Intelligente Apps bauen und betreiben

Mit dem Copilot Stack

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Azure Specialist

Robin-Manuel Thiel
Global Black Belt

ChatGPT

THE SHIFT

An A.I.-Generated Picture Won an Art Prize. Artists Aren't Happy.

"I won, and I didn't break any rules," the artwork's creator says.

Give this article 1.5K

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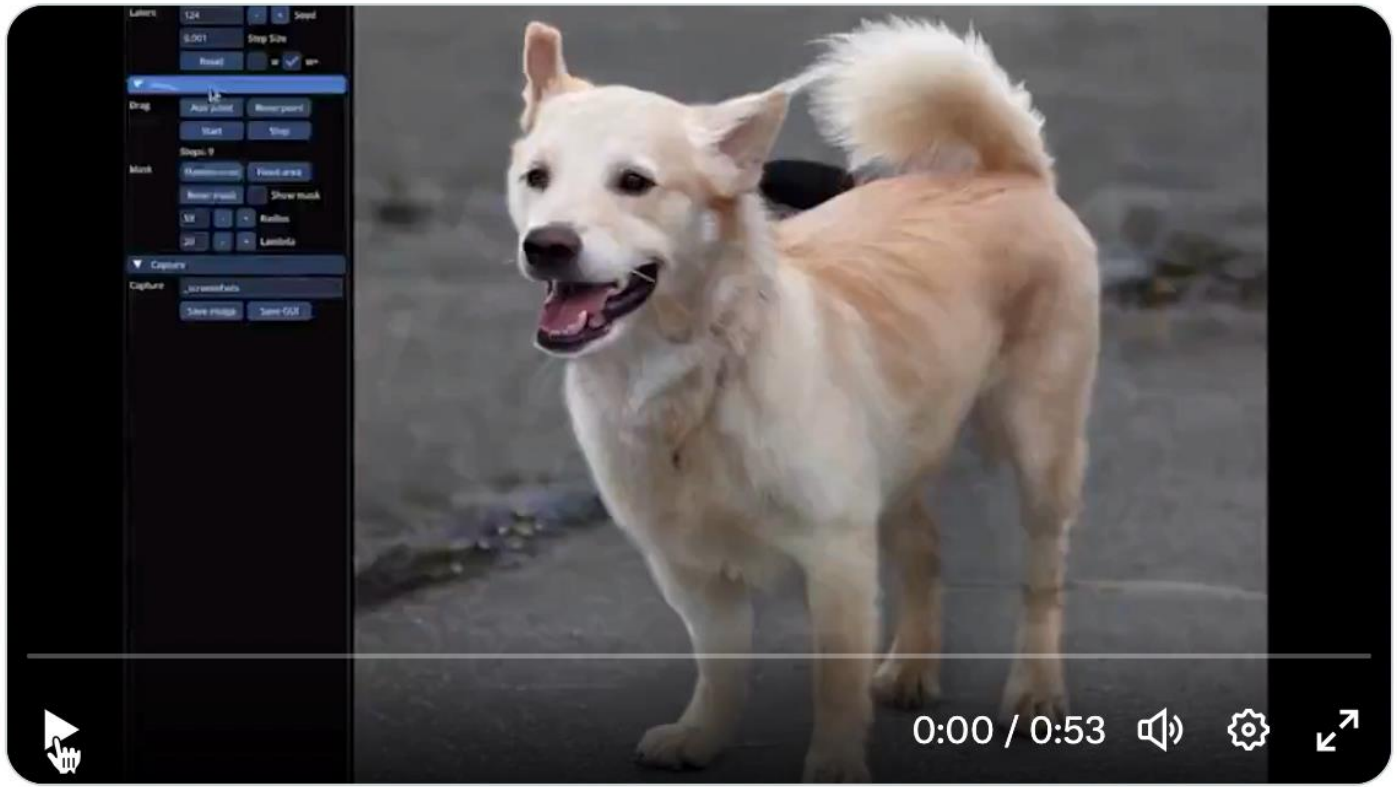
Brendan Alper
@backtobrendo

Photoshop is dead.

DraGAN is a new AI tool that lets you change images however you want with a simple drag & drop.

Photo editing just got 10x easier.



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Santiago
@svpino
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AI will not replace you. A person using AI will.
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GIF
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THE KING IS DEAD
LONG LIVE THE KING!

Microsoft

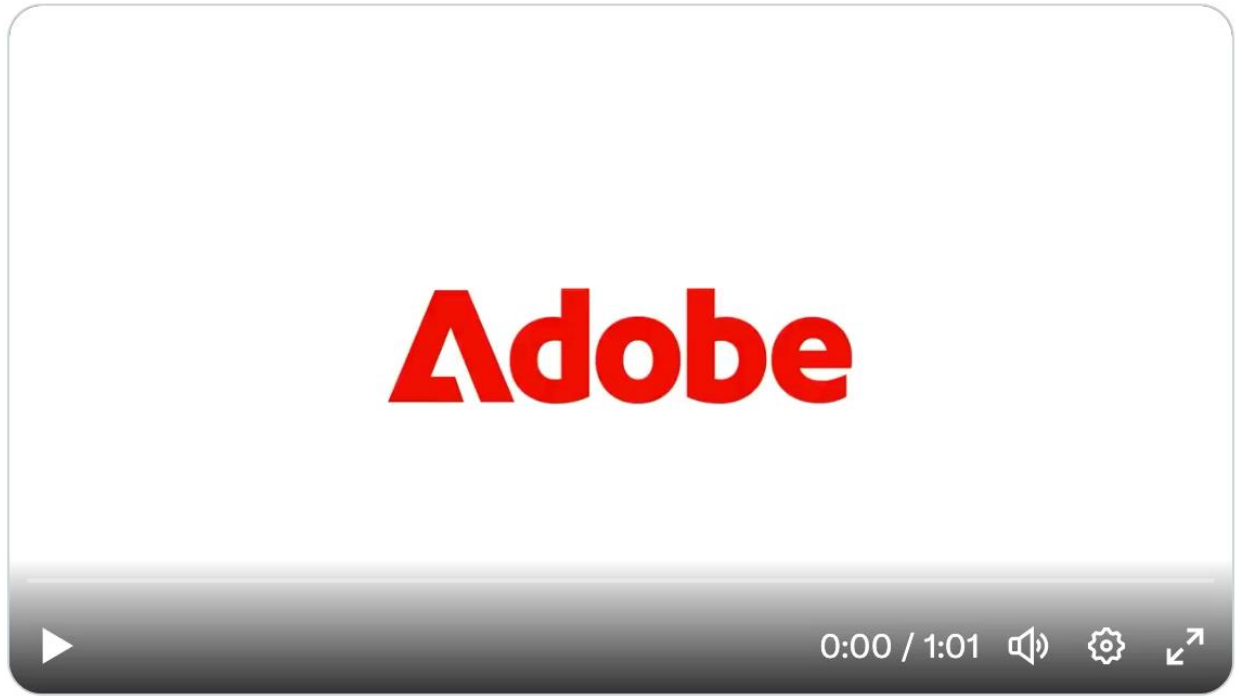
Ilman Shazhaev
@shzhv13

Adobe's new AI feature - generative fill 🤯

It lets you add objects to images just through simple text prompts.

We've seen text-to-image but not at this level where the AI understands the context and modifies it.

Whoever was saying Photoshop is dead - you're so wrong.



9:13 PM · May 24, 2023 · **654** Views

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“The programming language of the future is …”

Microsoft

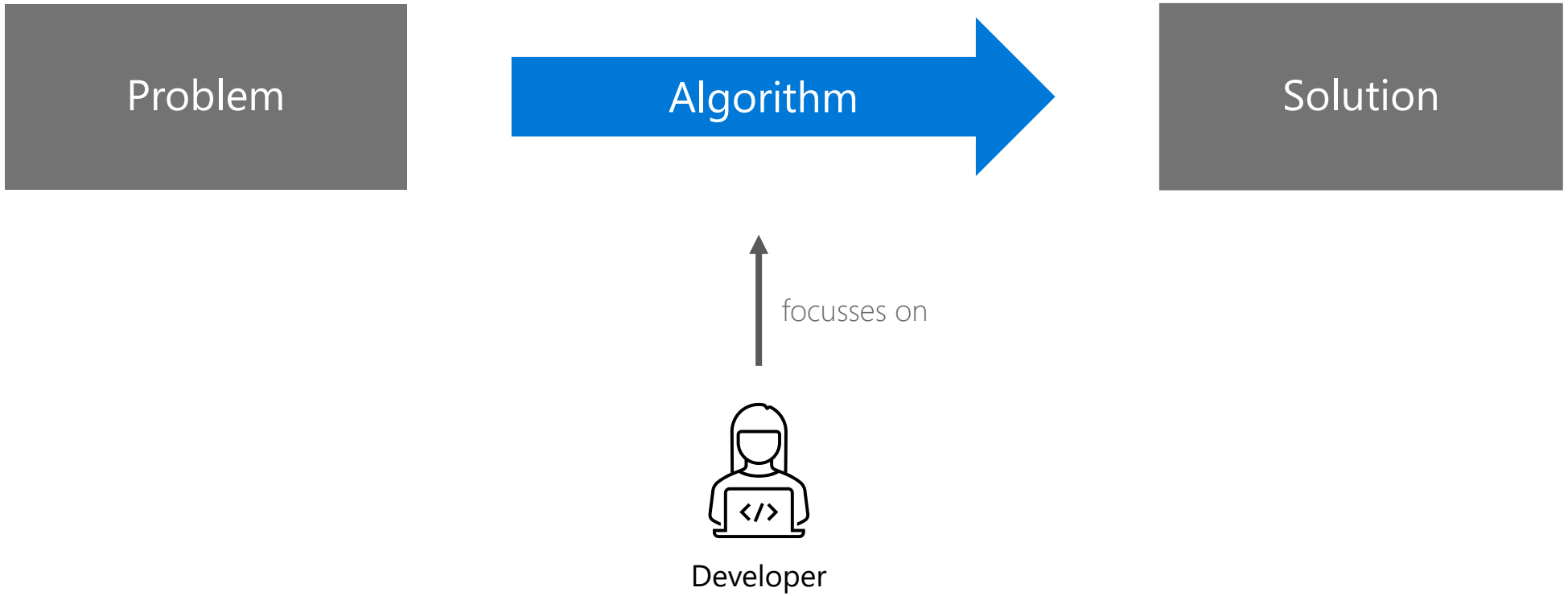
> The programming language of the future is **English.**

Microsoft

MINDSET CHANGE

When working with generative AI as programmers, we have to change our way of thinking.

Present:



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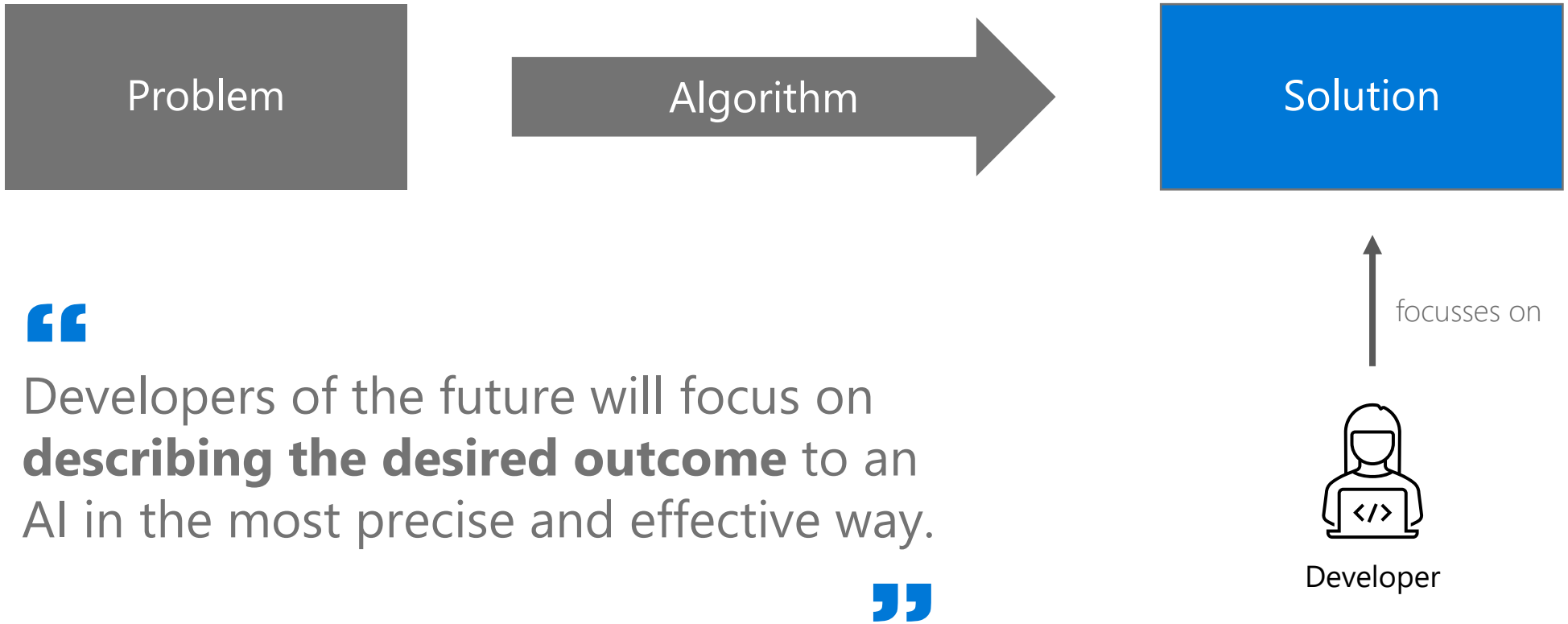
MINDSET CHANGE

When working with generative AI as programmers, we have to change our way of thinking.

Future:



> Developers of the future will focus on **describing the desired outcome** to an AI in the most precise and effective way.

Microsoft

“

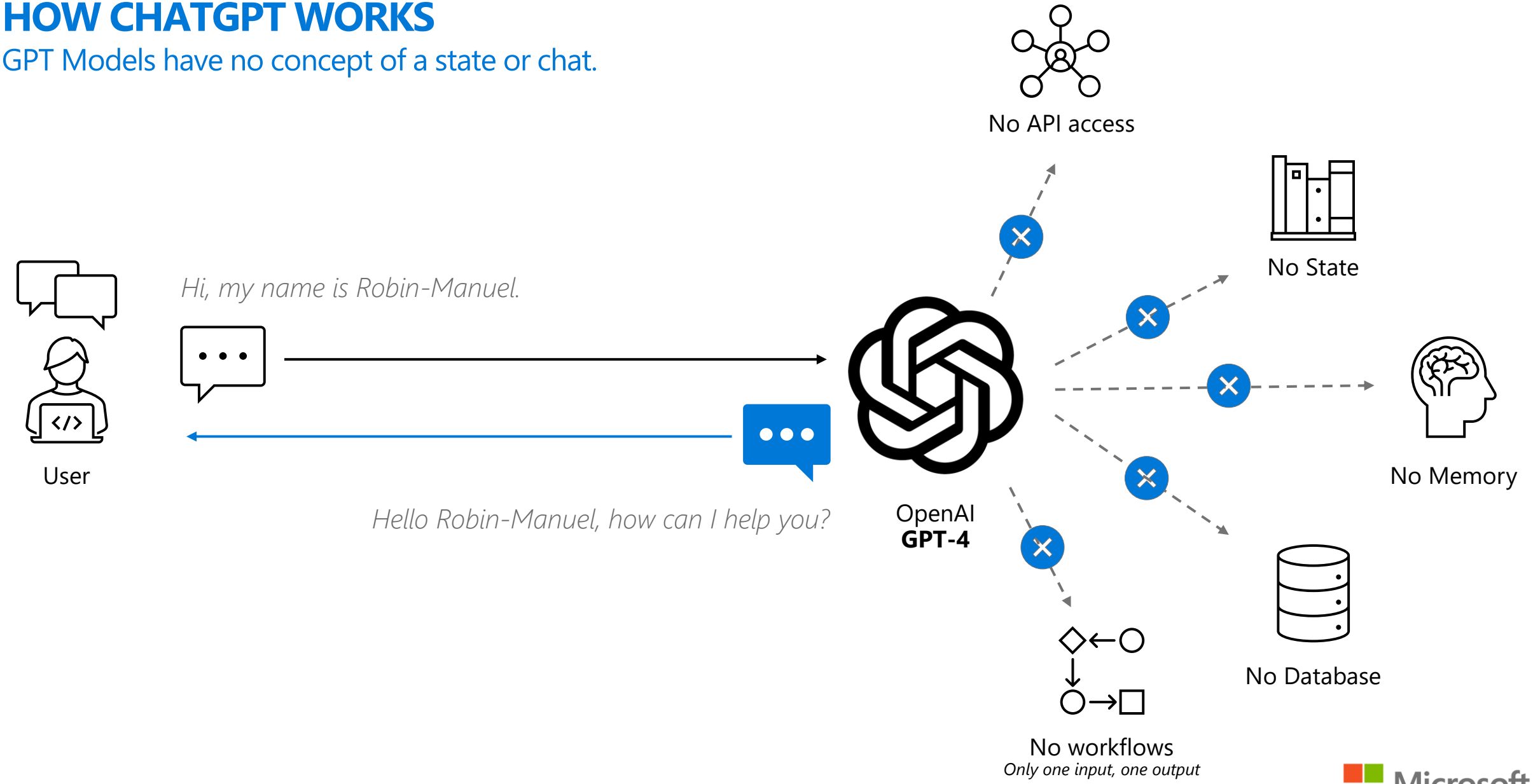
Developers of the future will focus on **describing the desired outcome** to an AI in the most precise and effective way.

➡ **Prompt Engineering** ”

Microsoft

HOW CHATGPT WORKS

GPT Models have no concept of a state or chat.



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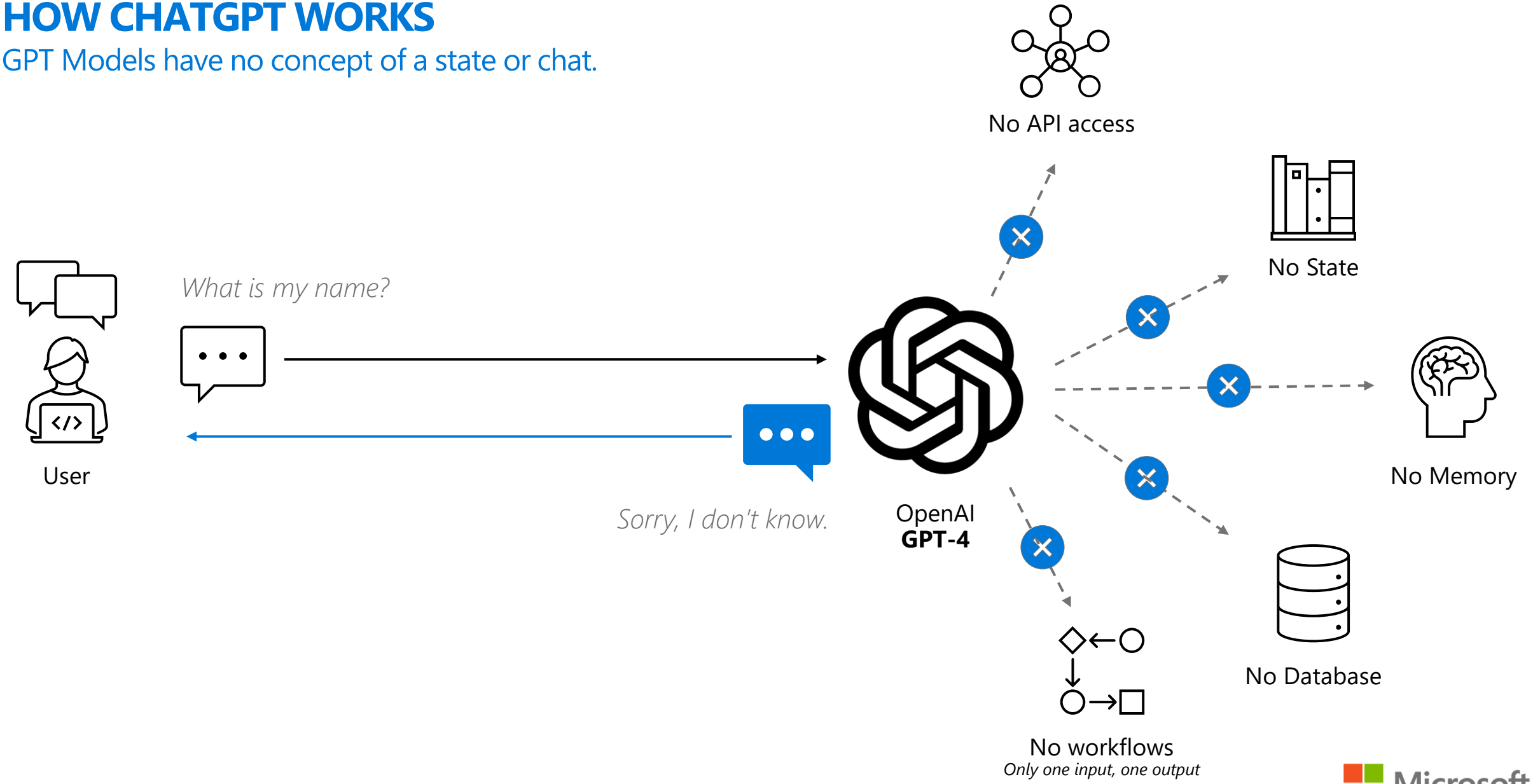

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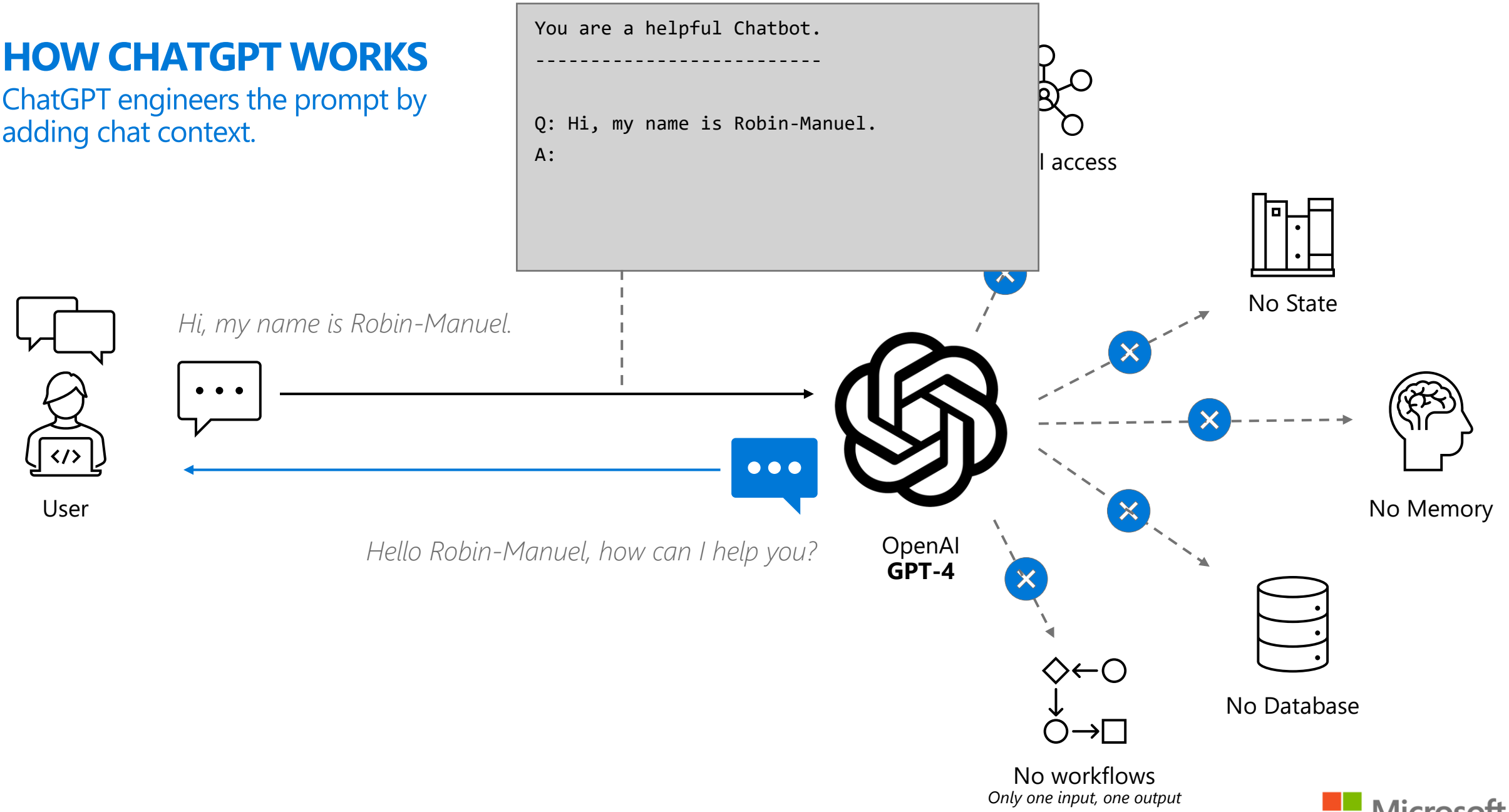
HOW CHATGPT WORKS

ChatGPT engineers the prompt by adding chat context.



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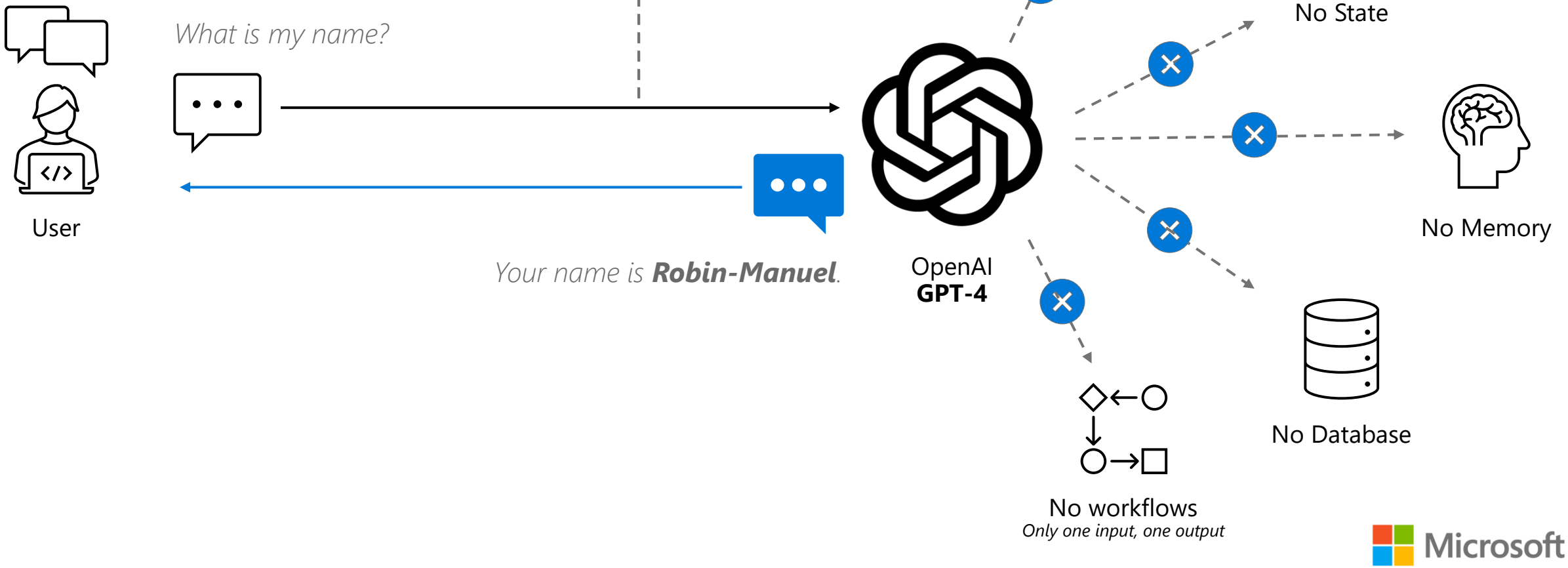
HOW CHATGPT WORKS

ChatGPT engineers the prompt by adding chat context.

```
You are a helpful Chatbot.
--------------------------

Q: Hi, my name is Robin-Manuel.
A: Hello Robin-Manuel, how can I help you?
Q: What is my name?
A:
```



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BRING YOUR OWN DATA

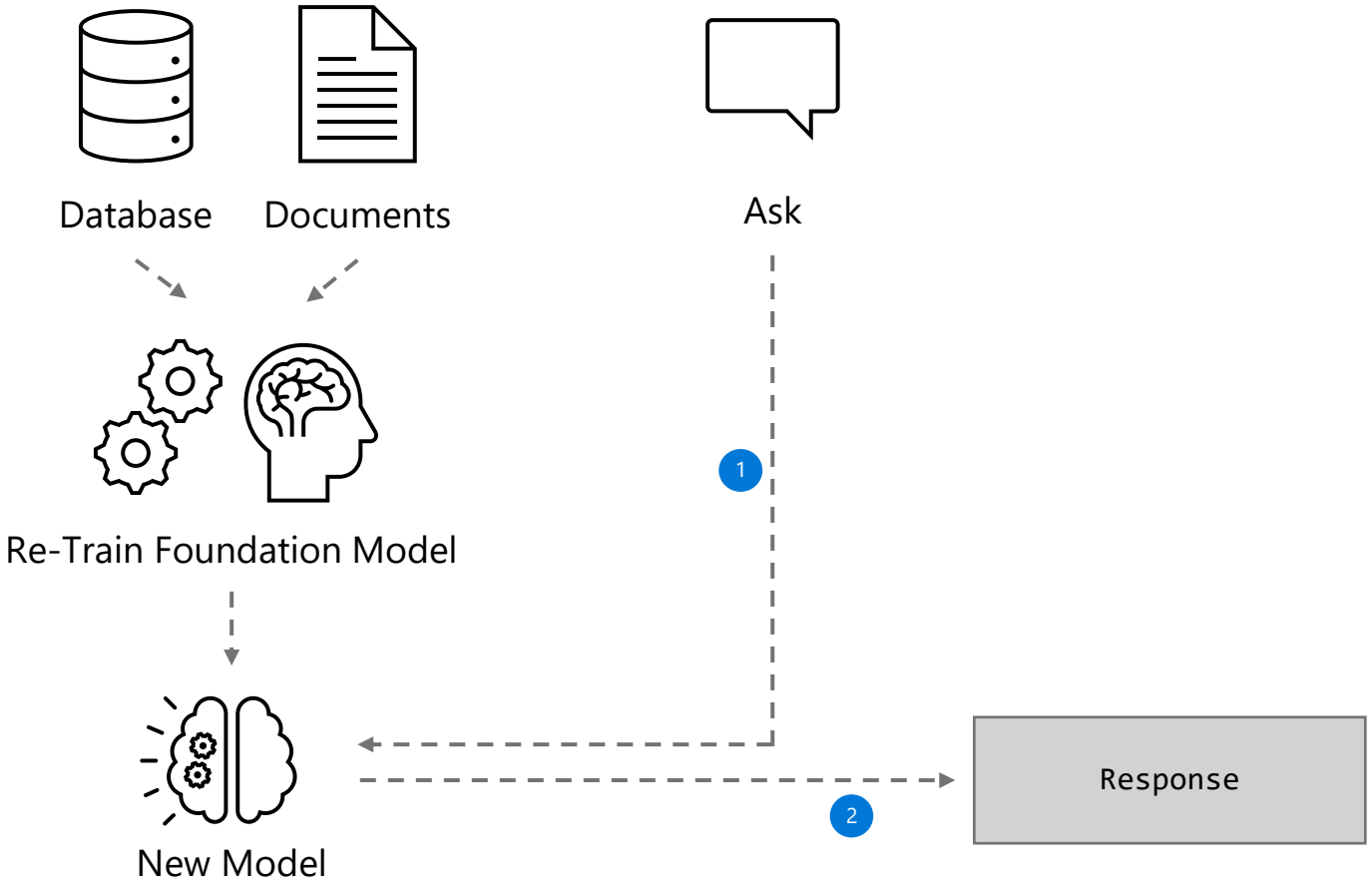
Option 1: Fine Tuning

✅ Best results

❌ Data can't be updated without re-training the model

❌ Data protection and access rights does not exist

⚠ Very expensive, as fine-tuning is resource intensive and takes a long time



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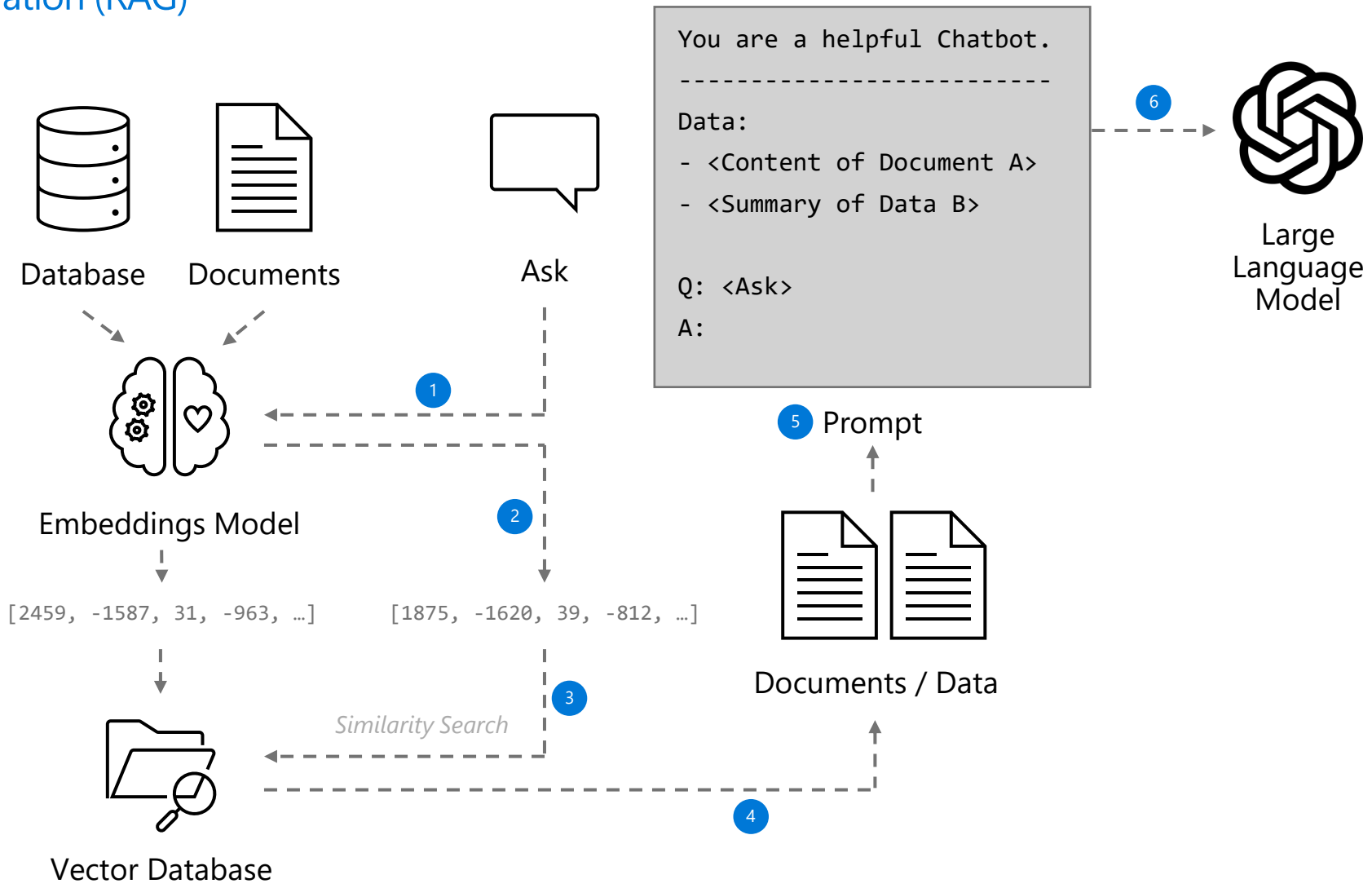
BRING YOUR OWN DATA

Option 2: Retrieval Augmented Generation (RAG)

- ✅ Much cheaper than fine-tuning
- ✅ Data can be updated without re-training the model
- ✅ Data protection and access rights is easier to ensure
- ⚠ Amount of data that can be put into the prompt is limited
- ⚠ Slightly more complex to use but also more flexible



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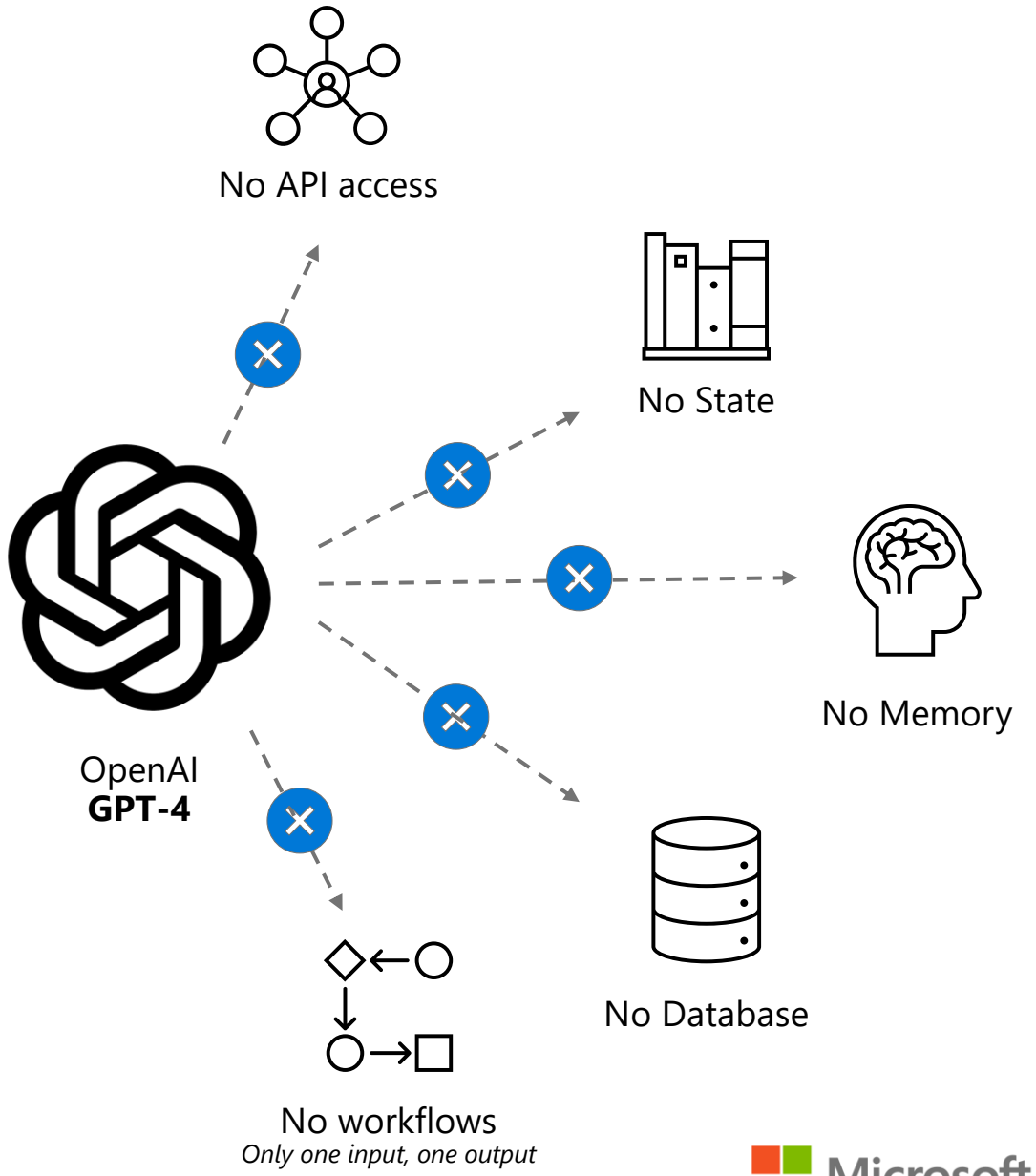
BUT THERE ARE MORE CHALLENGES

What if the prompt size exceeds the token limit?

What I want the model to execute native functions?

What if I need data that comes from another service?

What if I don't know which steps to execute in which order to achieve my goal?



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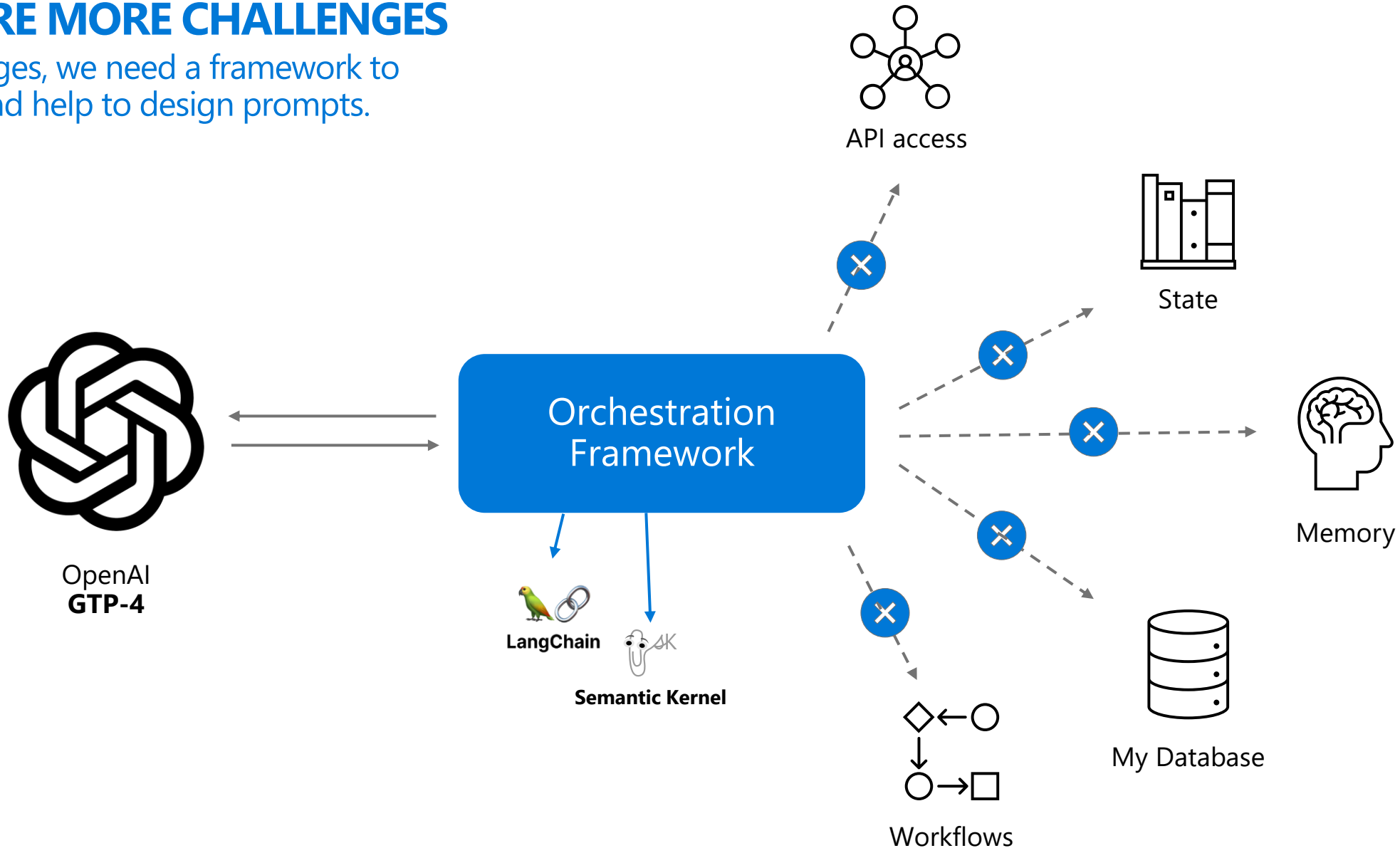
BUT THERE ARE MORE CHALLENGES

To lift these challenges, we need a framework to orchestrate flows and help to design prompts.



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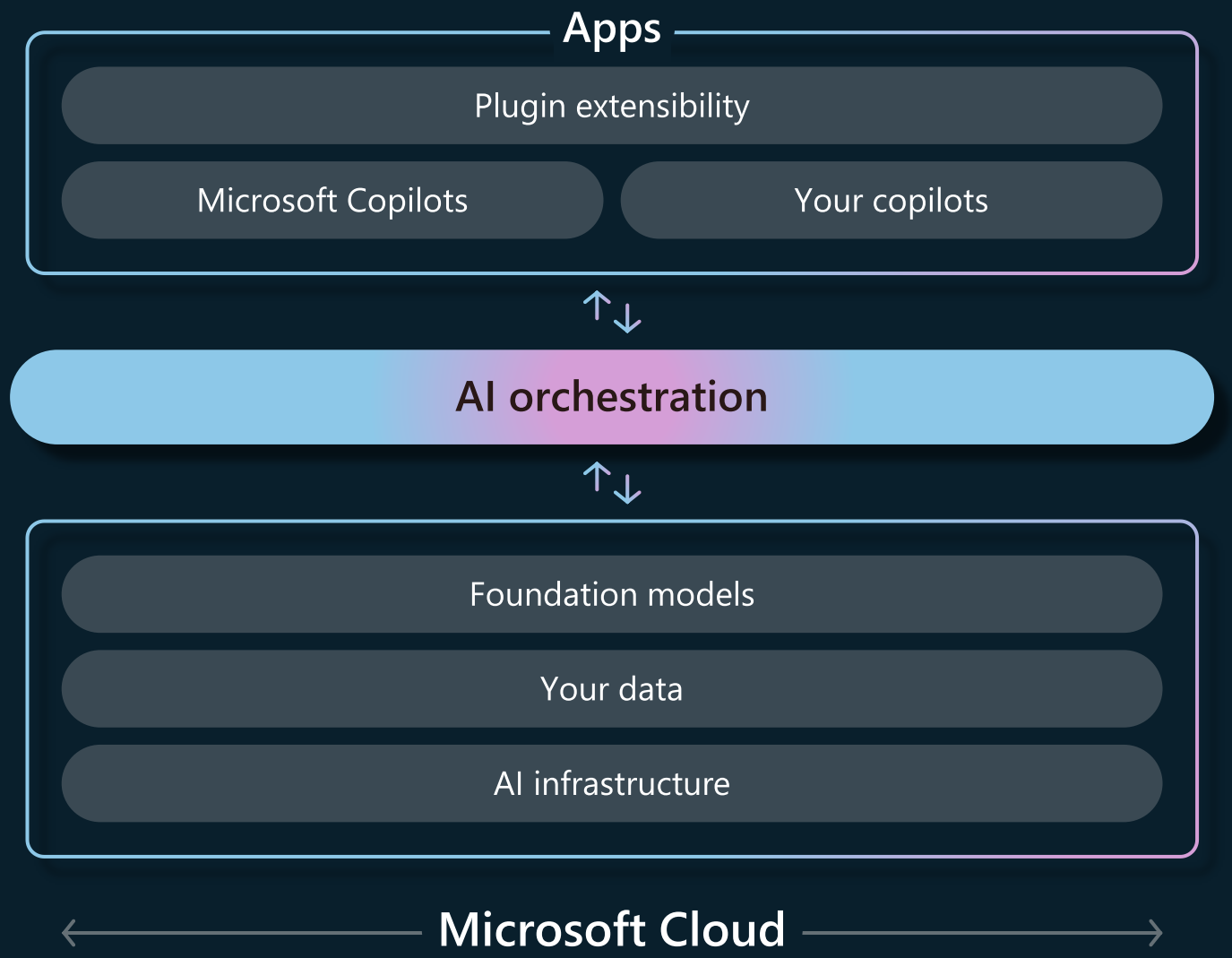
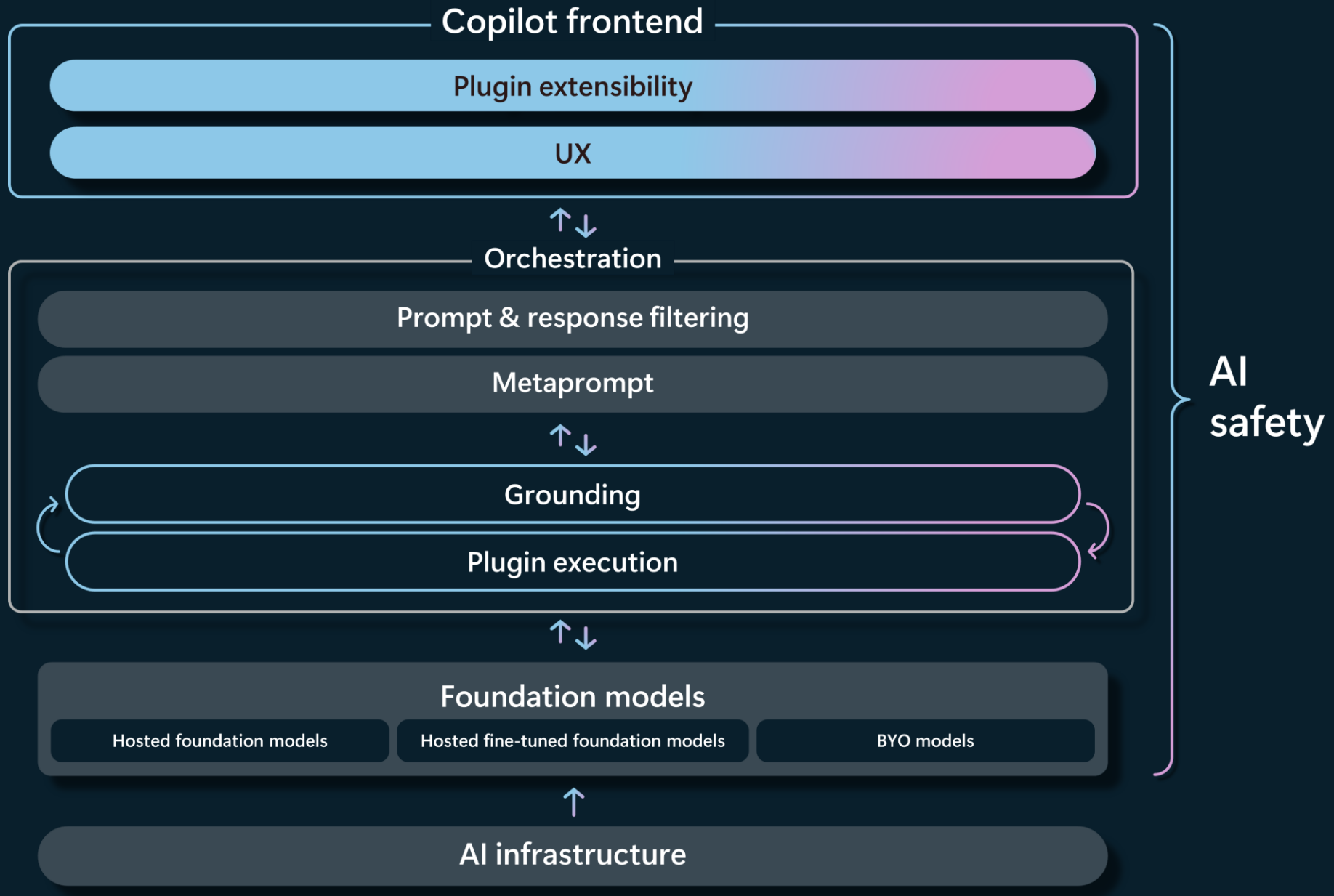
Copilot stack



Anatomy of a Copilot



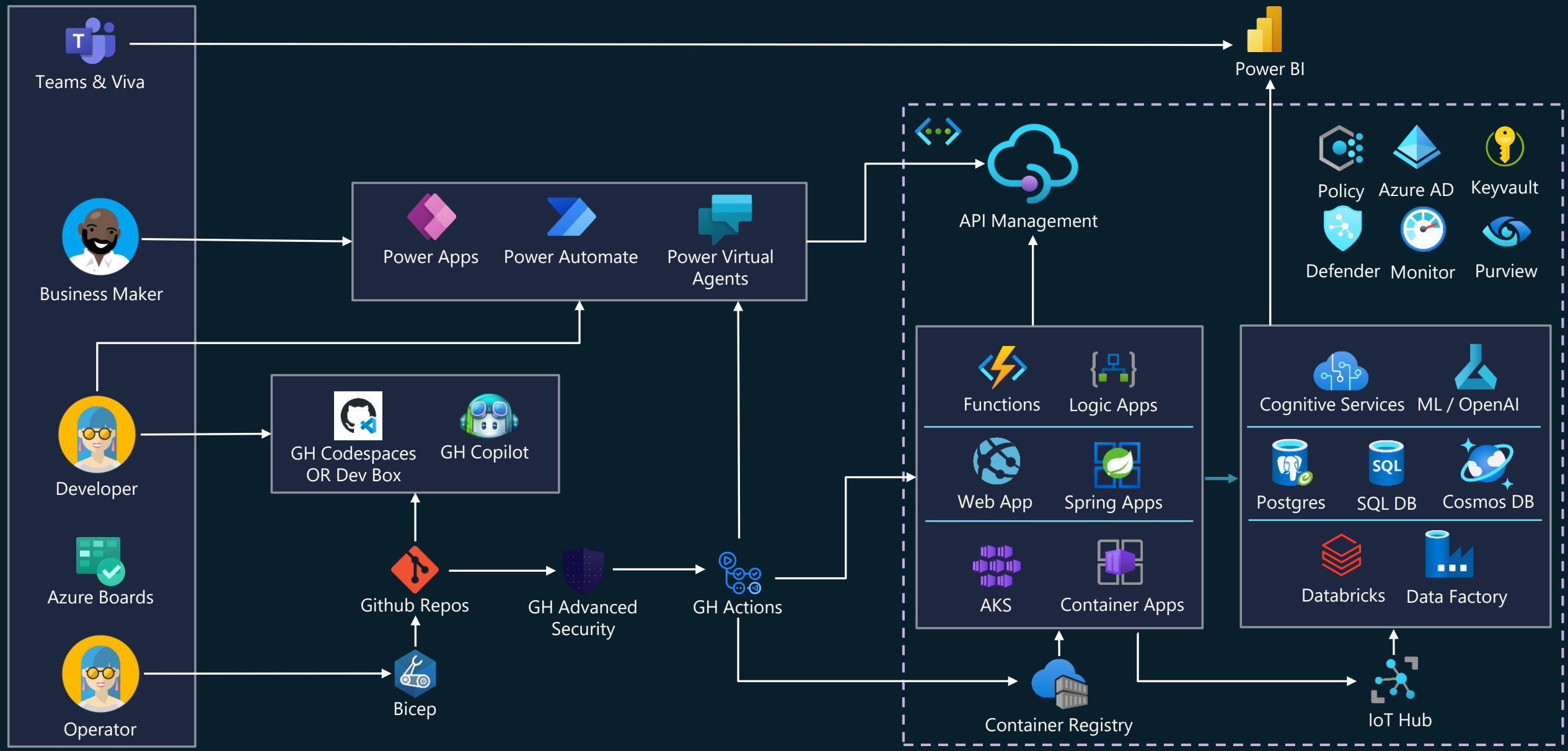
Bringing AI into an IDE

Getting up-to-speed

Writing boilerplate code

Diagnosing issues

End-to-End Developer Destination



Empower your applications with Azure AI

Applied AI Services

Bot Service

Cognitive Search

Form Recognizer

Video Indexer

Metrics Advisor

Immersive Reader

Cognitive Services

Vision

Speech

Language

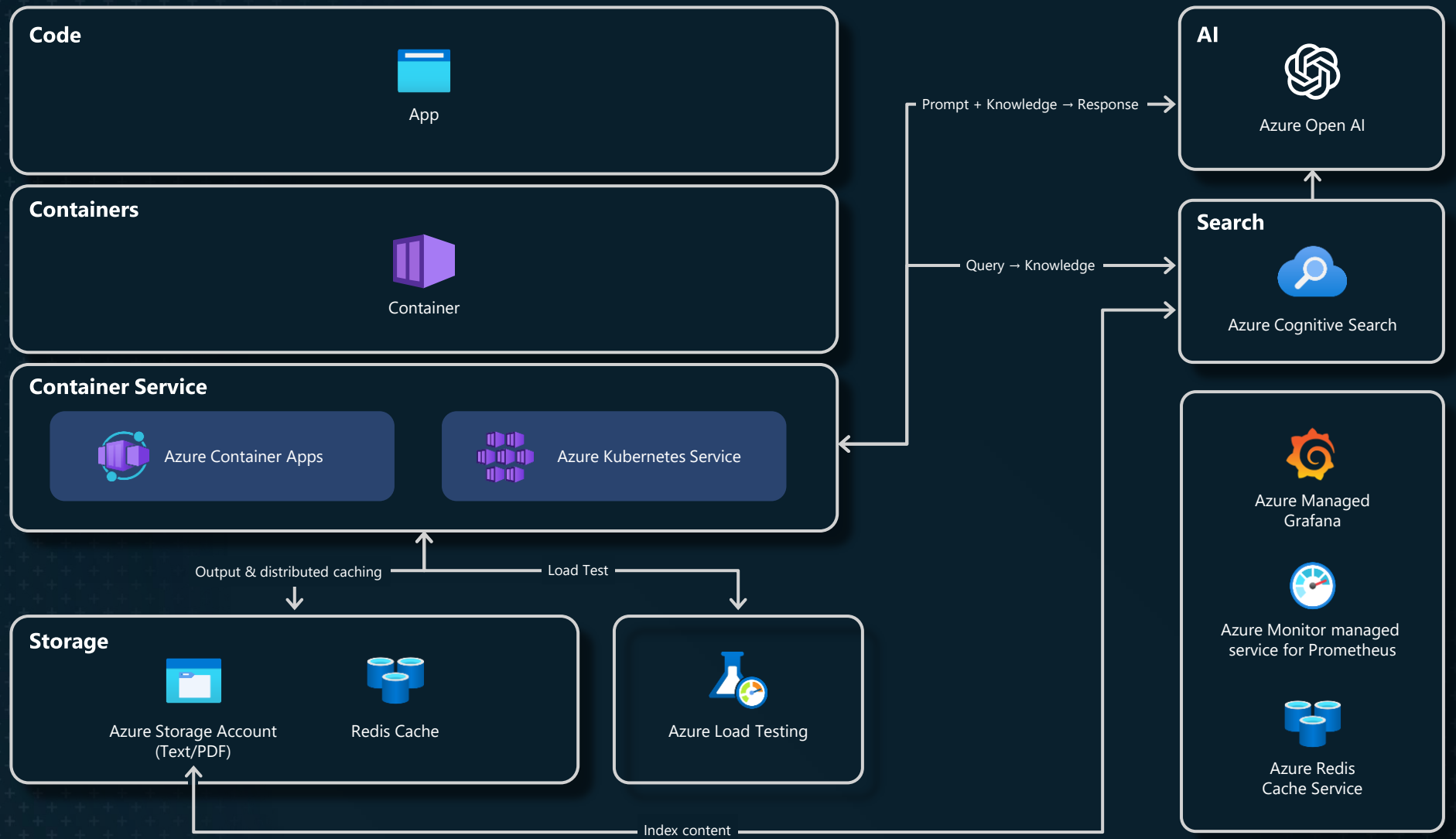
Decision

OpenAI Service

ML Platform

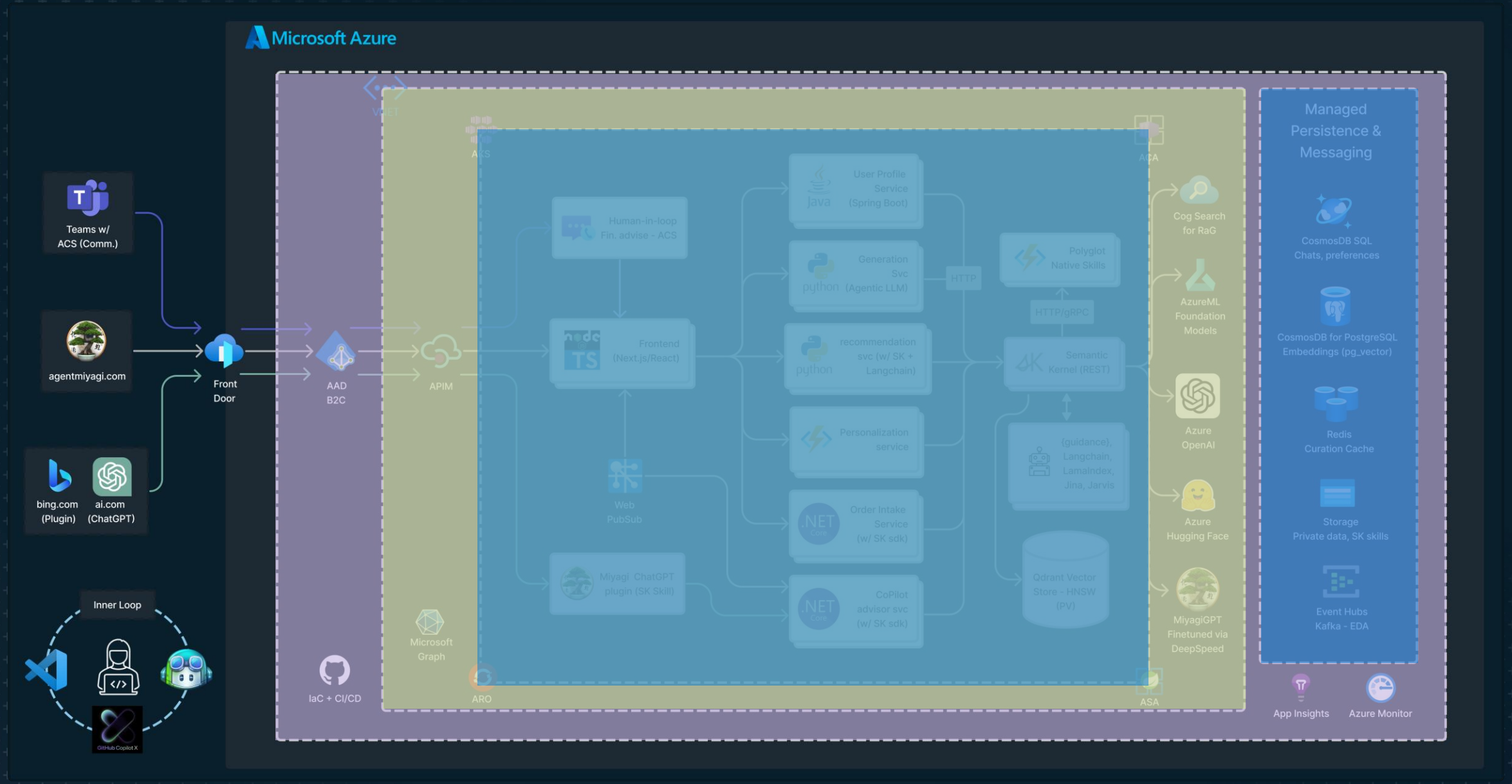
Azure Machine Learning

Adding intelligence to your existing enterprise app



Leverage the right technology to modernize and build new intelligent apps

Assembling the blocks – Project Miyagi -> https://intelligentapp.dev



SESSION FEEDBACK

Session Title: Intelligente AI Apps bauen und betreiben mit dem Copilot Stack

https://aka.ms/AzSum-S018