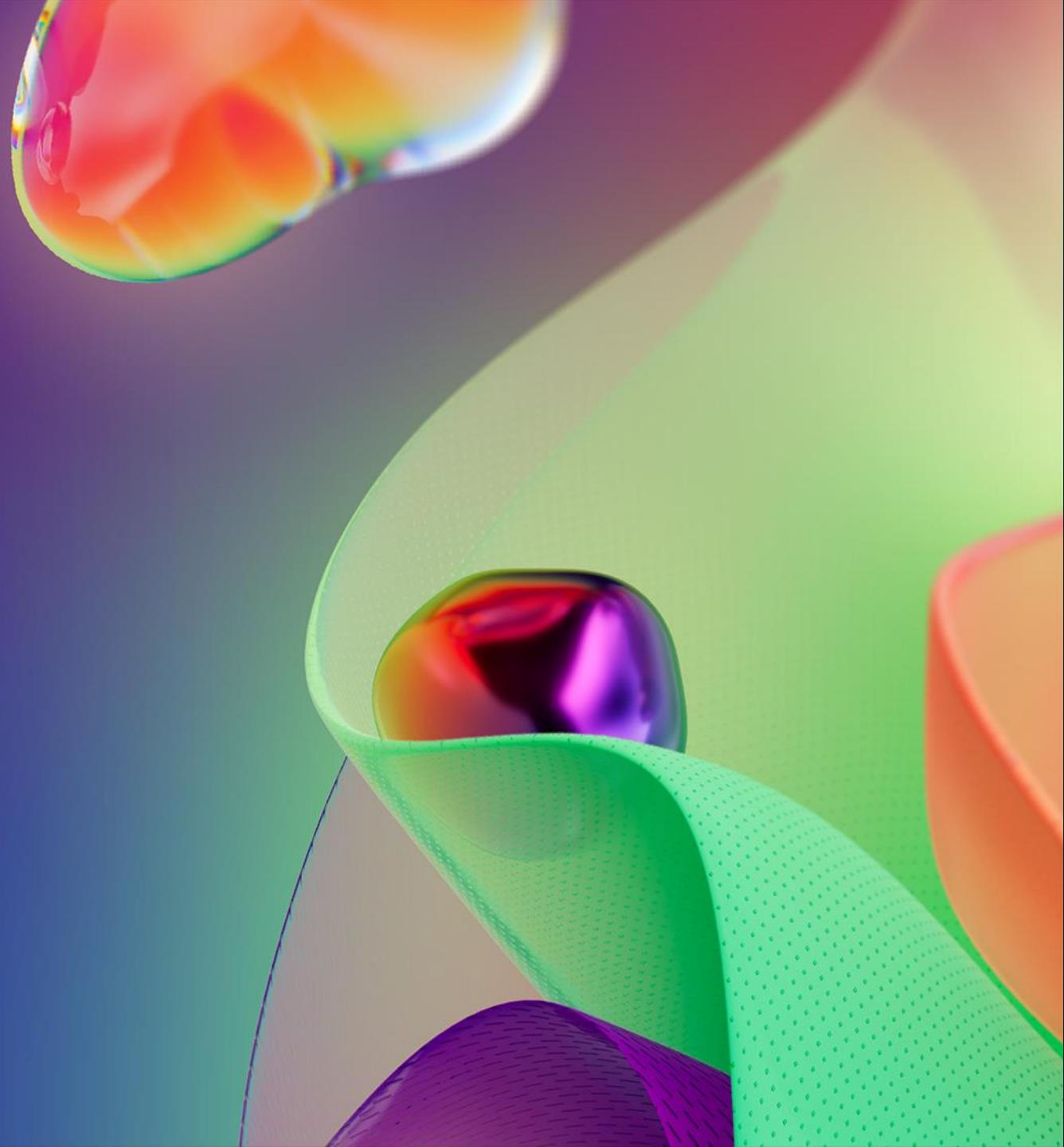




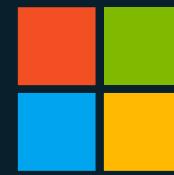
Microsoft Build





The era of the AI copilot

Kevin Scott
CTO & EVP of AI, Microsoft



Microsoft

+



OpenAI

**World's most
powerful
supercomputers**

**World's most capable
foundation models, from
hosted to open source**

**World's best
AI dev
infrastructure**

Azure

The cloud for AI

Windows

The best client for AI development

Copilot

An application using modern AI
to assist you with complex cognitive tasks



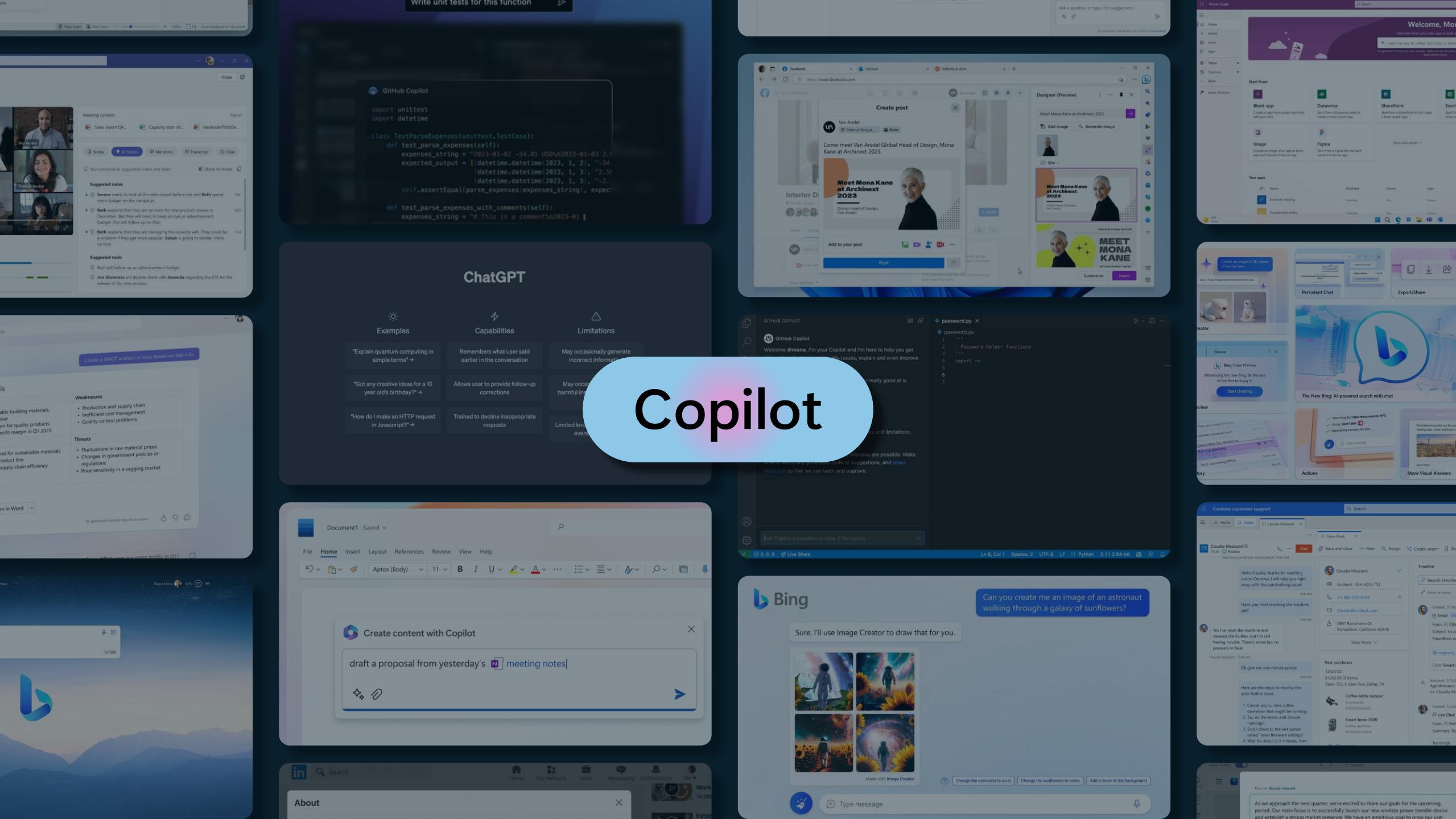


Greg Brockman
President and co-founder

State of GPT

Andrej Karpathy
2:45-3:30 PM

Copilot

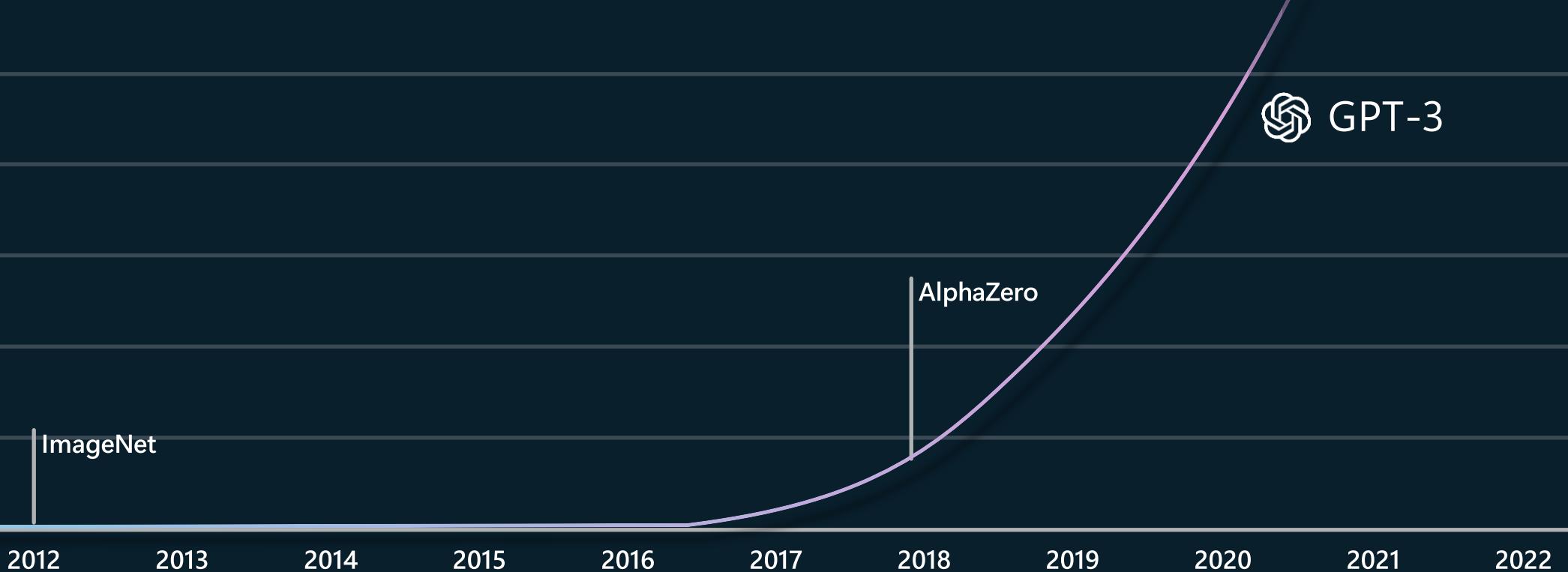


“A platform is when the economic value of everybody that uses it exceeds the value of the company that creates it. Then it’s a platform.”

Bill Gates

Compute in AI Models

Petaflop/s-day, linear scale



Copilot

+

Plugins

Plugins

Augment AI systems to access APIs

Retrieve useful information

Perform new computations

Safely act on the user's behalf

A diagram illustrating the integration of Copilot, Plugins, and The digital world. Three rounded rectangular boxes are arranged horizontally. The first box on the left contains the text "Copilot". The middle box contains the text "Plugins". The third box on the right contains the text "The digital world". A horizontal double-headed arrow connects the "Copilot" and "Plugins" boxes. Another horizontal double-headed arrow connects the "Plugins" and "The digital world" boxes. The background is dark blue, featuring faint, curved, light-blue lines radiating from behind the boxes. In the upper right corner, there is a cluster of five small, semi-transparent icons: a globe, a 4x4 grid, a cylinder, a double-headed arrow, and a Y-shape.

Copilot

Plugins

The digital world

Reimagining software development with AI

User
experience

Application
architecture

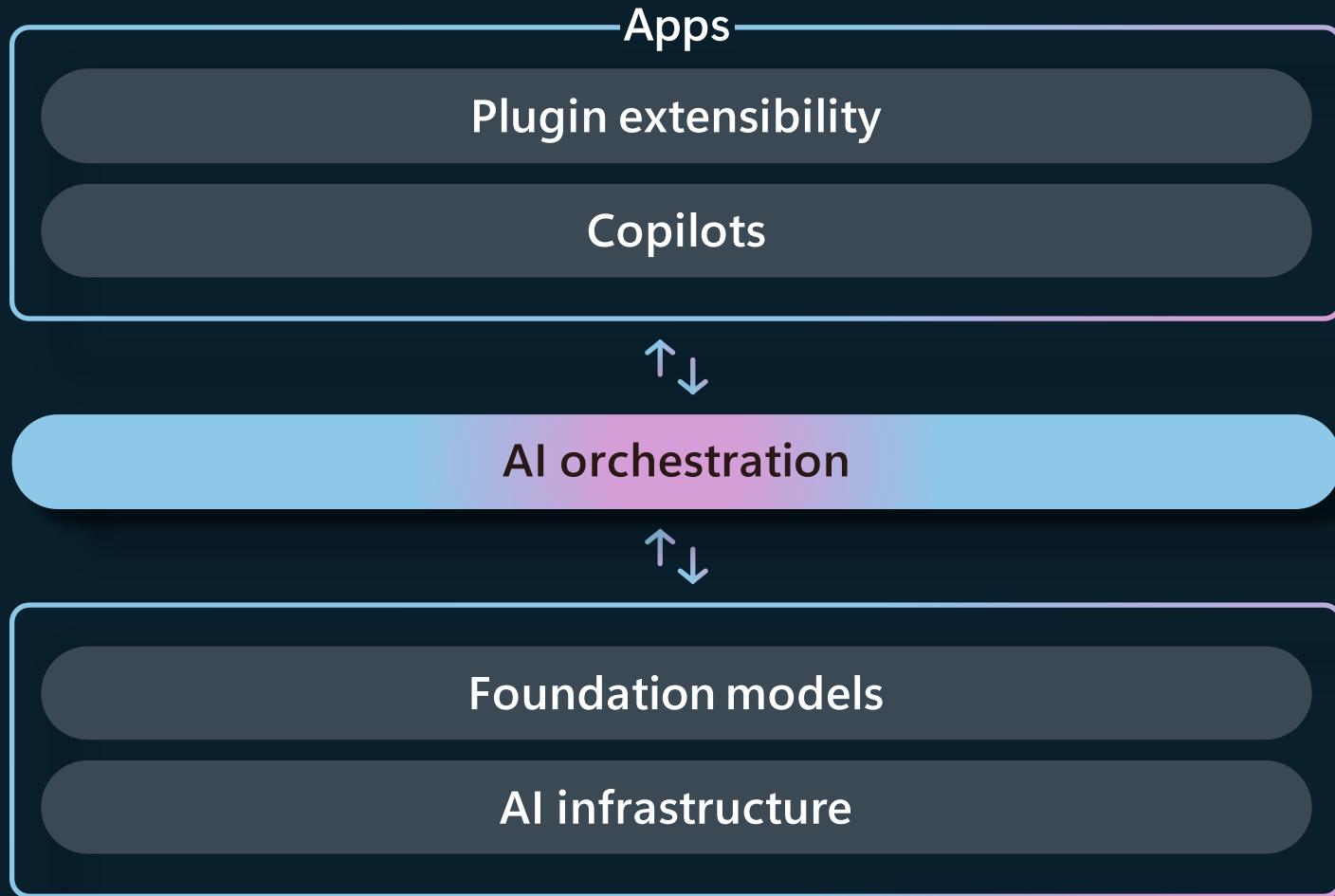
Safety and
security

You must build a great product

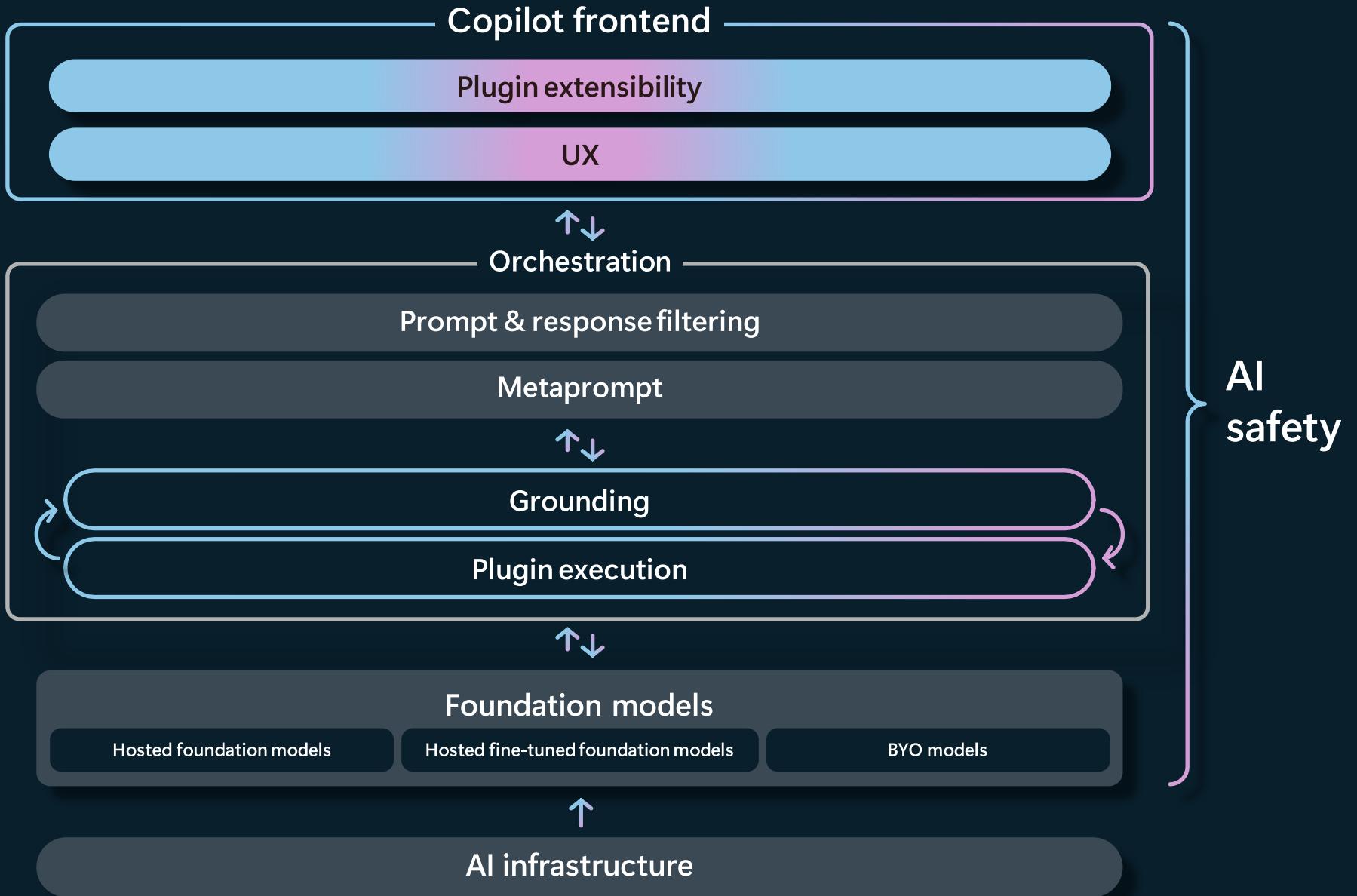
The model is not your product

It's up to you to create great experiences

Copilot stack

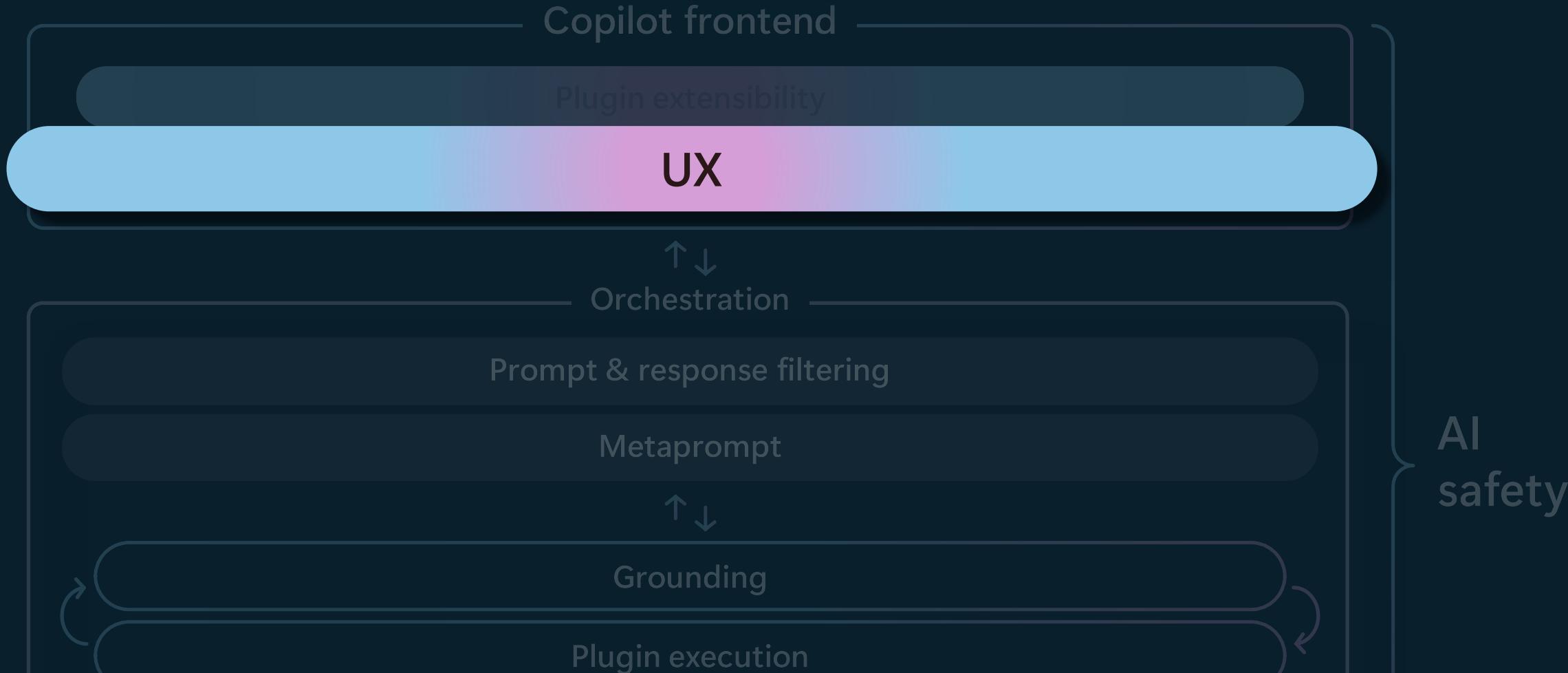


Copilot stack



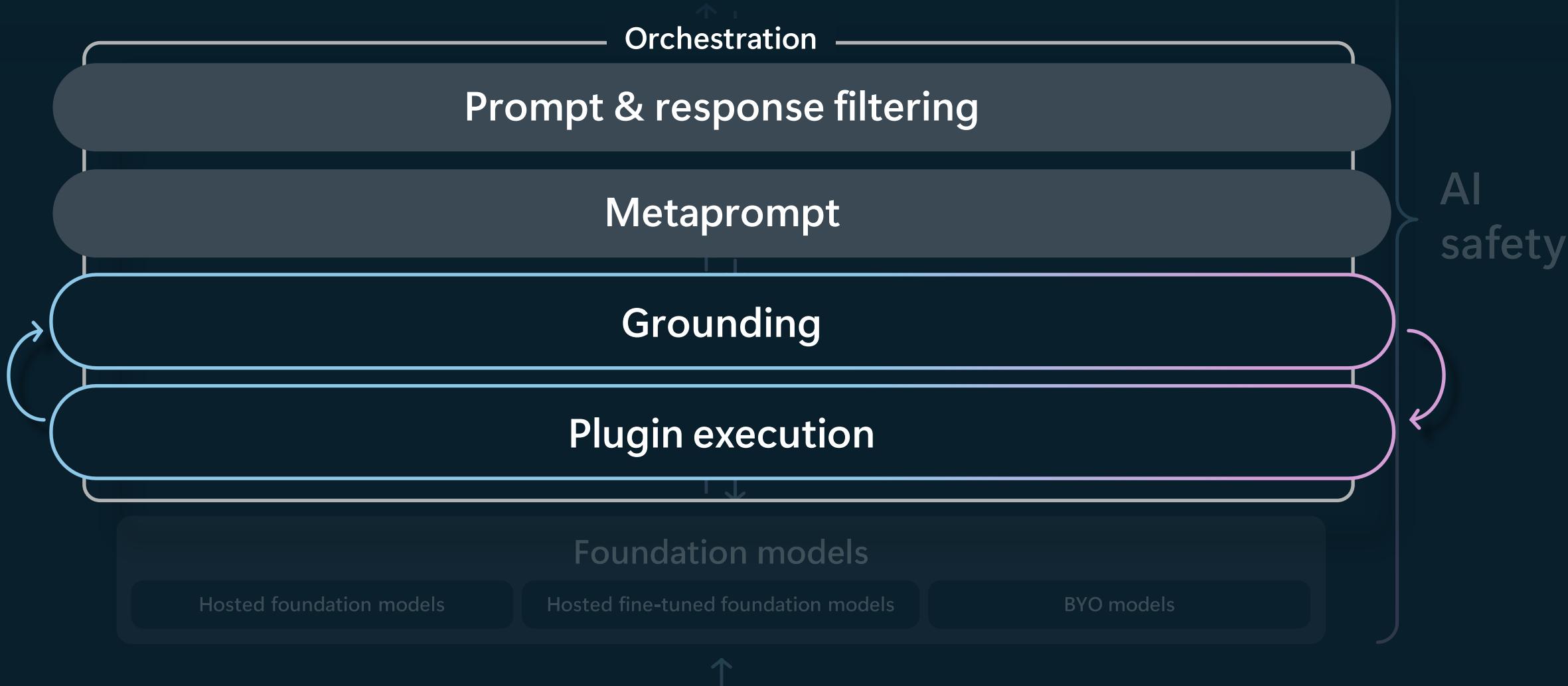
Copilot stack

User experience



Copilot stack

Orchestration frameworks



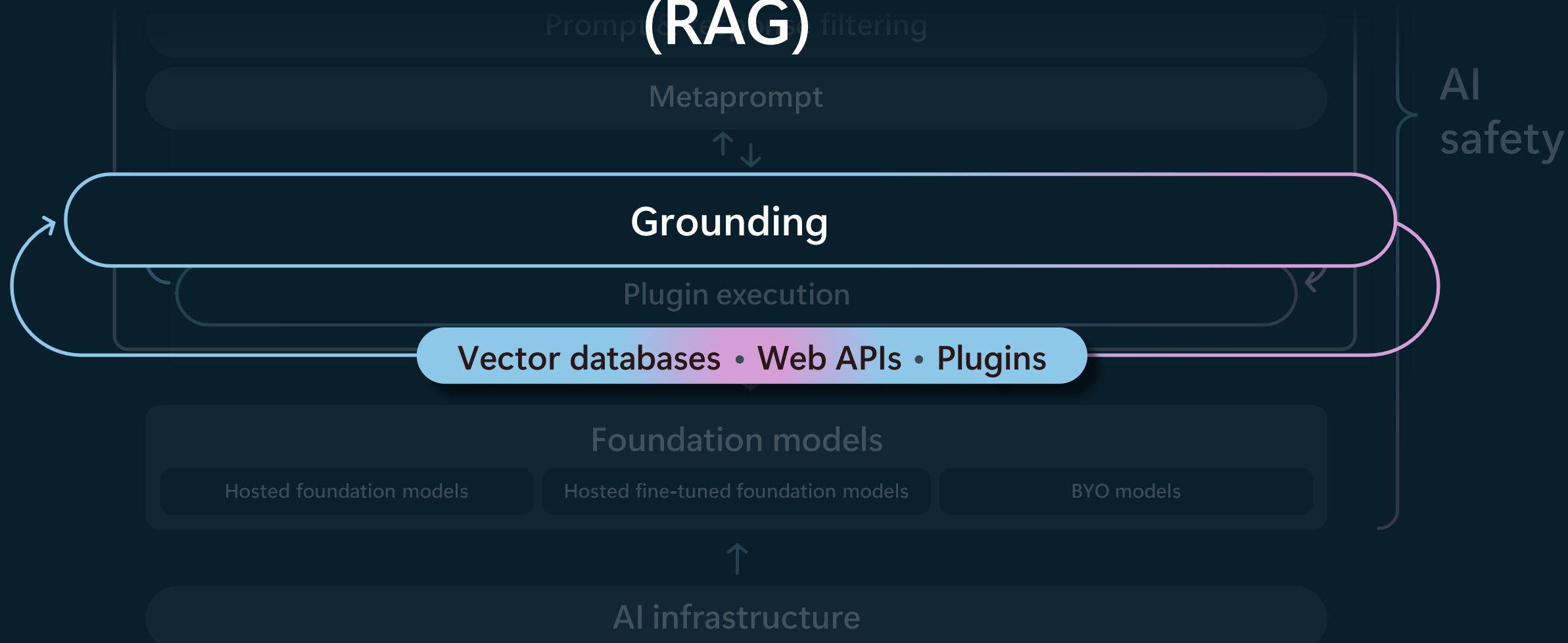
Copilot stack

Prompt and Metaprompt



Copilot stack

Retrieval Augmented Generation (RAG)



Copilot stack

Plugins

Plugin extensibility



Orchestration

Prompt & response filtering

Metaprompt



Plugin execution



Foundation models

AI
safety

Copilot stack

Foundation models and fine-tuning

Grounding

Plugin execution



Foundation models

Hosted foundation models

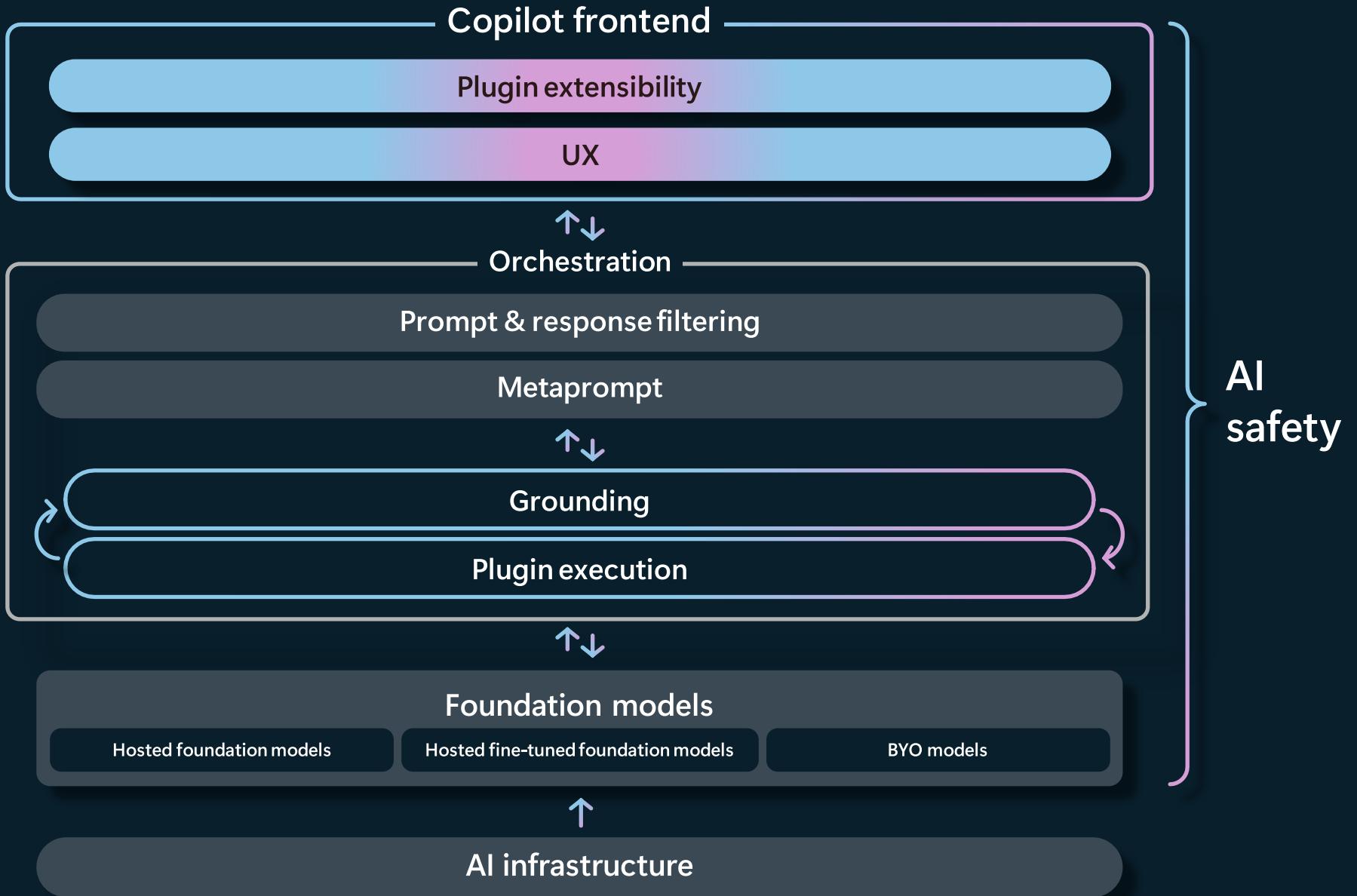
Hosted fine-tuned foundation models

BYO models



AI infrastructure

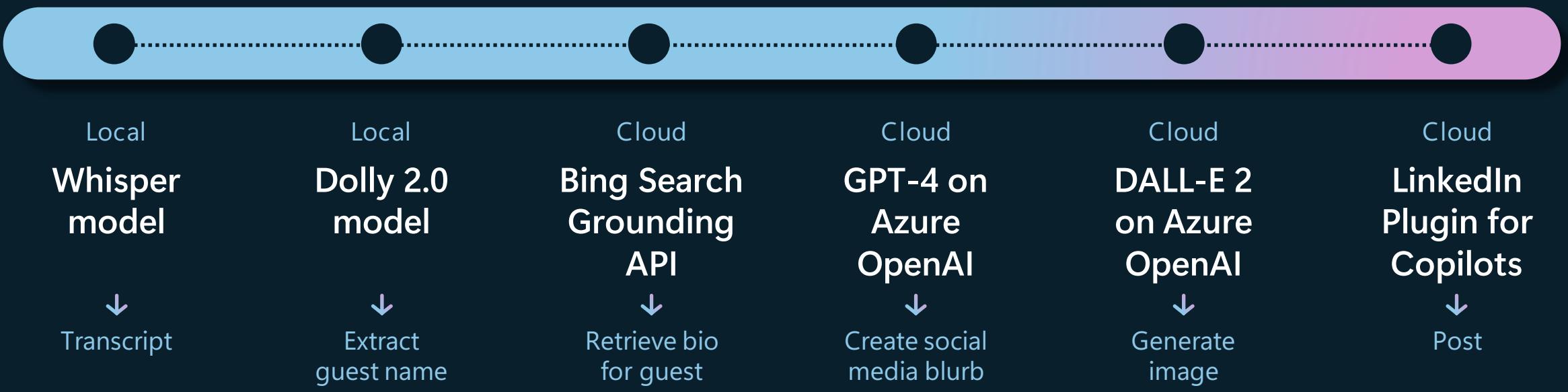
Copilot stack



Behind the Tech

With Kevin Scott





```
(base) C:\Code\PodcastSocialMediaCopilot>python  
PodcastSocialMediaCopilot.py  
Imports are complete  
Calling Whisper to transcribe audio...
```

Transcript:

Hi, everyone. Welcome to Behind the Tech. I'm your host, Kevin Scott, Chief Technology Officer for Microsoft.

Neil deGrasse Tyson is one of America's best-known astrophysicists and a beloved educator and advocate for the sciences. He has a great talent for presenting complex concepts in a clear and accessible manner.

Whisper

Speech to text

Calling a local Dolly 2.0 model optimized for Windows to extract the name of the podcast guest.

Guest:

Neil deGrasse Tyson

Dolly 2.0

Entity extraction

```
Anaconda Prompt × + - □ ×
```

Calling Bing Search API to get bio for guest.

Bio:

Neil deGrasse Tyson (US: / da grəs / or UK: / da g r a: s /; born October 5, 1958) is an American astrophysicist, author, and science communicator **Tyson** studied at Harvard University, the University of Texas at Austin, and Columbia University. From 1991 to 1994, he was a postdoctoral research associate at Princeton University. In 1994, he joined the Hayden Planetarium as a...

Bing Grounding API

Retrieval Augmented Generation

Calling GPT-4 model on Azure OpenAI Service to create a social media blurb...

Social Media Copy:

Excited to share the latest episode of Behind the Tech with the brilliant astrophysicist, Neil deGrasse Tyson! We dive into his incredible ability to communicate complex scientific concepts in an engaging and accessible way. As the head of the Hayden Planetarium and host of StarTalk Radio, Neil has been a role model for many, including myself. Join us for a fascinating conversation that explores Neil's approach to sparking curiosity, the specialness of human life, and the beauty of the cosmos. Don't miss this one! #BehindTheTech #NeilDeGrasseTyson #ScienceCommunication <https://lnkd.in/gqGSPSM5>

GPT-4

Text generation

Calling DALL-E model on Azure OpenAI Service to get an image for social media...

Image: saved to PostImage.jpg



DALL-E

Image generation

The following will be posted to LinkedIn:

Excited to share the latest episode of Behind the Tech with the brilliant astrophysicist, Neil deGrasse Tyson! We dive into his incredible ability to communicate complex scientific concepts in an engaging and accessible way. As the head of the Hayden Planetarium and host of StarTalk Radio, Neil has been a role model for many, including myself. Join us for a fascinating conversation that explores Neil's approach to sparking curiosity, the specialness of human life, and the beauty of the cosmos. Don't miss this one! #BehindTheTech #NeilDeGrasseTyson #ScienceCommunication <https://lnkd.in/gqGSPSM5>

Do you want to post this to LinkedIn? (y/n):

LinkedIn plugin

Safely acts on the user's behalf

The following will be posted to LinkedIn:

Excited to share the latest episode of Behind the Tech with the brilliant astrophysicist, Neil deGrasse Tyson! We dive into his incredible ability to communicate complex scientific concepts in an engaging and accessible way. As the head of the Hayden Planetarium and host of StarTalk Radio, Neil has been a role model for many, including myself. Join us for a fascinating conversation that explores Neil's approach to sparking curiosity, the specialness of human life, and the beauty of the cosmos. Don't miss this one! #BehindTheTech #NeilDeGrasseTyson #ScienceCommunication <https://lnkd.in/gqGSPSM5>

The content successfully posted.

Do you want to post this to LinkedIn? (y/n): y

LinkedIn plugin

Safely acts on the user's behalf

LinkedIn

https://www.linkedin.com

Search

PREMIUM
REPROGRAMMING THE AMERICAN DREAM
KEVIN SCOTT
ON SALE APRIL 7TH

Kevin Scott 
CTO Microsoft, Author of "Reprogramming the American Dream"

Followers 745,818

All activity

Posts Comments Videos Images More ▾

Kevin Scott  CTO Microsoft, Author of "Reprogramming the A... now • 

Excited to share the latest episode of Behind the Tech with the brilliant astrophysicist, Neil deGrasse Tyson! We dive into his incredible ability to communicate complex scientific concepts in an engaging and accessible way. As the head of the Hayden Planetarium and host of StarTalk Radio, Neil has been a role model for many, including myself. Join us for a fascinating conversation that explores Neil's approach to sparking curiosity, the specialness of human life, and the beauty of the cosmos. Don't miss this one!

#BehindTheTech #NeilDeGrasseTyson #ScienceCommunication
<https://lnkd.in/gqGSPSM5>

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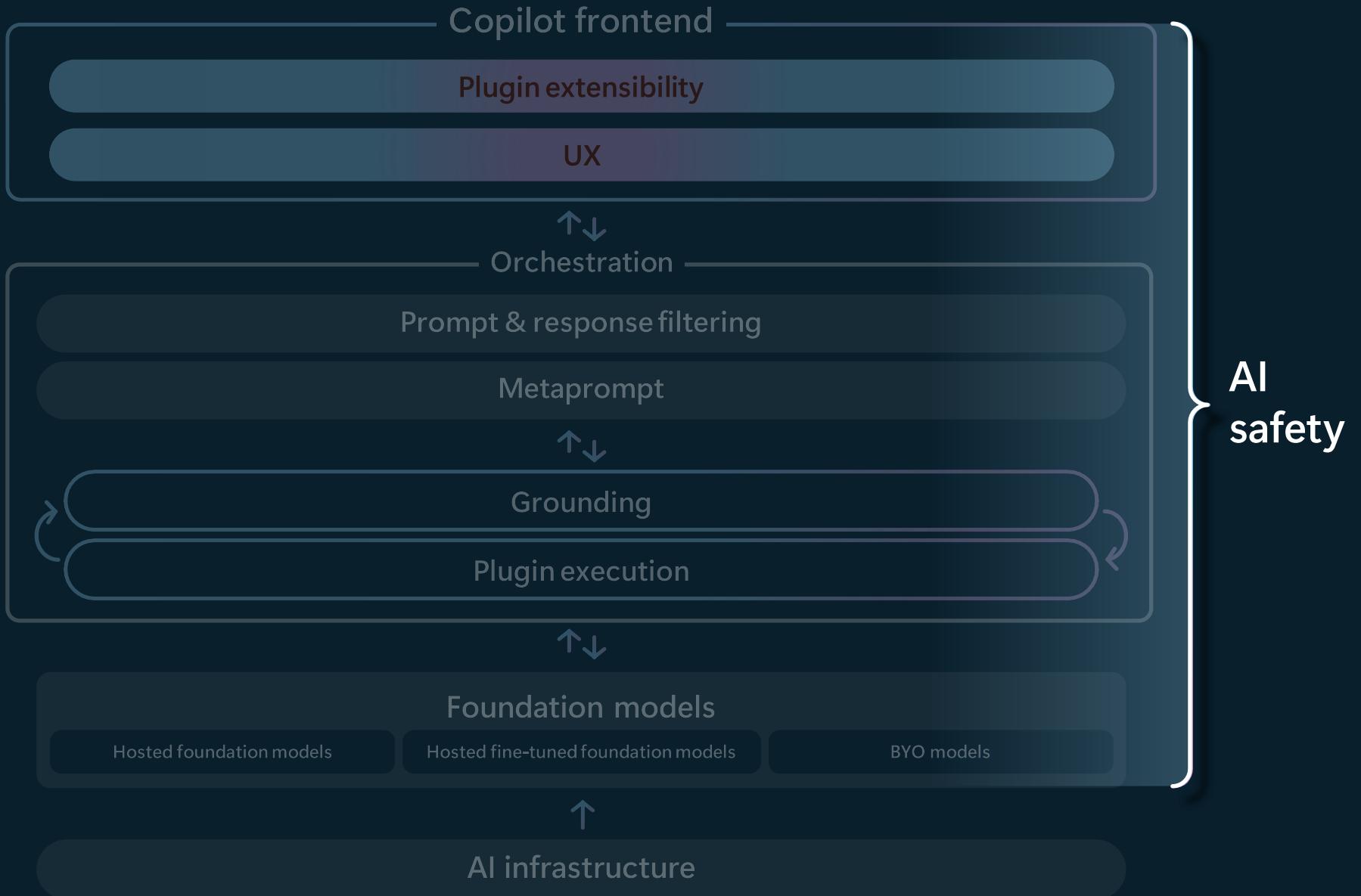


**Check out the GitHub repo
for the full code**

github.com/microsoft/PodcastCopilot

Copilot stack

Safety and security



Coming soon

Media provenance tools

Cryptographic methods used to mark and sign AI-generated content with metadata about its origin, enabling consumers to verify whether an image or video was generated by AI.

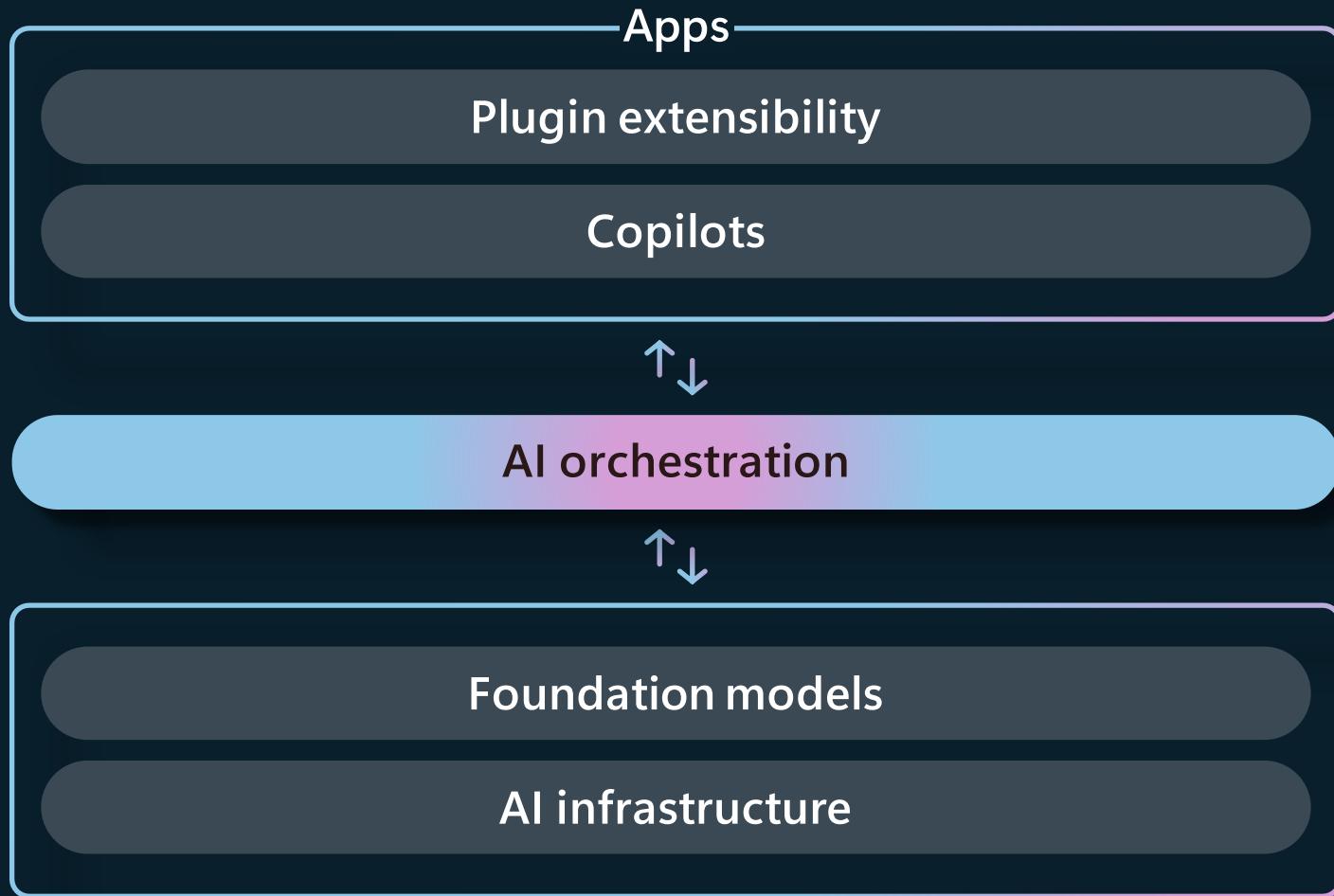
Copilots

New development
pattern

Unique
architecture

Will be
everywhere

Copilot stack



Do legendary shit

