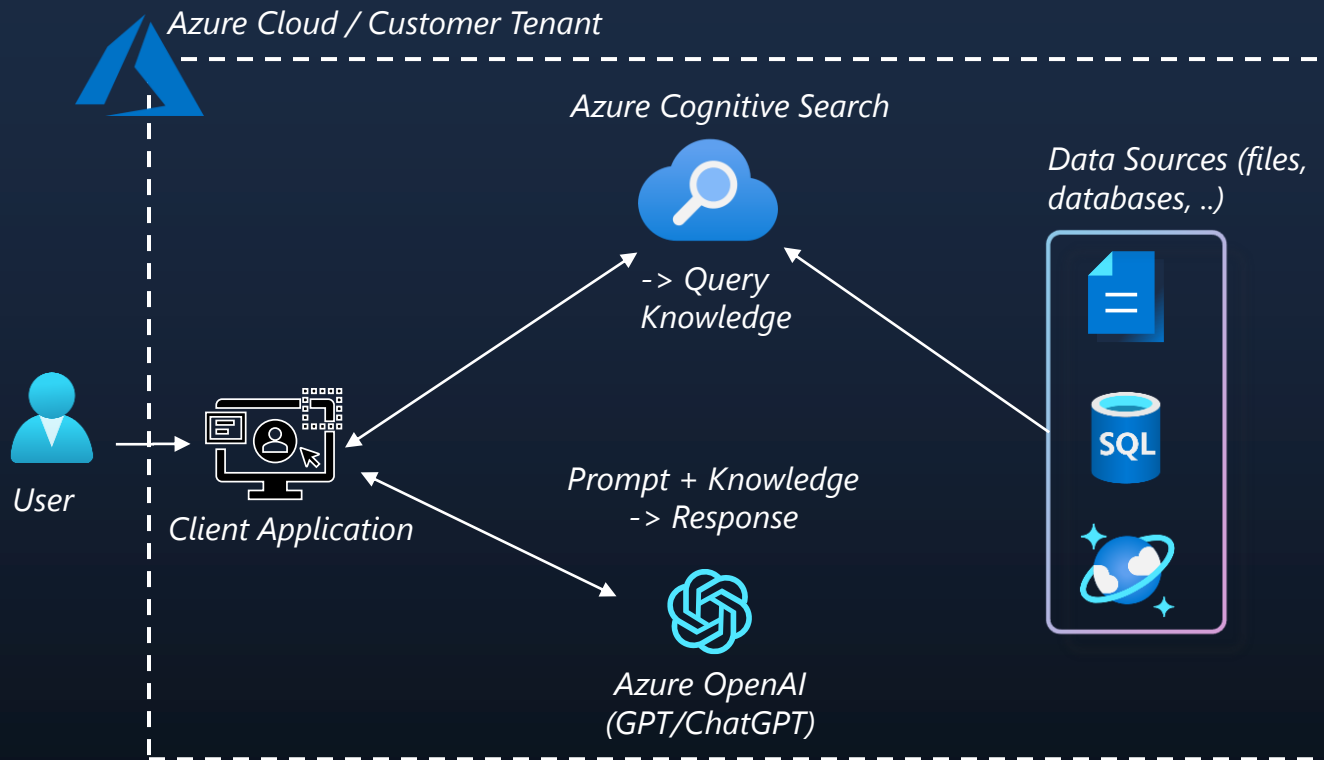
Can you tell me about performance reviews?

What does a Product Manager do?

Type a new question (e.g. does my plan cover annual eye exams?)



# Safety Systems



Deployed and secured in customer cloud environment and tied to their datasets and applications

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

Prompts and completions processed by Azure OpenAI are not used to train, retrain or improve the models.

# Multimodality is here

Language

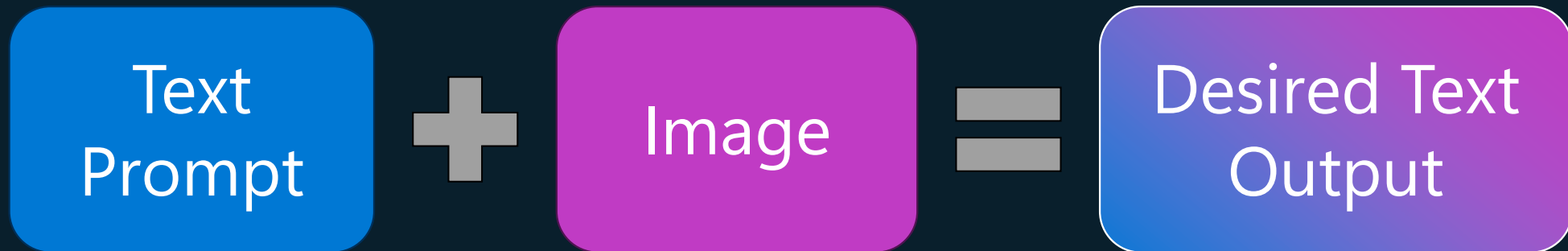
Speech

Vision

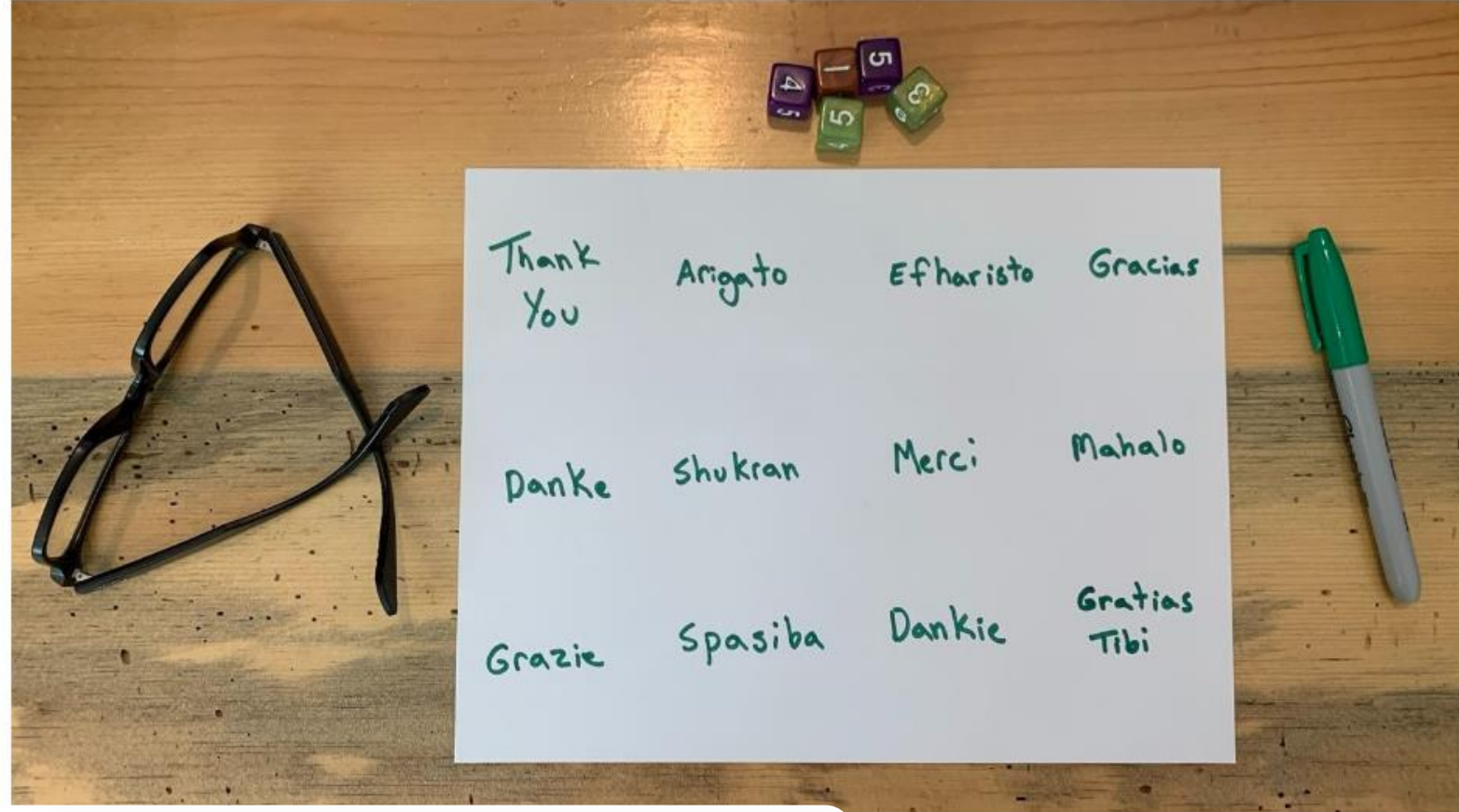


## What 'GPT4 Turbo with Vision' Offers

GPT-4 Turbo with Vision is a multimodal model developed by OpenAI that accepts both image and text inputs and generates text outputs.



# Identify Languages in Images



...  
All these words are ways to say "Thank You" in different languages.

# Playground

[↑ Import](#) [↓ Export](#) [</> View Code](#) [Prompt samples](#)

Mode [Chat](#)



[Clear chat](#)

[Playground Settings](#)

☐ Show JSON



Bitte erkläre mir was du siehst hier.



Das Bild zeigt ein Schlafzimmer mit einem großen Fenster, das viel natürliches Licht hereinlässt und einen Blick auf grüne Umgebung bietet. Das Zimmer hat eine beruhigende blaue Wandfarbe und ist mit einem großen Bett mit einer gepolsterten Kopfteil und blauer Bettwäsche ausgestattet. Neben dem Bett befindet sich ein Nachttisch mit einer modernen Lampe und einem Buch. Am Fußende des Bettes steht ein einfacher Stuhl, und auf dem Boden liegt ein großer Teppich, der für zusätzlichen Komfort sorgt. Das Zimmer wirkt insgesamt sehr ordentlich, einladend und entspannend.

## Playground

↑ Import ↓ Export </> View Code ☐ Prompt samples ⋮

Mode Chat ▾

🗑️ Clear chat ⚙️ Playground Settings ☐ Show JSON 🔊



Type user query here. (Shift + Enter for new line)



Bitte beschreibe das Bild

Das Bild zeigt eine Werbeanzeige für ein Immobilienprojekt namens "IM ALTE RÄBBERG". Es handelt sich um ein modernes Wohnungsbauprojekt, das im historischen Teil von Rütihof in Zürich-Höngg realisiert wird. Die Anzeige verspricht, dass 32 einzigartige Eigentumswohnungen mit 2.5 bis 5.5 Zimmern entstehen werden. Die Wohnanlage scheint von viel Grün umgeben zu sein und bietet eine naturnahe, moderne und einzigartige Wohnatmosphäre.

Die Gebäude sind mehrstöckig und mit Flachdächern versehen, auf denen Solarpaneele installiert sind. Die Architektur ist kubisch und die Fassaden der Gebäude sind mit Holzelementen verkleidet, was den Wohnungen ein zeitgemäßes und zugleich warmes Erscheinungsbild verleiht. Zwischen den Gebäuden befinden sich gepflegte Grünflächen und Wege, die die einzelnen Blöcke miteinander verbinden.

Die Anzeige informiert auch über wichtige Daten des Projekts: Die Baubewilligung wurde bereits erteilt, der Baustart ist für den Sommer 2024 geplant und die Wohnungen sollen im Herbst 2026 bezugsfertig sein. Für weitere Informationen wird auf die Website [www.im-alte-räbberg.ch](http://www.im-alte-räbberg.ch) verwiesen.

# From Retail to Lab Optimization

## Out-Of-Stock Shop Assistant

Web cam # 1

Web cam # 2

Web cam # 3

Web cam # 4

Analyse



Web cam # 3

Image analysis results for Web cam # 3:

There is a visible gap on the second from the bottom shelf on the right side, where

Azure AI | Azure OpenAI Studio

Azure OpenAI Studio > Chat playground

Chat playground

Clear chat Playground Settings View code Show JSON

Configuration

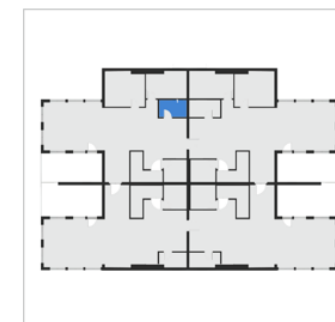
Deployment Parameters

Deployment \*  
gpt-4v

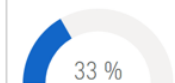
Enhancements  
☒ Vision  
Azure AI Services

Session settings  
Past messages included 10  
Current token count 299/128000  
Input tokens progress indicator

Type user query here, (Shift + Enter for new line)



Compounds Level of Usage

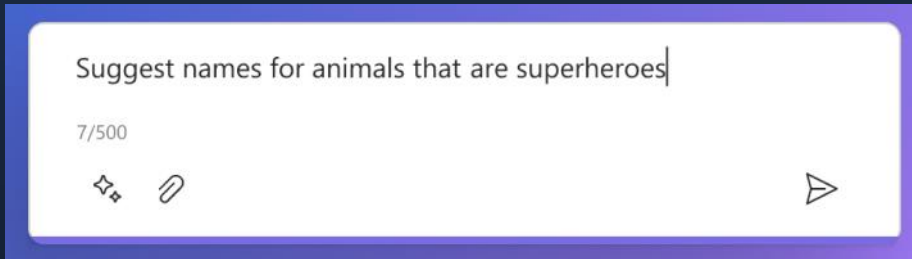


Compounds main stock



# Prompt Design

The basic request to the model, usually in the form of an instruction or question.



Suggest names for animals that are superheroes

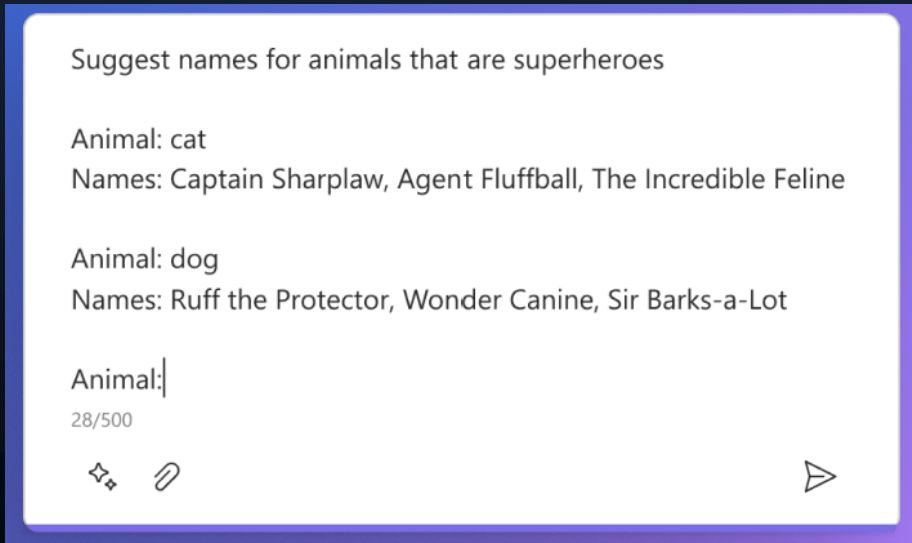
7/500

✱ 📎 ➤

A screenshot of a text input field with a purple border. The text "Suggest names for animals that are superheroes" is entered. Below the text is a character count "7/500". At the bottom left are icons for a star and a paperclip. At the bottom right is a right-pointing arrow icon.

Zero shot

*One of the best ways to get meaningful outputs is to show the model what that output should look like*



Suggest names for animals that are superheroes

Animal: cat  
Names: Captain Sharplaw, Agent Fluffball, The Incredible Feline

Animal: dog  
Names: Ruff the Protector, Wonder Canine, Sir Barks-a-Lot

Animal: |

28/500

✱ 📎 ➤

A screenshot of a text input field with a purple border. It shows a few-shot example. The prompt "Suggest names for animals that are superheroes" is at the top. Below it are two examples: "Animal: cat" followed by "Names: Captain Sharplaw, Agent Fluffball, The Incredible Feline", and "Animal: dog" followed by "Names: Ruff the Protector, Wonder Canine, Sir Barks-a-Lot". The current input is "Animal: |". Below the input is a character count "28/500". At the bottom left are icons for a star and a paperclip. At the bottom right is a right-pointing arrow icon.

Few shot

# Prompt Engineering Builds on Data



User Prompt

«Help me determine the biggest risks to next quarter's earnings»

Data Estate



Document Stores



Structured Data



CRM



API's, Other sources...

System message

Contract Clauses

Accounting Data

Public News

Sales Data

User Prompt

RAG  
pattern



Azure Open AI Service

**Retrieval Augmented Generation**



# The unified data platform for the era of AI



Data  
Factory



Synapse Data  
Engineering



Synapse Data  
Science



Synapse Data  
Warehousing



Synapse Real  
Time Analytics



Power BI



Data  
Activator



AI



OneLake



Purview

Unified  
architecture

Unified  
experience

Unified  
governance

Unified  
business model



# Microsoft Fabric

5 seconds to sign up / 5 minutes to WOW

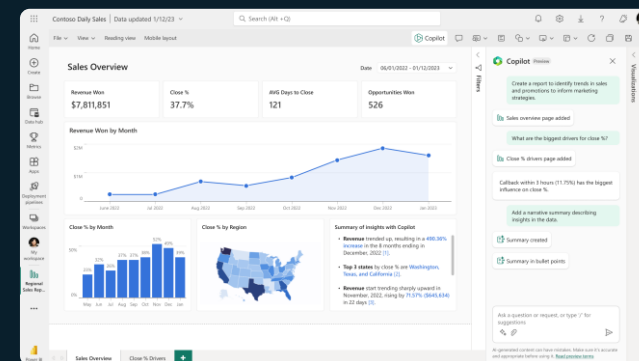
Unified Analytics Platform

A lake centric and open architecture approach


Empowering every business users through Power BI

All of the AI goodness in Microsoft Fabric with Copilot

Cost reduction with an unified capacity model





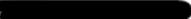
 A SQL endpoint for SQL querying and a default dataset for reporting were created and will be updated with any tables added to the lakehouse.

## Explorer













## CircleHouse

## Tables

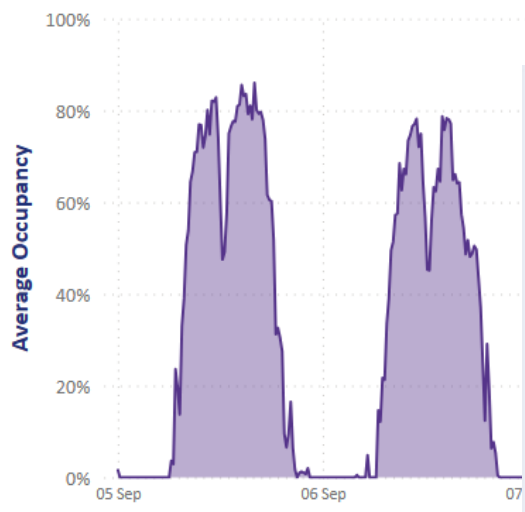
  1>  CircleShortcut ...

## Files

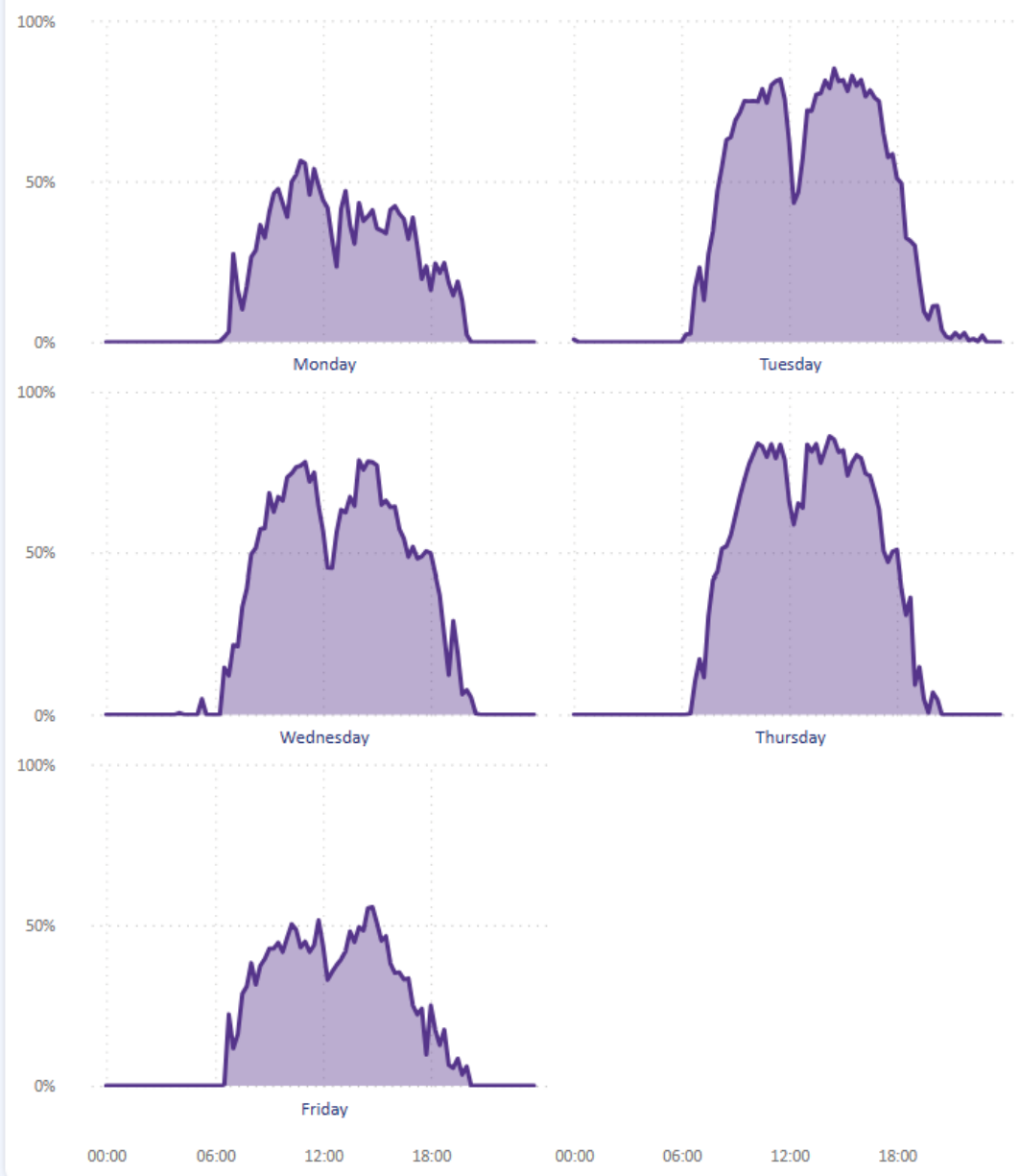
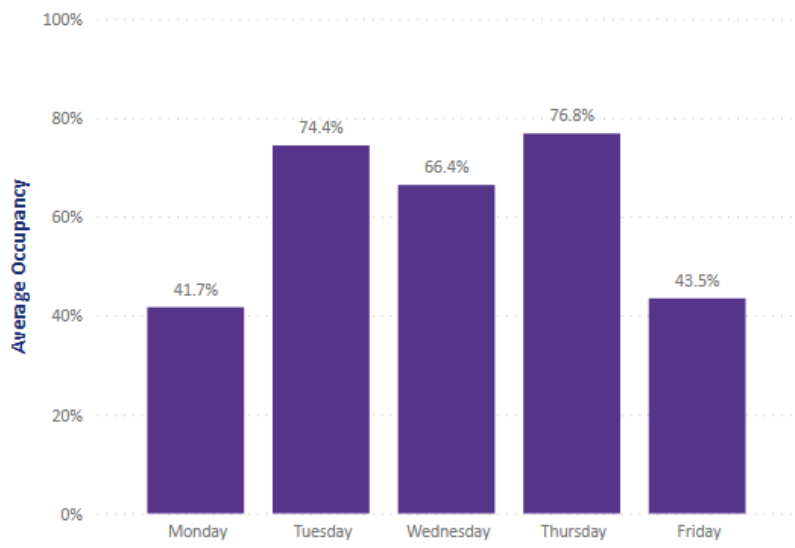
 > CircleShortcut

Name	Date modified ↓	Type	Size
 date=2023-09-18	9/18/2023 2:10:20 AM	Folder	146 items
 date=2023-09-17	9/17/2023 2:10:48 AM	Folder	288 items
 date=2023-09-16	9/16/2023 2:11:25 AM	Folder	288 items
 date=2023-09-15	9/15/2023 2:11:09 AM	Folder	288 items
 date=2023-09-14	9/14/2023 2:10:44 AM	Folder	288 items
 date=2023-09-13	9/13/2023 2:10:39 AM	Folder	288 items
 date=2023-09-12	9/12/2023 2:10:52 AM	Folder	288 items
 date=2023-09-11	9/11/2023 2:10:30 AM	Folder	288 items
 date=2023-09-10	9/10/2023 2:11:40 AM	Folder	288 items
 date=2023-09-09	9/9/2023 2:11:04 AM	Folder	288 items

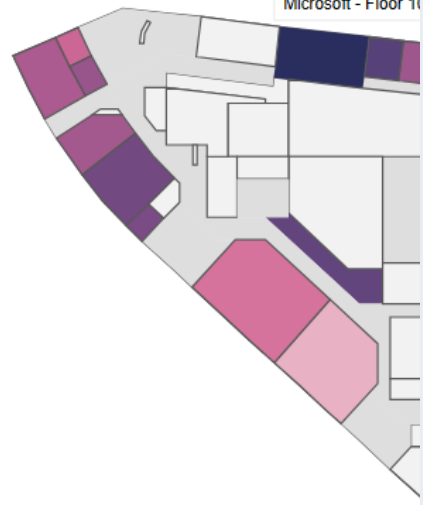
Microsoft - The Circle - Zürich Airport



Microsoft - The Circle - Zürich Airport



Microsoft - Floor 10



Microsoft - Floor 9





Home



Create



Browse

OneLake  
data hub

Apps



Metrics

Monitoring  
hub

Workspaces

MyDataWor  
kspace

esg\_lake

ESG\_Risk-  
Scoring

Power BI

## Workspaces

Workspace search

Admin monitoring

My workspace

All

Clinical Hub

MyDataWorkspace

tatooine



Deployment pipelines

+ New workspace

te deployment pipeline



Create app



Filter by keyword

Filter



Type

Owner

Refreshed

Next refresh

Endorsement

Sensiti

Lakehouse

System Administr...

—

—

—

—

Semantic model (...)

MyDataWorkspace

24/01/24, 03:19:04

N/A

—

—

SQL analytics end...

MyDataWorkspace

24/01/24, 03:22:38

N/A

—

—

Notebook

System Administr...

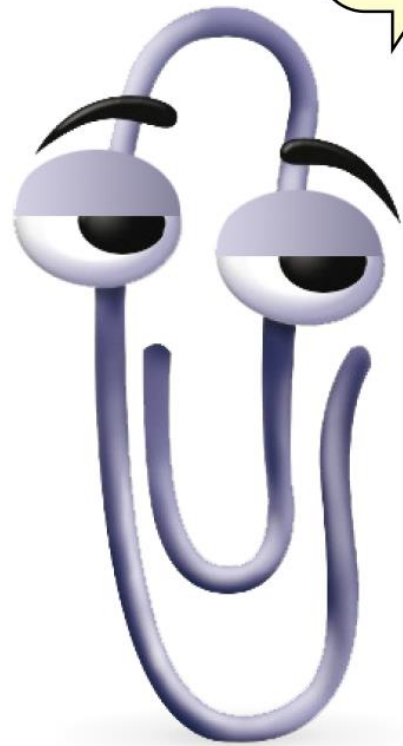
—

—

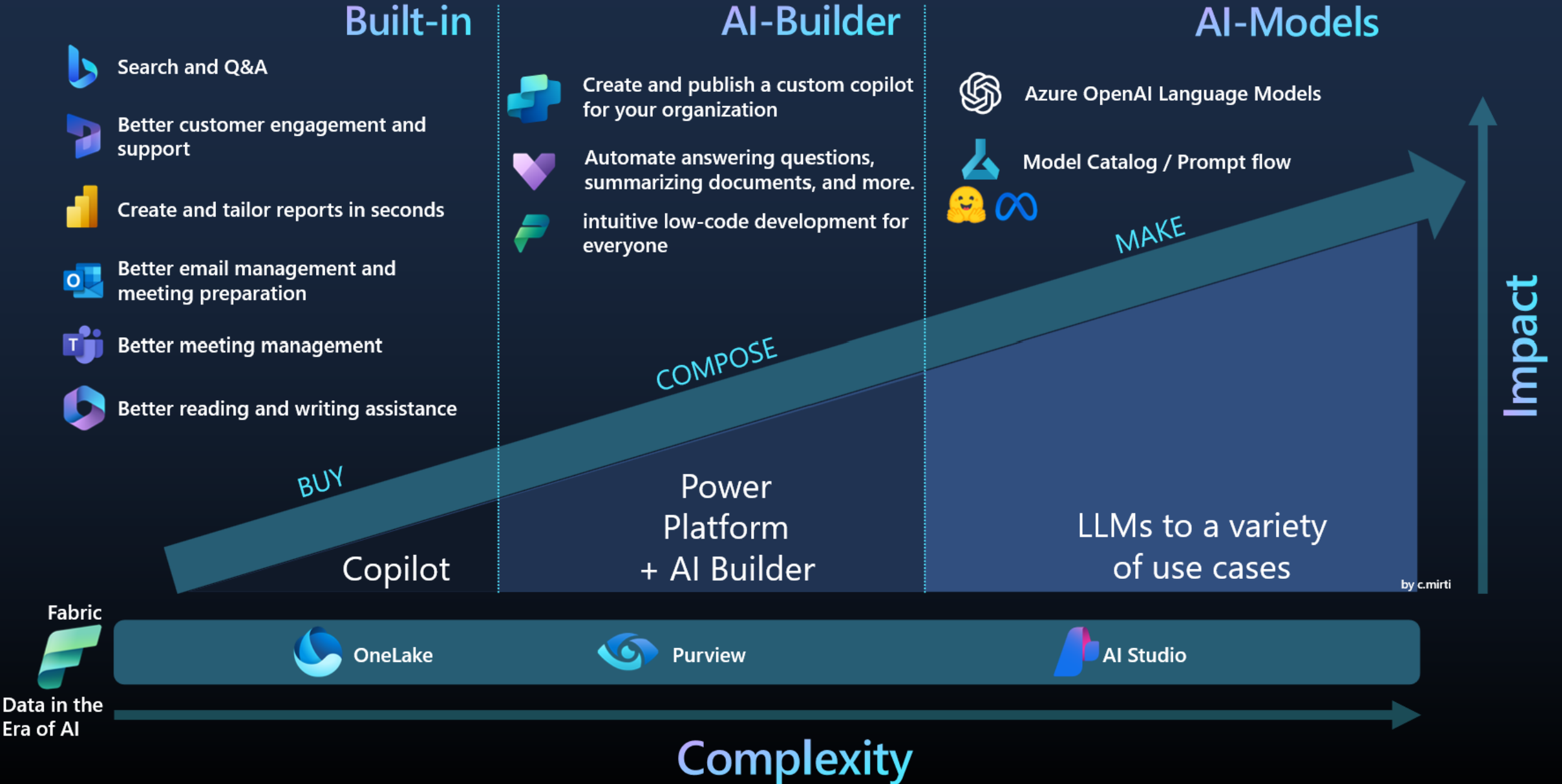
—

—

Copilot, I am  
your father

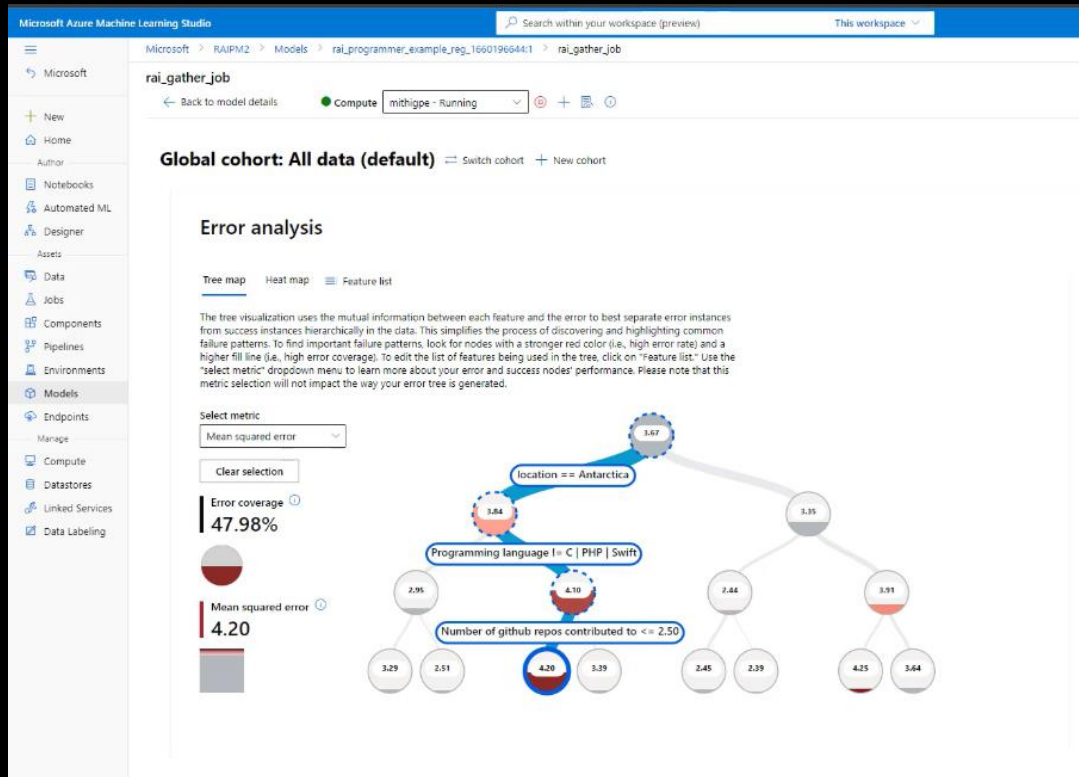


# From Copilot to enterprise scale AI



# Responsible AI & Content filtering

## Responsible AI dashboard



## AI Content Safety

Configure filters

Use blocklist

View code

Set the severity thresholds for each category and select Run test to see how the results change.

[Reset to default](#)

Severity ⓘ

SAFE LOW MEDIUM HIGH

Violence ⓘ

✓ ✓ - -

Self-harm ⓘ

✓ ✓ - -

Sexual ⓘ

✓ ✓ - -

Hate ⓘ

✓ ✓ - -

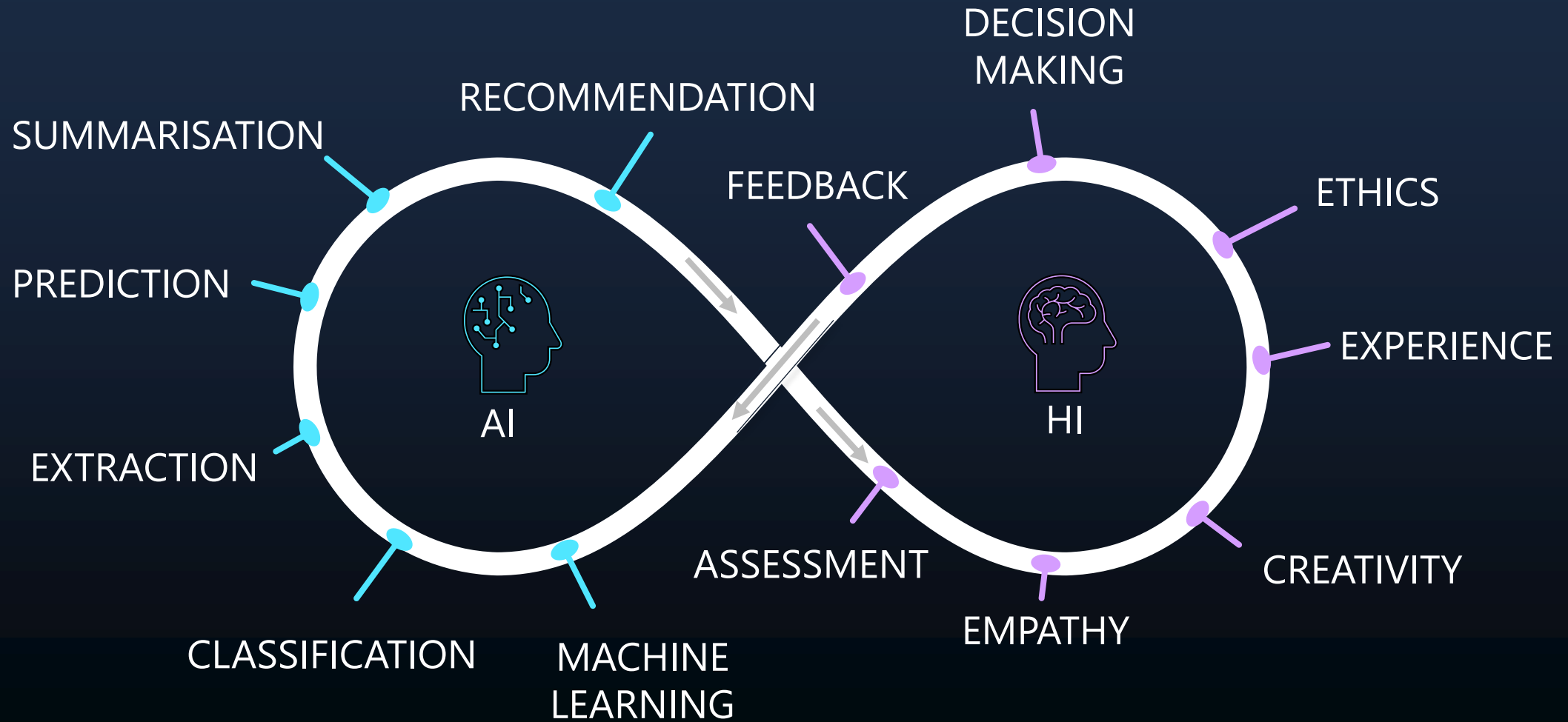
# Microsoft Cloud AI you can trust

Your data is your data

Your data is not used to train the OpenAI foundation models without permission

Your data is protected by the most comprehensive enterprise compliance and security controls

# Artificial Intelligence and Human Intelligence: Better together



# Guidelines for Human AI Interaction

Learn More: <https://aka.ms/aiguideelines>



## INITIALLY

1  
Make clear  
what the  
system  
can do.

2  
Make clear  
how well the  
system can  
do what it  
can do.

## DURING INTERACTION

3  
Time services  
based on  
context.

4  
Show  
contextually  
relevant  
information.

5  
Match  
relevant  
social norms.

6  
Mitigate  
social biases.

## WHEN WRONG

7  
Support  
efficient  
invocation.

8  
Support  
efficient  
dismissal.

9  
Support  
efficient  
correction.

10  
Scope  
services when  
in doubt.

11  
Make clear  
why the  
system did  
what it did.

## OVER TIME

12  
Remember  
recent  
interactions.

13  
Learn from  
user behavior.

14  
Update and  
adapt  
cautiously.

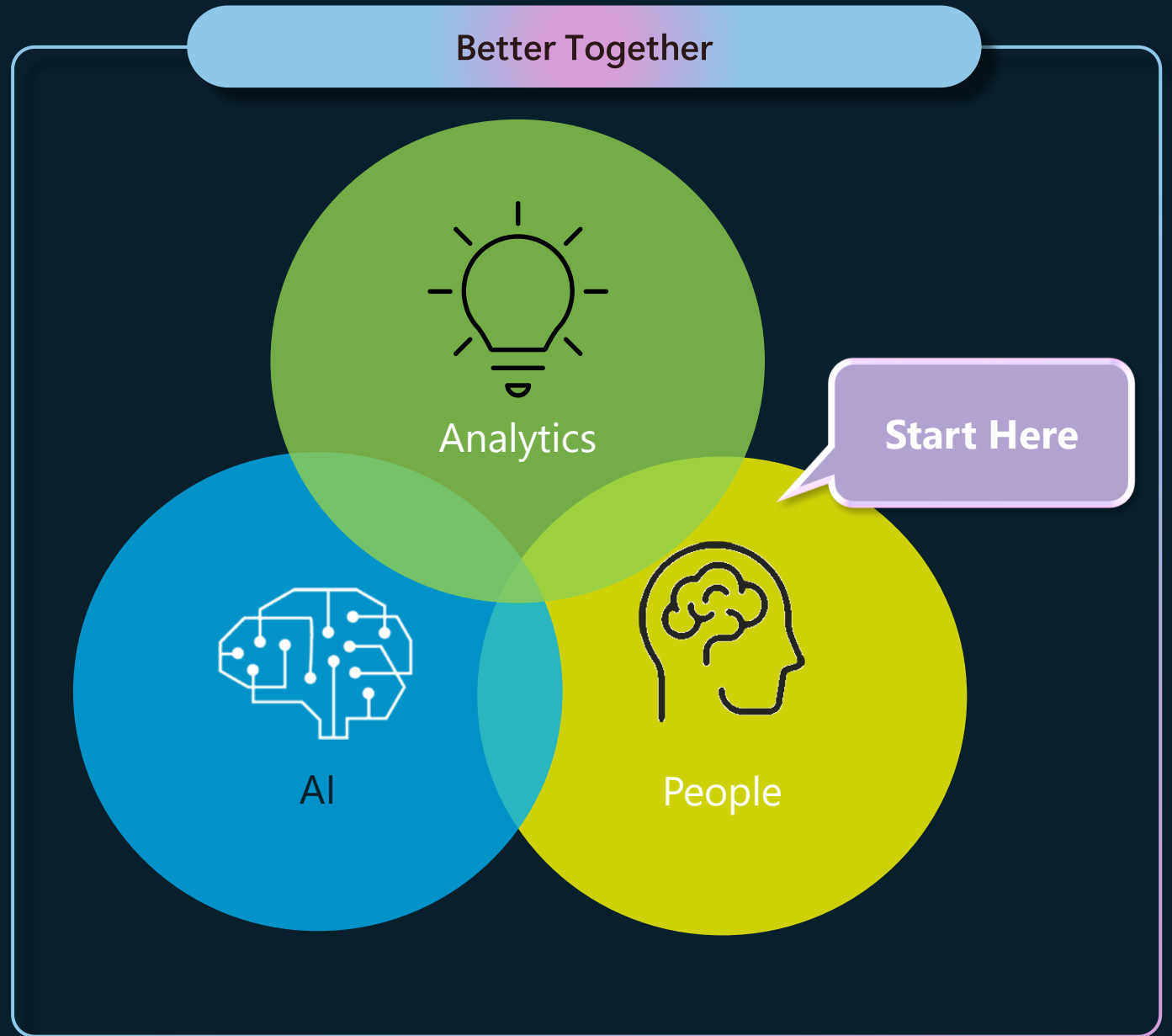
15  
Encourage  
granular  
feedback.

16  
Convey the  
consequences  
of user  
actions.

17  
Provide  
global  
controls.

18  
Notify users  
about  
changes.

Start with a story that  
features people's need  
and organic use of AI



# THANK YOU.

Claudio Mirti



# Advancing the state-of-the-art computer vision technologies

YbrigOut-20230416172252-20230416172319.mp4



Run a test

Run frame analysis

Run

Results

Results appear here.



[Project Florence \(AI\) - Microsoft Research](#)