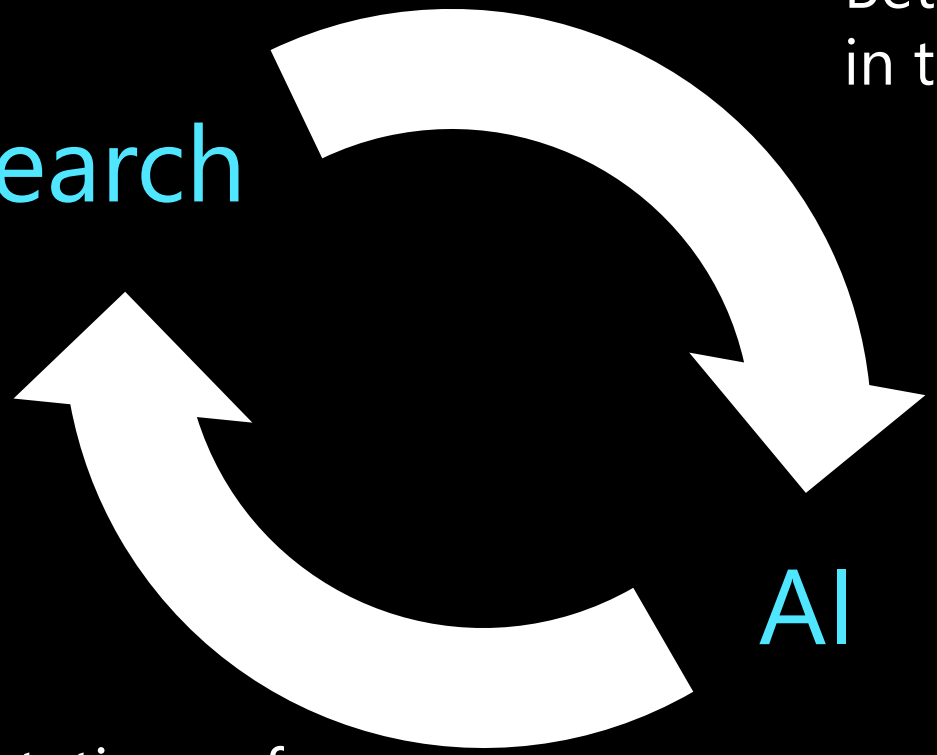
Azure AI Search

Search + AI

Better Together

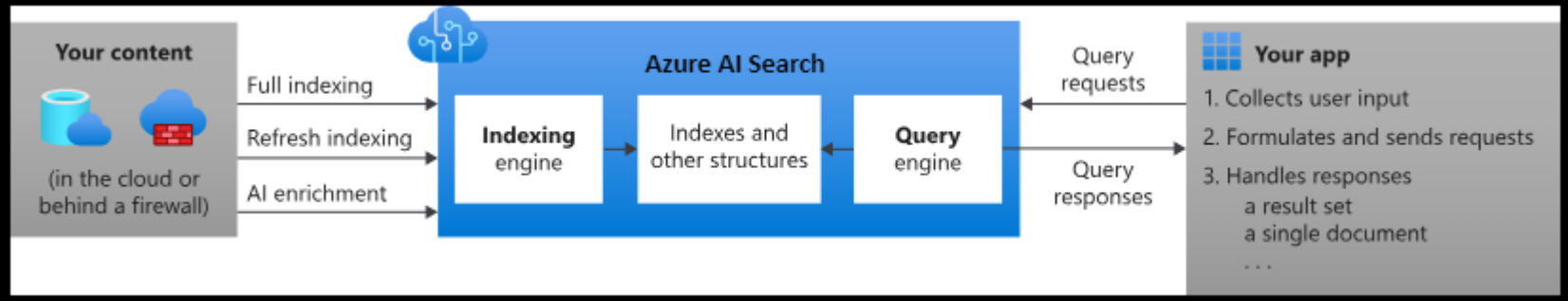


Better information in the context

Better representations of data (embeddings)

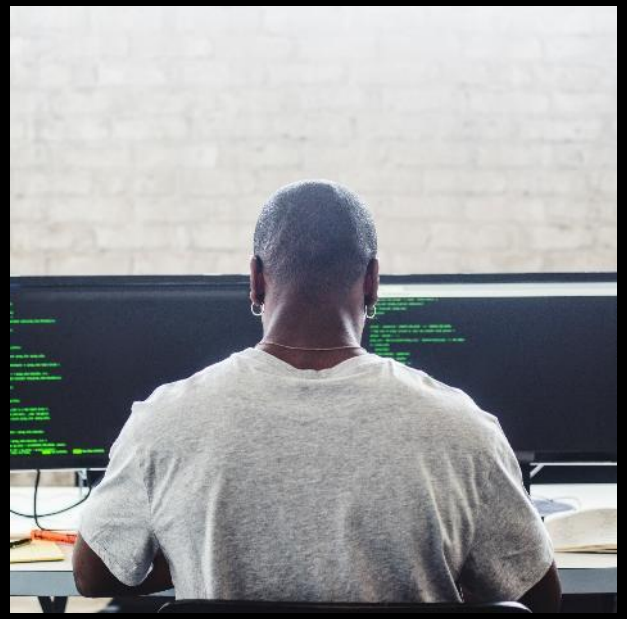
Azure AI Search

- Azure AI Search (formerly known as "Azure Cognitive Search") provides secure information retrieval at scale over user-owned content in traditional and generative AI search applications.
- Information retrieval is foundational to any app that surfaces text and vectors. Common scenarios include catalog or document search, data exploration, and increasingly chat-style apps over proprietary grounding data.



Vector Search: Deeper Dive

Scenario

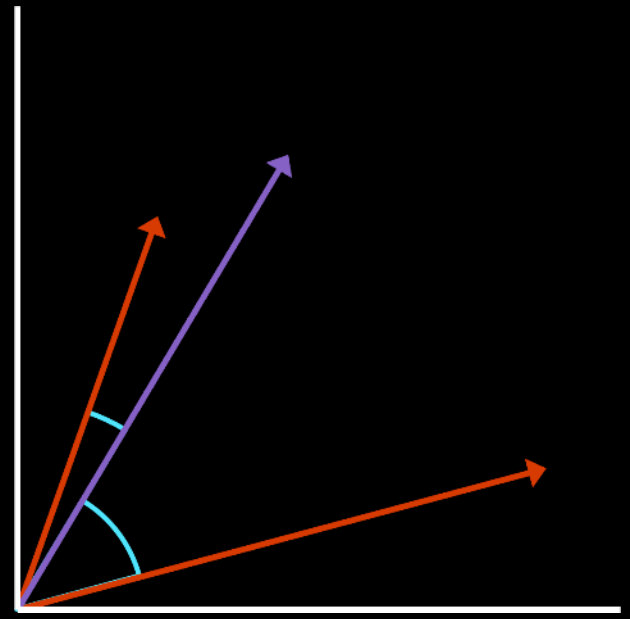


Organizations need efficient methods to retrieve semantically similar items from large-scale data sources.

The Challenge

Sifting through large-scale databases to find related items can be resource-intensive and time-consuming.

The Solution



By calculating similarity metrics like cosine similarity, vector search organizes data and retrieves semantically similar items within the high-dimensional space.

Embeddings: Convert Data into Vector Representation

Simplifying complex data structures for efficient analysis and processing in various applications.

Definition

- Abstract, dense, compact, learned numerical representations of data
- Map complex structures into simpler, fixed-size vectors
- Applicable to diverse data types (text, images, audio, etc.)

Purpose

- Facilitate analysis and processing of diverse data types
- Enable similarity measurement, clustering, and classification
- Power applications like Vector search and recommendation systems

Benefits

- Efficient search and organization of vast datasets
- Improved accuracy and relevance of search results
- Scalable and adaptable to various industries and use cases

Choosing an Embedding Model

Key Factors for Selecting the Optimal Model for Your Use Case

Model Characteristics

- Task Specificity
- Performance
- Context Awareness
- Model Size and Inference Speed
- Language Support
- Customizability (ability to fine-tune)

Implementation Considerations

- Training Time and Complexity
- Pre-Trained Models
- Integration
- Community Support and Updates
- Cost

We recommend Azure OpenAI Service “text-embedding-ada-002” for text embeddings
We recommend Azure AI Vision Image Retrieval API for image embeddings

Introducing Vector search

Revolutionize Indexing and Power Retrieval Augmented Generation for LLM Apps


Images


Audio


Video


Graphs

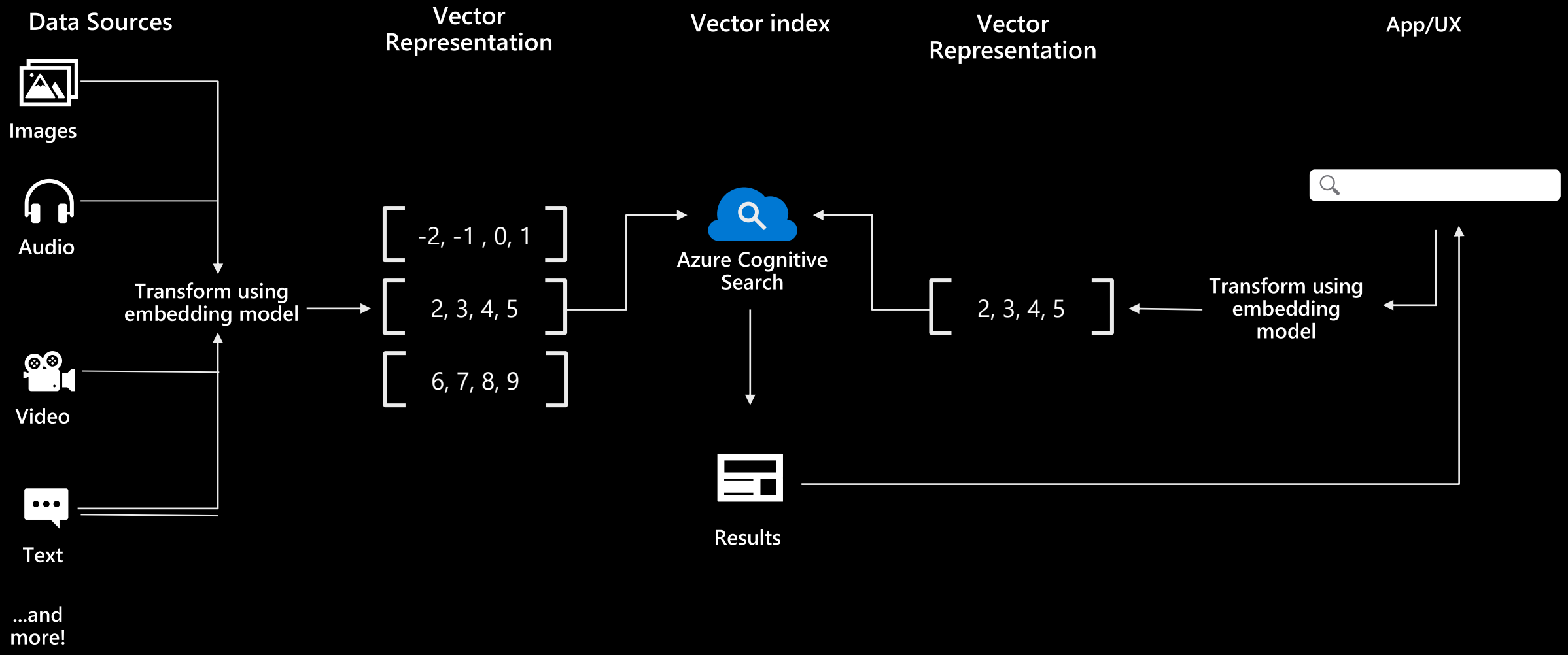

Text

- Leverage data from any data store
- Improve relevancy
- Query across multiple types of data
- Quickly search through large data sets

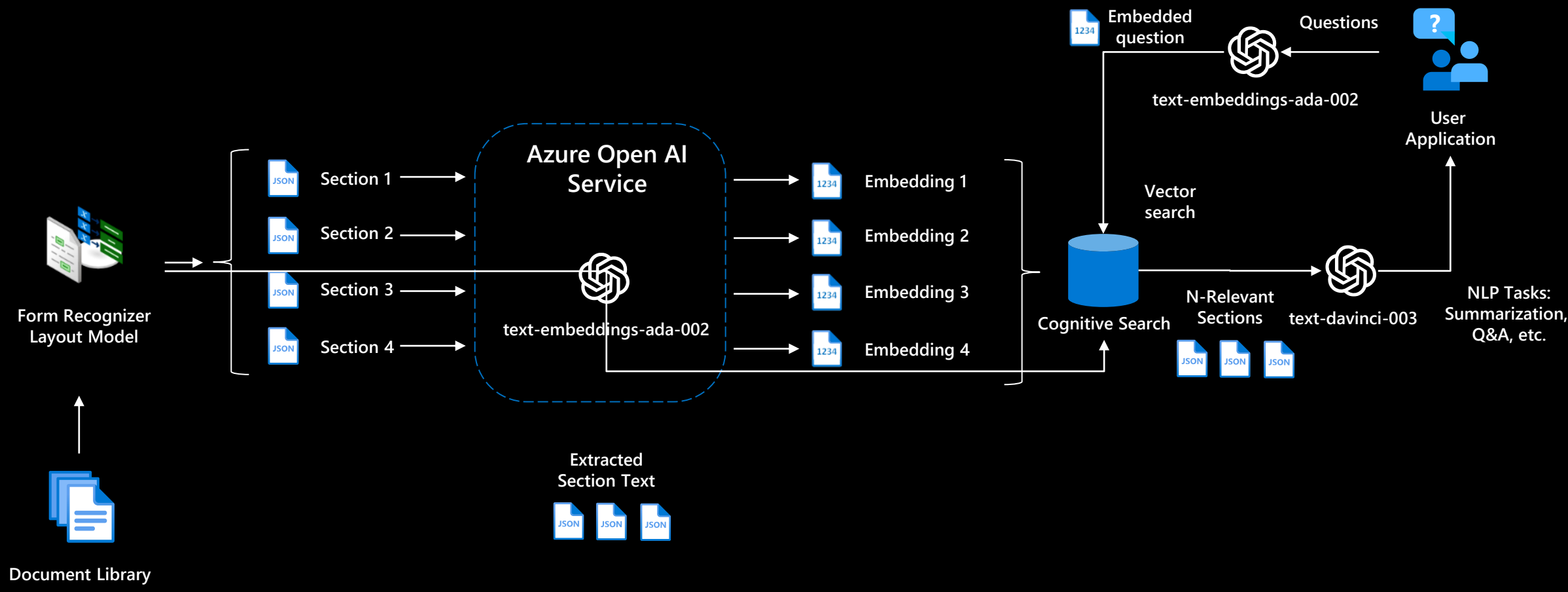
- Deploy with enterprise-grade security
- Easily scale with changing workloads
- Build retrieval plugins for OpenAI's ChatGPT using Azure OpenAI service

Find relevant objects with embeddings

Convert data vectors (embeddings) and find the most similar objects according to metric

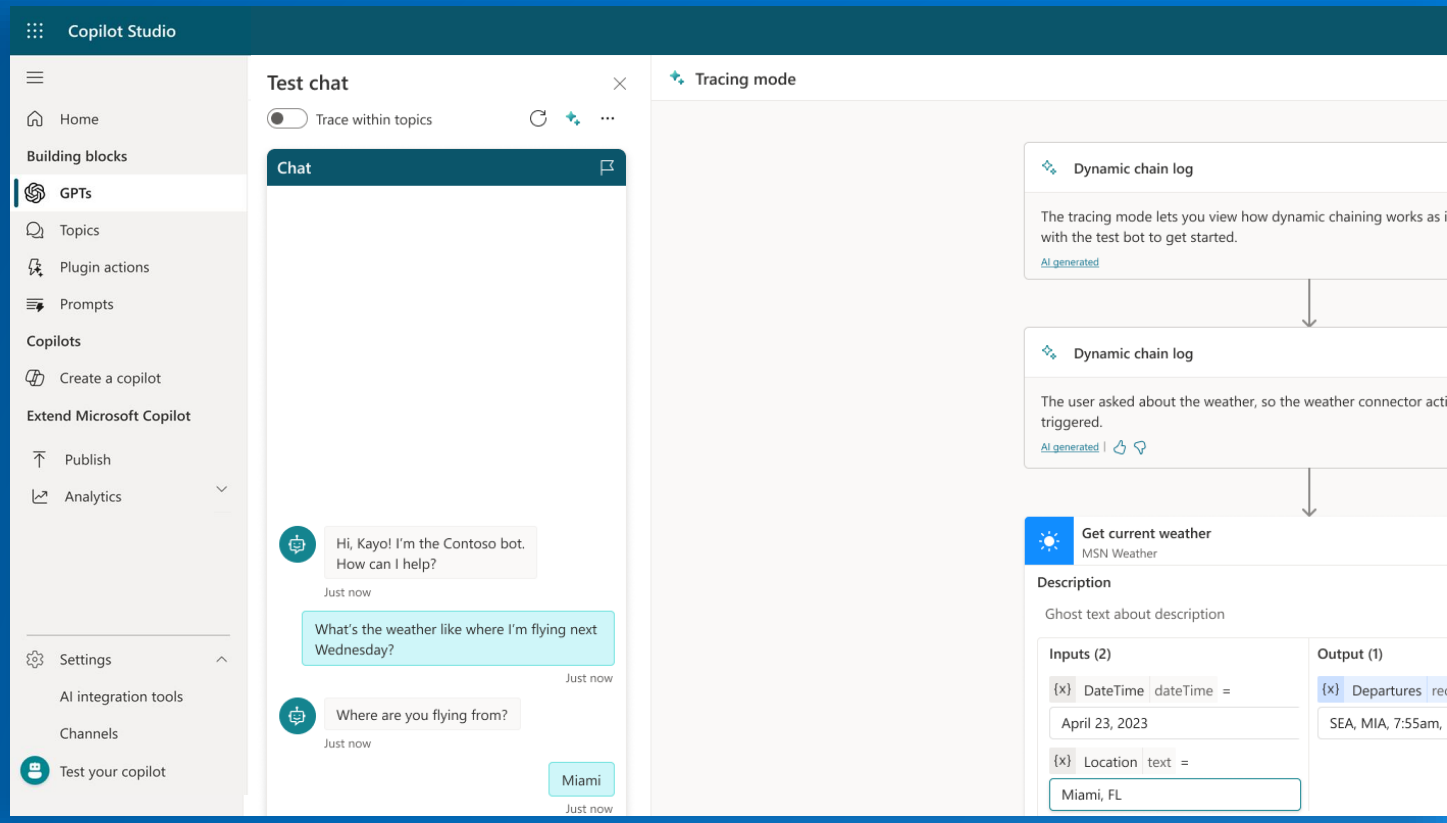


Q&A with Semantic Answering over Document Library



Build your own custom copilot with Copilot Studio

- Generative conversations
- Natural language to build
- Dynamically complete tasks



Microsoft Copilot Studio

Build your own copilot

Create and publish a custom copilot for your organization using the intuitive building experience enhanced with large language models and generative AI

Customize Microsoft Copilot

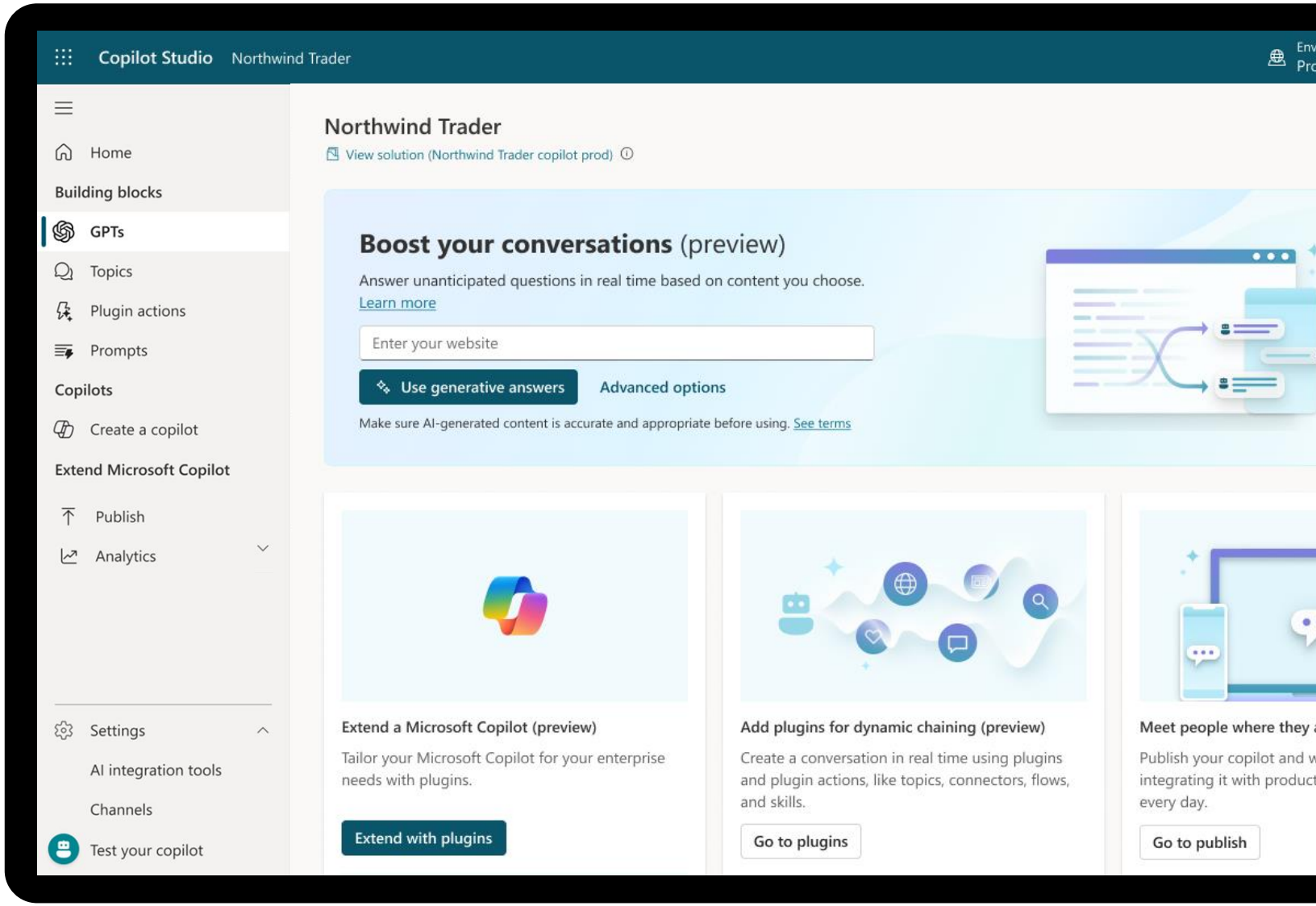
Extend and customize 1st party Microsoft Copilots with your own enterprise scenarios. Copilot Studio will be included with the Microsoft 365 Copilot SKU.

Connected platform

Integrates and exposes various Microsoft's conversational AI technology stacks - integrated with Azure AI Studio, Azure Cognitive Services, Azure Bot Framework, Power Platforms AI models and more

Manage copilot experiences

Governance and control features to monitor usage with full visibility of customizations, standalone copilots as well as who is building and customizing them.



Copilot Studio

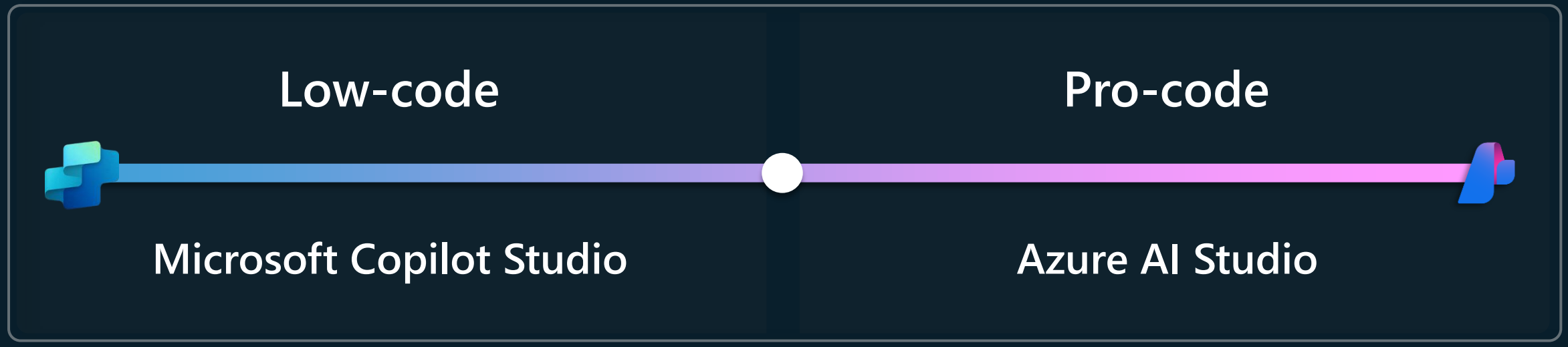
	Internal custom copilots	Customer facing copilots	Extend Copilot for Microsoft 365		
World Class UX	Declarative	Rich Response	Intuitive	Ease of use	Natural language to build
Logic + Automation	Low code logic	Generative Answers + Actions	Power Automate	Custom Azure Skills	
Next-Gen AI	Prebuilt LLM	Generative AI	Proactive suggestions	Bring your own Model (BYOM)*	
Connected experience	Microsoft Copilot	Power Platform	1000+ Connectors	Azure AI Studio	
Copilot Lifecycle	Test Pane	Collaboration	Solution Management	ALM Automation	
Security + Governance	Trusted identity	Full visibility	Advanced RBAC	Granular DLP control	

Microsoft's end-to-end copilot building platform


JAKE-CLARK.TUMBLR

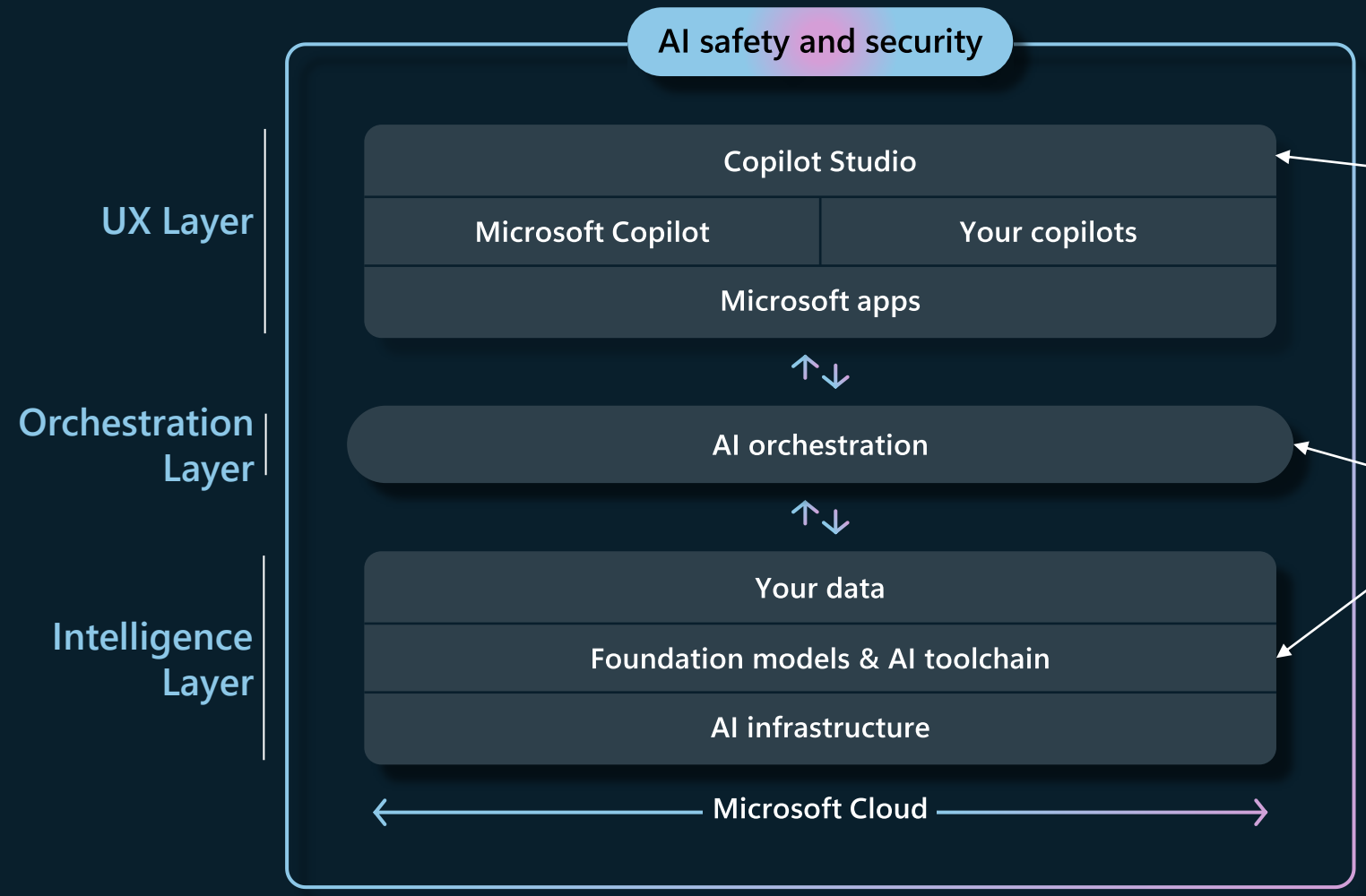
Build your own Copilot

with the most comprehensive end-to-end AI toolchain



- Extend Microsoft Copilot
- Build custom copilot
  - Knowledge Discovery
  - Process Automation

- Build custom copilot
- Build AI-powered apps and solutions (beyond copilot)



Microsoft Copilot Studio

- Formerly known as Power Virtual Agent
- Strong focus on conversational AI / chatbot
- Low code & SaaS = accelerated time to market

Azure AI Studio

- Unified experience and one-stop shop for all AI development (beyond copilots)
- Model Catalog (AOAI and OSS)
- Integration with AI orchestration frameworks such as Prompt Flow, Semanic Kernel, LangChain
- Data integration with OneLake in Microsoft Fabric
- Built-in content safety