

Thrive in the era of generative AI

Xiaopeng Li
Western Europe AI Lead, Microsoft



Artificial Intelligence

Machine Learning

Deep Learning

Generative AI



Artificial Intelligence

The field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence



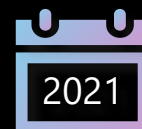
Machine Learning

Subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions



Deep Learning

A machine learning technique in which layers of neural networks are used to process data and make decisions



Generative AI powered by foundation models

Create new written, visual, and auditory content given prompts or existing data

The economic potential of generative AI

The next productivity frontier

June 2023



Authors

Michael Chui
Eric Hazan
Roger Roberts
Alex Singla
Kate Smaje
Alex Sukharevsky
Lareina Yee
Rodney Zimmel

- Generative AI's impact on productivity could add up to **\$4.4 trillion annually** in value to the global economy.
- About 75% of the value that generative AI use cases could deliver falls across **customer operations, marketing, sales, software engineering, and R&D**.
- Generative AI can revolutionize work by automating a significant portion of employees' activities, **up to 60-70% of their current workload**. This augmentation of individual capabilities has the potential to transform the way we work.
- Generative AI is expected to have **\$ 180-260 billions economic impact on Risk & Legal**.

1

We're entering a new era of productivity revolution, powered by generative AI.

ChatGPT



Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021



Meeting content

Sales report Q4... Capacity status list... VanArsdelPhotoDe...

Notes

Notes

Suggested notes

- Serena wants to look at the sales report before she and Beth spend more budget on the campaign.
- Beth explains that they are on track for new product release in December. But they will need to keep an eye on advertisement budget. She will follow up on that.
- Beth explains that they are managing the capacity well. They could be a problem if they get more popular. Babak is going to double check on that.

Suggested tasks

- Beth will follow up on advertisement budget.
- Jon Shamma will double check with Amanda regarding the ETA for the release of the new product.

Write unit tests for this function

```
import unittest
import datetime

class TestParseExpenses(unittest.TestCase):
    def test_parse_expenses(self):
        expenses_string = "2023-01-02 -34.01 USD\n2023-01-03 2.5\nexpected_output = [(datetime.datetime(2023, 1, 2), "-34",
datetime.datetime(2023, 1, 3), "2.5"),
(datetime.datetime(2023, 1, 3), "-2.5")
self.assertEqual(parse_expenses(expenses_string), expected_output)

    def test_parse_expenses_with_comments(self):
        expenses_string = "# This is a comment\n2023-01-02 -34.01 USD\n2023-01-03 2.5\nexpected_output = [(datetime.datetime(2023, 1, 2), "-34",
datetime.datetime(2023, 1, 3), "2.5"),
(datetime.datetime(2023, 1, 3), "-2.5")
self.assertEqual(parse_expenses(expenses_string), expected_output)
```

ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms" →	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?" →	Allows user to provide follow-up corrections	May occasionally generate harmful information
"How do I make an HTTP request in Javascript?" →	Trained to decline inappropriate requests	Limited knowledge of current events

Copilot

Facebook

Create post

Meet Mona Kane at Archinext 2023

Interior Design

Designer (Preview)

Meet Mona Kane at Archinext 2023

Image

Figma

MEET MONA KANE

Power Apps

Welcome, Mona

Start from

- Blank app
- Dataverse
- SharePoint
- Excel
- Image
- Figma

Your apps

Name	Modified	Owner	Type
Inventory tracking	12/24/2023	Mona Kane	Canvas
Procurement orders	12/24/2023	Mona Kane	Canvas

Create a SWOT analysis in loop based on this info

Strengths	Weaknesses	Opportunities	Threats
High quality products	Production and supply chain inefficiencies	Market expansion	Fluctuations in raw material prices
Strong customer loyalty	Inefficient cost management	Partnerships	Changes in government policies or regulations
Robust R&D capabilities	Quality control problems	Strategic alliances	Price sensitivity in a sagging market

GITHUB COPILOT

```
password.py
1 ...
2 Password helper functions
3 ...
4 import re
5 ...
6 ...
7 ...
```

Discover

Bing Open Preview

The New Bing: AI-powered search with chat

Actions

More Visual Answers

Document1 - Saved

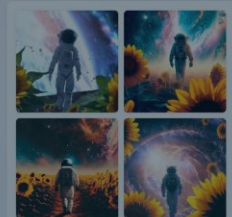
Create content with Copilot

draft a proposal from yesterday's meeting notes

Bing

Can you create me an image of an astronaut walking through a galaxy of sunflowers?

Sure, I'll use Image Creator to draw that for you.



Made with Image Creator

Continous customer support


Claudia Mezzanti

Timeline

- Post purchases
- Coffee latte tamper
- Smart home 3000

Microsoft Edge

Microsoft Copilot



LinkedIn

About

Type message

Microsoft Word

As we approach the next quarter, we're excited to share our goals for the upcoming period. Our main focus is to successfully launch our new wireless power transfer device and establish a strong market presence. We have an ambitious goal to grow our user...

GitHub Copilot

Your AI pair programmer

```
ts sentiment.ts
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 |
6
7
8
9
10
11
12
13
14
15
16
17
```

copilot.github.com

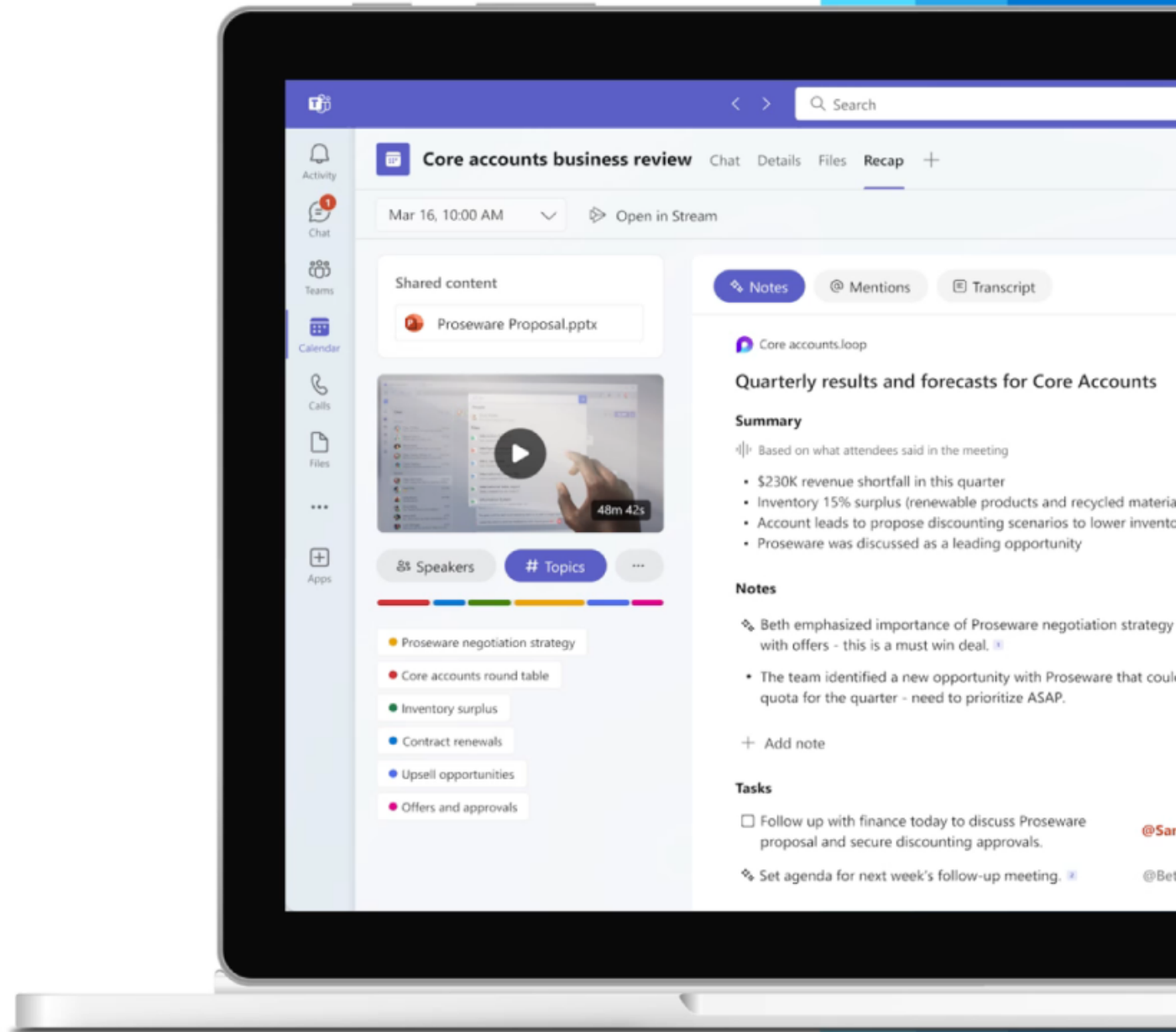
Microsoft 365 Copilot



Business Chat brings together data from documents, presentations, email, calendar, notes, and contacts – all using natural language

Microsoft 365

Copilot in Teams meetings



Copilot

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

A copilot for every profession

Microsoft 365
Copilot

Knowledge
workers

Dynamics 365
Copilot

Sales,
marketing,
finance,
operations,
customer
service
professionals

Microsoft
Security Copilot

Security
professionals

GitHub
Copilot

Developers

... and more!

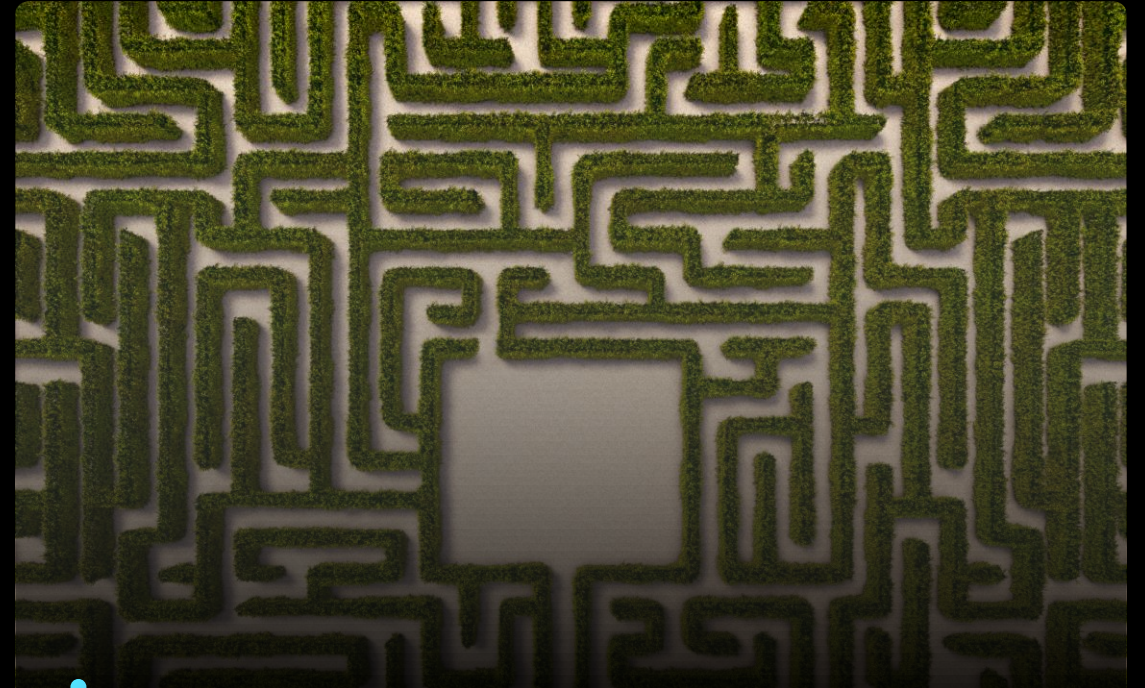
2

Foundation models are becoming the new platform for innovation.

Foundation models transform how we think about AI



Simple model:
Purpose-built for one use case



Foundation model:
Broader intelligence with many
applications

Foundation models are advancing exponentially

GPT-4
(?)



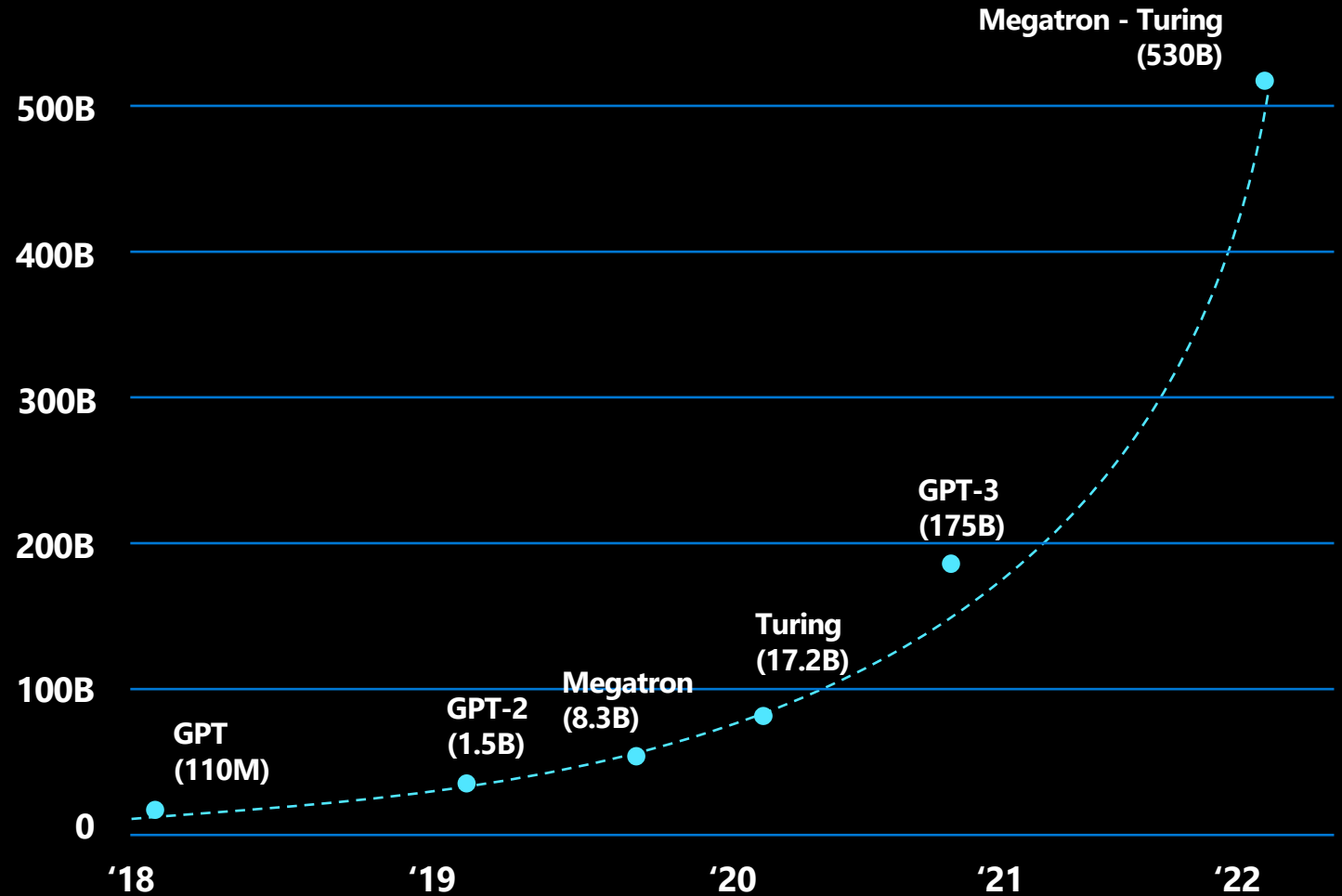
More powerful,
massive models



Multi-modal,
multi-task



Interactive



Azure OpenAI Service

Turning large pretrained foundation AI models into cloud services

GPT-3.5 and GPT-4

Text

ChatGPT

Conversation

Codex

Code

DALL·E 2

Images



Content generation



Summarization



Code generation



Semantic search

Top use cases for

Generative AI



Enterprise ChatGPT
Better knowledge mining



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



Lucinity built "Luci", an AI copilot powered by [Azure OpenAI Service](#), to help frontline analysts and financial crime investigators more efficiently detect and prevent financial crimes.



LINDEX

Swedish fashion retailer Lindex built “Lindex Copilot” with [Azure OpenAI Service](#) to offer contextually relevant and personalized support to store employees.



Cognite introduced “Cognite AI”, an industrial data Copilot built with [Azure OpenAI Service](#) to enhance efficiency in industrial OT/IT data management.

Imagining

AI Copilot for the legal industry

Retrieve and discover knowledge

Review and redline contracts

Draft and summarize legal documents

Assist with client communications

3

**Key considerations for thriving
in the new era of AI**

#1 People, Platform, Process

Key pillars for adopting emerging technologies

People

Upskill your employees
across functions e.g.
tech, product, legal

Process

Incorporate change
management in your AI
adoption plan

Platform

Ensure a solid data foundation
Practice AI responsibly

#2 Responsible generative AI

Risks, mitigations and how Microsoft helps

Data Privacy

GDPR

EU Data Boundary

Responsible AI Standards

AI Grounding

Prompt Engineering
Knowledge Augmenting
Model Fine-tuning

Copilot Stack

Prompt Flow

Azure OpenAI on Your Data

Content Safety

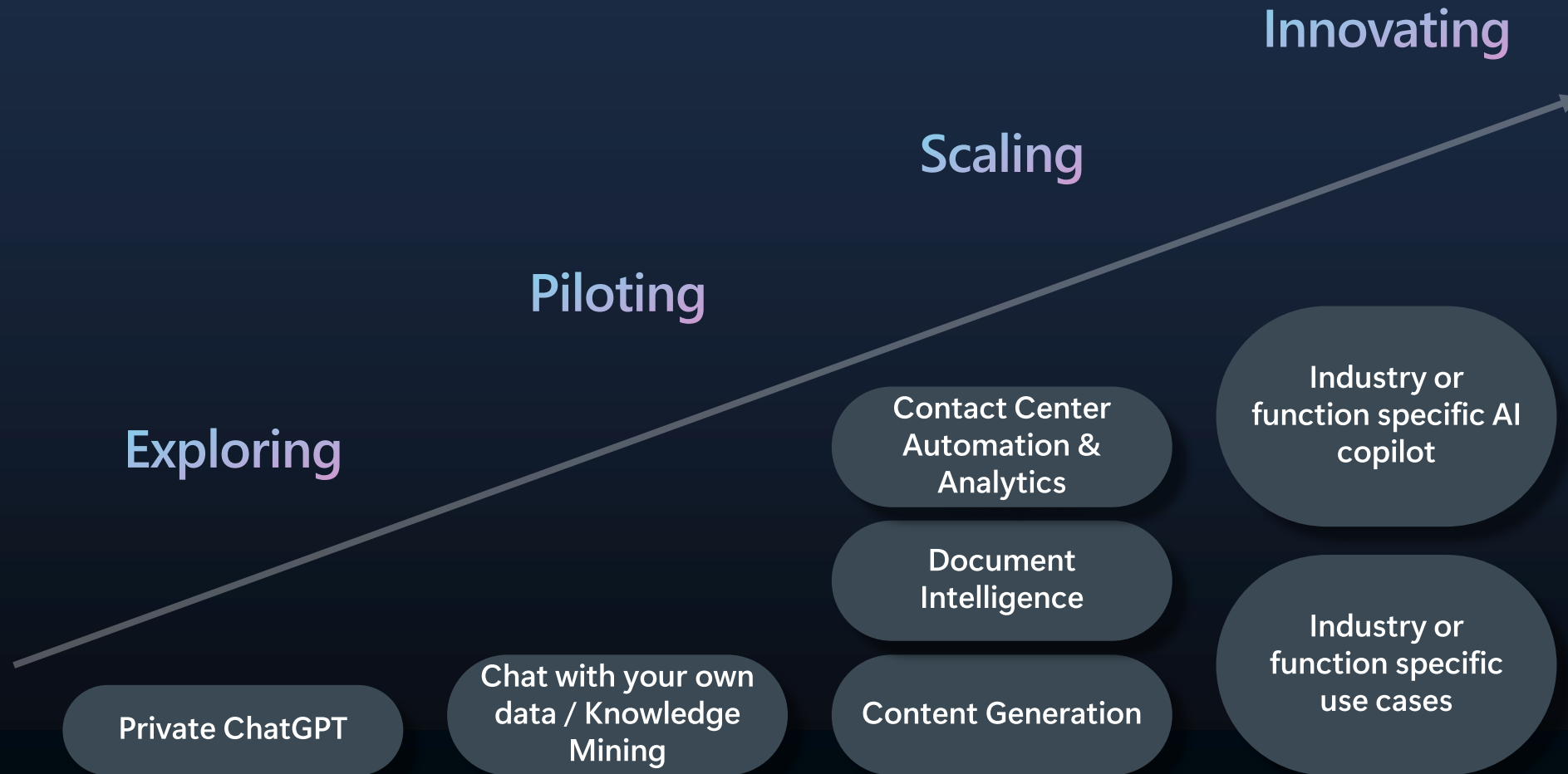
Content Filtering & Moderation

Azure OpenAI Content Filter

Azure AI Content Safely

#3 Generative AI adoption journey

Build confidence and competence before scaling



Thank you!

Xiaopeng Li, AI Business Lead

E: Xiaopeng.Li@microsoft.com

T: @ixiaopengli

L: <https://www.linkedin.com/in/Xiaopeng-Li/>

