Welcome!

Applied Generative AI Workshop

WHAT'S IN IT FOR YOU?

☐ Learn the **fundamentals of generative AI** and its ethical implications.

☐ Discover how AI can revolutionize business **communication, and bring insight and visualization to your data.**

☐ Gain **hands-on experience** with tools like ChatGPT to improve your workflows.

GENERATIVE AI: A RAPIDLY EVOLVING DOMAIN

☐ Like generative AI models, this workshop has **"Knowledge Cut-offs"**

- ○ As models like ChatGPT get pre-trained at a moment in time, their last update determines their knowledge cut-off.

- ○ The workshop also has a cut-off - it should be up-to-date as of **January 26th 2024.**

HOW THE DAY WILL FLOW

☐ **Six packed hours:**
   Mix of lectures, hands-on practice, group activities, and Q&A.

☐ **Breaks and lunch:**
   Short breaks between each unit, with 1 hour for lunch.

Workshop Agenda

Part One	Part Two
☐☐☐☐ *Introductions (15 mins)*	🥘 *Lunch (20 mins)*
🤖 **Generative AI's Impact on Work (45 mins)**	🧐 **Generative AI For Data Analysis (1 hour)**
🦾 **Capabilities & Limitations (45 mins)**	📈 **Identifying Trends and Insights (30 mins)**
☕ *Break (5 mins)*	☕ *Break (5 mins)*
📝 **Prompt Optimization (45 mins)**	👁 **Data Visualizations with AI (1.5 hours)**

CLASS NORMS

☐ **Participation:**
Engage actively, share experiences, and ask questions.

☐ **Collaboration:**
Work together, respect differing viewpoints.

☐ **Communication:**
Listen actively, provide constructive feedback.

☐ **Seek Help:**
Don't hesitate to ask instructors or peers for clarification or assistance.

ICE BREAKER 🧊

1. Share your name, your role, and one non-work-related fact about yourself that you're comfortable sharing with the group.

2. What's one question or topic about AI that you find particularly intriguing or want to know more about?

Generative AI

Generative AI's Impact on Work

LEARNING OBJECTIVES

By the end of the lesson, you will be able to...

☐ Identify the key benefits and potential applications of Generative AI for work.

☐ Analyze the impact of Generative AI on various industries and business functions.
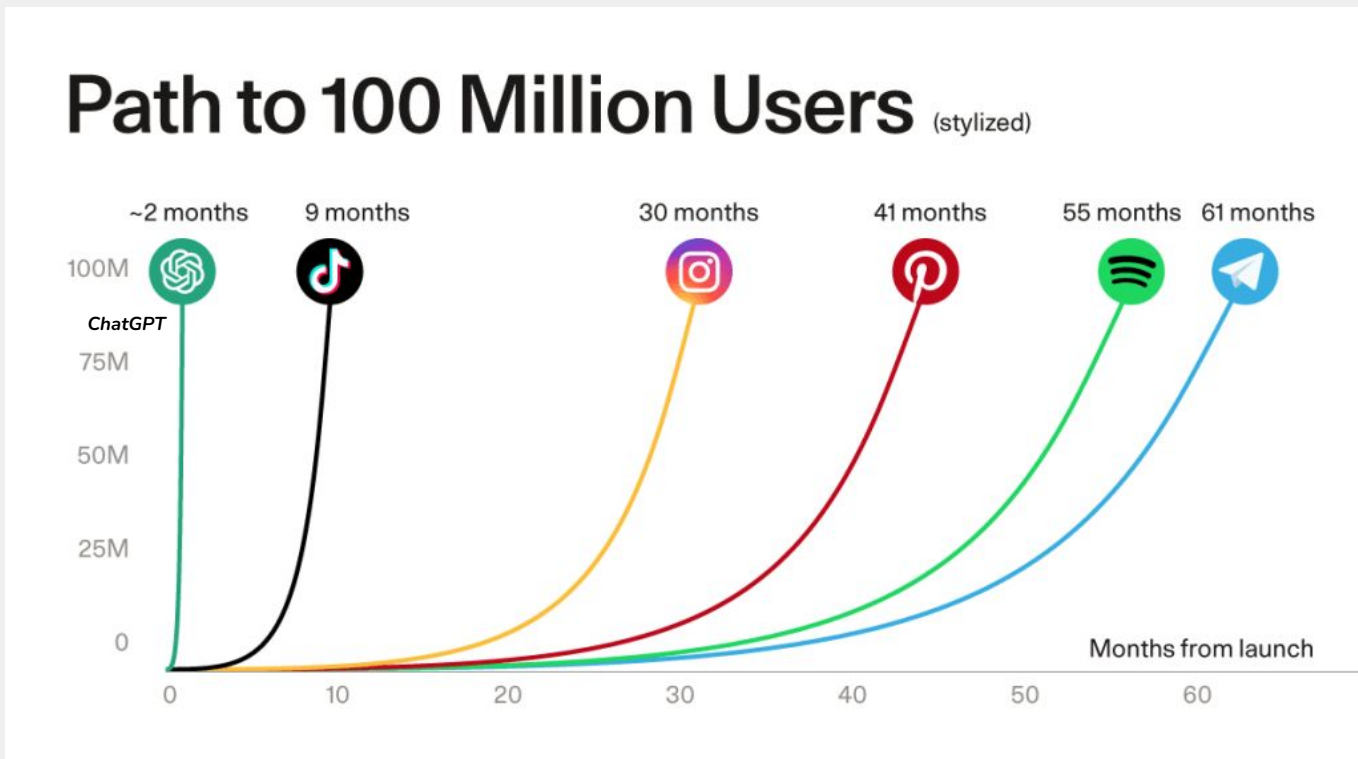
LEARN

The Impact of Gen AI on Work

Why Now? The Incredible Growth of ChatGPT

Path to 100 Million Users (stylized)

Source: Sequoia Capital

> **AI is quite possibly the most important – and best – thing our civilization has ever created, certainly on par with electricity and microchips, and probably beyond those.**

Marc Andreessen, Co-founder
Andreessen Horowitz

> **AI is quite possibly the most important – and best – thing our civilization has ever created, certainly on par with electricity and microchips, and probably beyond those.**
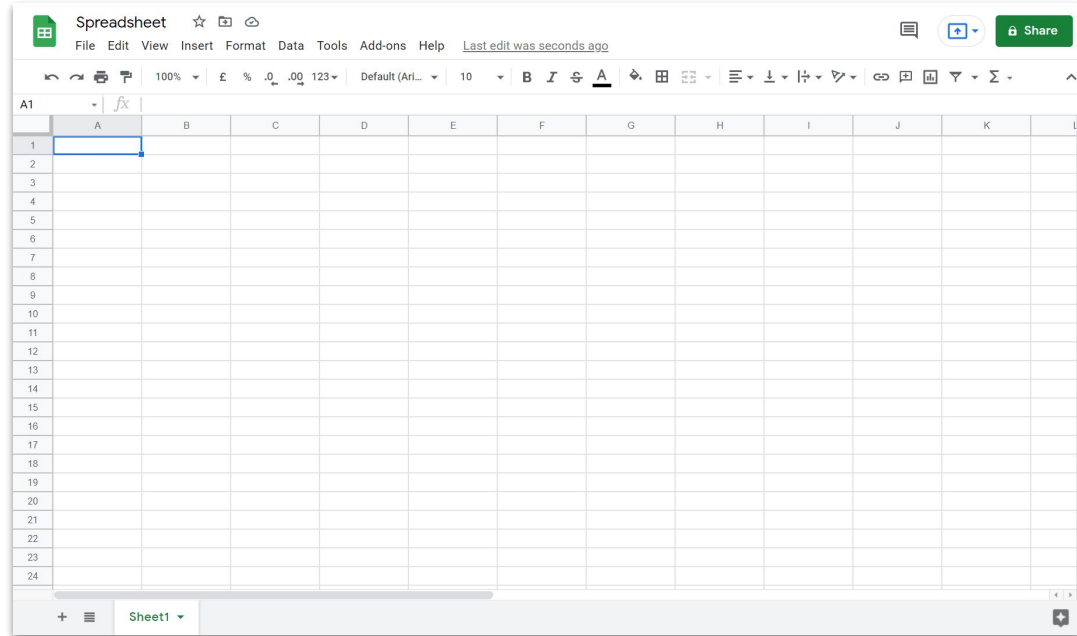
Marc Andreessen, Co-founder
Andreessen Horowitz

Take a few moments to reflect… **what is your reaction to this quote?**

Type your response in the chat.

Let's Consider a Previous Technological Revolution...

The **spreadsheet**

© 2023 General Assembly

The Impact of the Spreadsheet

- **1960s**: Insurance clerks represent single spreadsheet cells (see below)
- **1970s**: Mainframes automate away this work
- **1980s**: Desktop spreadsheets (VisiCalc)
- **1990s**: Spreadsheets for everyone - offices never looked the same

Image: "The Apartment" (1960), Directed by Billy Wilder

Source: Office, messaging and verbs — Benedict Evans

Generative AI could be **this century's spreadsheet.**

An experiment in using GPT-4 to augment consulting work

A randomized control trial involving hundreds of consultants found that those with access to GPT-4 outperformed those without in eighteen different tasks for a fictional shoe company, across metrics like time, task completion, and output quality.

- GPT-4 empowered consultants were more efficient and produced higher-quality work in creative, analytical, and writing tasks.

- Both AI and human graders rated assisted work as higher quality.

Think About It: Performance Boost 🤔

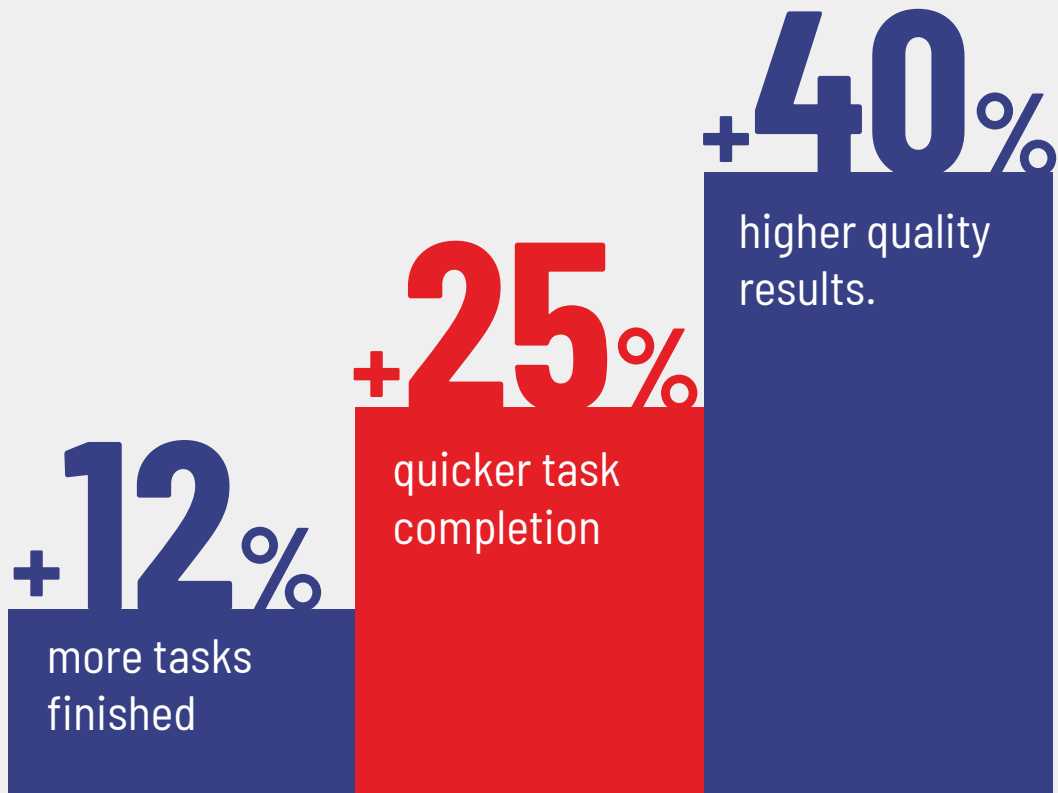Guess the performance boost (%) for consultants when working with GPT-4

| 🟨💬 | **Type your response in the chat.** |

Consultants using GPT-4

Versus the control group

"The consultants who scored the worst [in initial tests] had the biggest jump in their overall performance, **43%**."

+12%
more tasks finished

+25%
quicker task completion

+40%
higher quality results.

REAL CASES: Human/AI Collaboration

A Field Experiment on HR Recruiters

➔ Researchers found that **while higher-quality AI improved task efficiency** in HR recruitment, **it led to reduced human engagement and poorer decision-making**

➔ More experienced recruiters performed significantly better when given a lower quality AI assistant.

*This "falling asleep at the wheel" effect suggests that **maximising AI performance alone may not yield the best outcomes** in human-AI collaborations.*
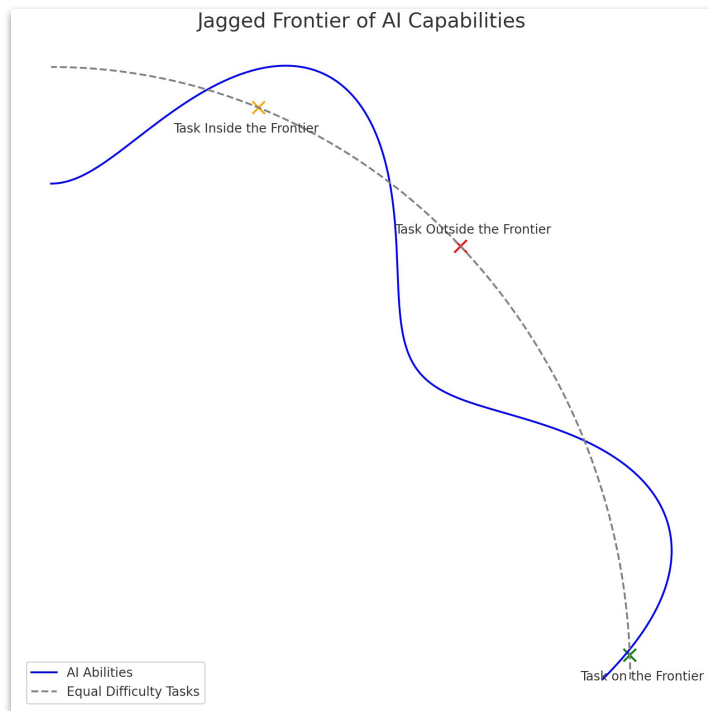
Don't fall asleep at the wheel.

LEARN

Generative AI: What is it Good For?

Working out which tasks are suitable for Gen AI
(and which aren't)

☐ Generative AI is not good at everything.

☐ It is surprisingly good at some tasks ("inside the frontier") and terrible at other tasks ("outside the frontier"), which seem to be of equal difficulty for a human.

Jagged Frontier of AI Capabilities

Task Inside the Frontier

Task Outside the Frontier

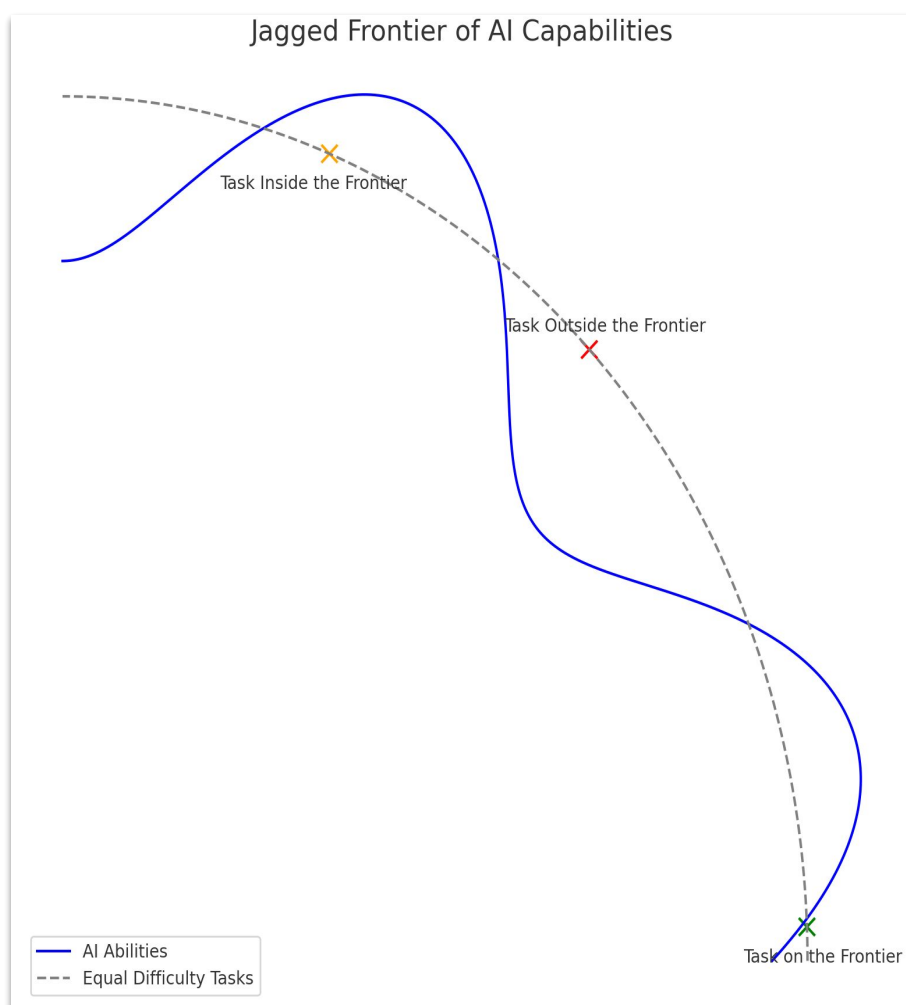Task on the Frontier

— AI Abilities
--- Equal Difficulty Tasks

Source: Centaurs and Cyborgs on the Jagged Frontier

How can we figure out the tasks that fall inside, and outside, of the *frontier*?

Type your response in the chat.

Jagged Frontier of AI Capabilities

Task Inside the Frontier

Task Outside the Frontier

Task on the Frontier

— AI Abilities
--- Equal Difficulty Tasks

Source: Centaurs and Cyborgs on the Jagged Frontier

Some Business Applications of Generative AI

Writing

Working with Data

Working with Documents

Idea Generation

GROUP EXERCISE: Tasks at Work

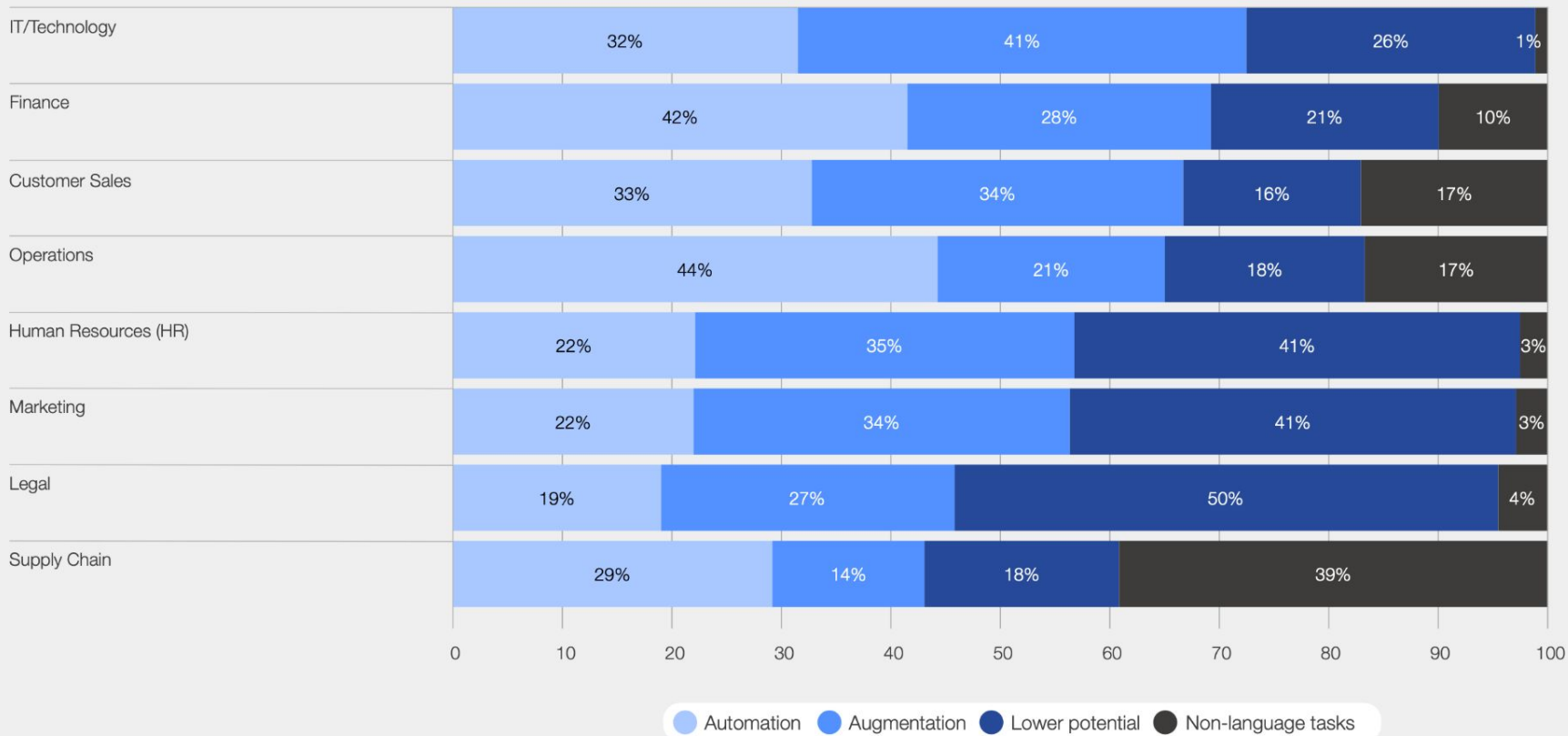**Reflect for a moment, then take turns discussing the following:**

☐ What tasks do you perform weekly? Reporting? Planning? Communicating?

☐ How much time do you spend on email? In meetings? In chat?

☐ How would you estimate you spend your time each week?

☐ What tasks do you struggle to achieve?

☐ What tasks do you not have enough time for?

☐ What tasks take up time without delivering value?

☐ Of the tasks you've considered, which ones would you like to use ChatGPT for?

Exposure of Business Functions to LLMs

Occupations

Occupation	Automation	Augmentation	Lower potential	Non-language tasks
IT/Technology	32%	41%	26%	1%
Finance	42%	28%	21%	10%
Customer Sales	33%	34%	16%	17%
Operations	44%	21%	18%	17%
Human Resources (HR)	22%	35%	41%	3%
Marketing	22%	34%	41%	3%
Legal	19%	27%	50%	4%
Supply Chain	29%	14%	18%	39%

Legend: Automation · Augmentation · Lower potential · Non-language tasks

REFLECT

Your Tasks at Work

Reflection: Your Tasks at Work

Taking what you learned and what you practiced, answer the following reflection questions.

1 How do you think generative AI will affect the skills required for jobs in the next decade?

2 Reflect on how generative AI might impact job security and the nature of employment. What are your thoughts and feelings about these changes?

Tips for Reflection:

Think carefully through the questions, provide specific details and examples, and try to break down your thinking.

"

AI won't replace humans, but humans with AI will replace humans without AI

Karim Lakhani,
Professor at Harvard Business School

GENERAL ASSEMBLY