The coming AI Epoch

A NEW AGE OF ENLIGHTENMENT?
A NEW THREAT TO HUMANITY?

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Maryland Tech Connect
12.12.24

ELON UNIVERSITY

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CENTER

Report from the AI frontline

NotebookLM EXPERIMENT

Try NotebookLM

- Forces At Play ☑
- Friction Frenzy: Explorin... ☑
- Gravity's Grip: The Force... ☑
- Inertia In Action... ☑
- Momentum Mania: Inves... ☑
- Newton's Three Laws... ☑
- Momentum Mania: Inves... ☑
- Simple Machines Make... ☑
- Understanding Speed, Ve... ☑

✳ Notebook guide

Help me create

| Table of contents | Study guide | Briefing doc | FAQ | Timeline |

Summary

These sources provide a comprehensive exploration of the **fundamental principles of physics**, spanning classical mechanics, quantum mechanics, and relativity. The sources analyze forces like gravity, friction, and magnetism, using real-world

Help me understand

How do Newton's three laws of motion explain how objects move and interact?

https://notebooklm.google/

Survey of NC Registered Voters 18+ August 2024
August 2024

YouGov

9. What is your overall impression of Donald Trump, the Republican candidate for President?

		Gender		Age		Education	
	Total	Man	Woman	18-44	45+	No 4-Yr Degree	4-Yr Degree+
Very favorable	29%	33%	26%	26%	31%	36%	18%
Somewhat favorable	17%	17%	17%	16%	17%	16%	18%
Neither favorable nor unfavorable	4%	6%	3%	7%	2%	5%	3%
Somewhat unfavorable	4%	5%	3%	4%	3%	4%	3%
Very unfavorable	46%	40%	52%	46%	46%	39%	58%
Have not heard of him	–	–	–	–	–	–	–

		Race			Income			Leaned Party ID		
	Total	White (Non-Hispanic)	Black	Other	LT $50k	$50-$100k	$100k+	Democrat	Republican	Independent
Very favorable	29%	35%	11%	23%	30%	28%	28%	2%	58%	16%
Somewhat favorable	17%	19%	6%	22%	16%	17%	18%	2%	30%	19%
Neither favorable nor unfavorable	4%	3%	8%	6%	5%	5%	1%	3%	3%	11%
Somewhat unfavorable	4%	3%	6%	2%	5%	4%	4%	3%	3%	10%
Very unfavorable	46%	39%	69%	47%	44%	46%	49%	90%	5%	44%
Have not heard of him	–	–	–	–	–	–	–	–	–	–

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And, voila, you can get it to generate
a podcast about the file

https://notebooklm.google.com/notebook/b7286221-b39d-4cd5-951a-9155fc0df802/audio

The challenges now look daunting … but familiar

People: Serve and model

Helper with new literacies (e.g. prompt engineering)

Pathfinders for trusted information

Curators and arbiters of trusted information

Tech AND data experts

Master teachers in the age of lifelong learning

Visionaries for the knowledge economy and the jobs it produces

Place: Reconfigured and Repurposed

Community information and media stewards

Builders and archivists of community media

Nodes for "system of systems" with databases and media

Testbeds – maker masters

Platform: Community Resource 4.0

Trusted, top-of-mind institution for learning

Advocates for free and open, transparent and accountable

Advocates for closing digital divides

Privacy and algorithms watchdog

New community builders

Here's the world you face now

LLMs proliferate

https://www.aporia.com/learn/train-your-own-language-model/
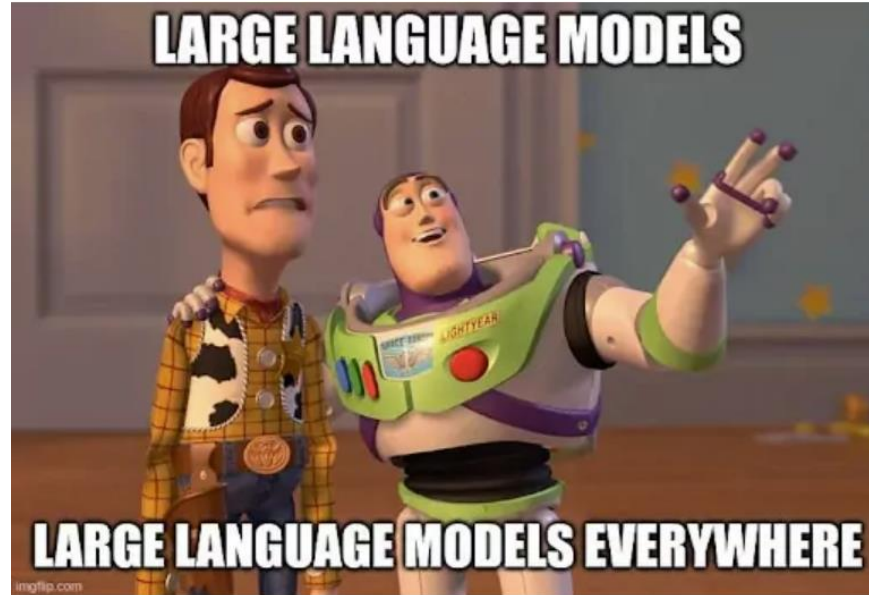
LLMs proliferate

New GPT
● Draft

... Create

Create Configure

Preview

Hi! I'll help you build a new GPT. You can say something like, "make a creative who helps generate visuals for new products" or "make a software engineer who helps format my code."

What would you like to make?

Custom GPTs

Below we can see a trendline of the total active unique GPT model count over time since the debut of the GPT store in early November 2023:

Trend of Total Organic Pages Over Time
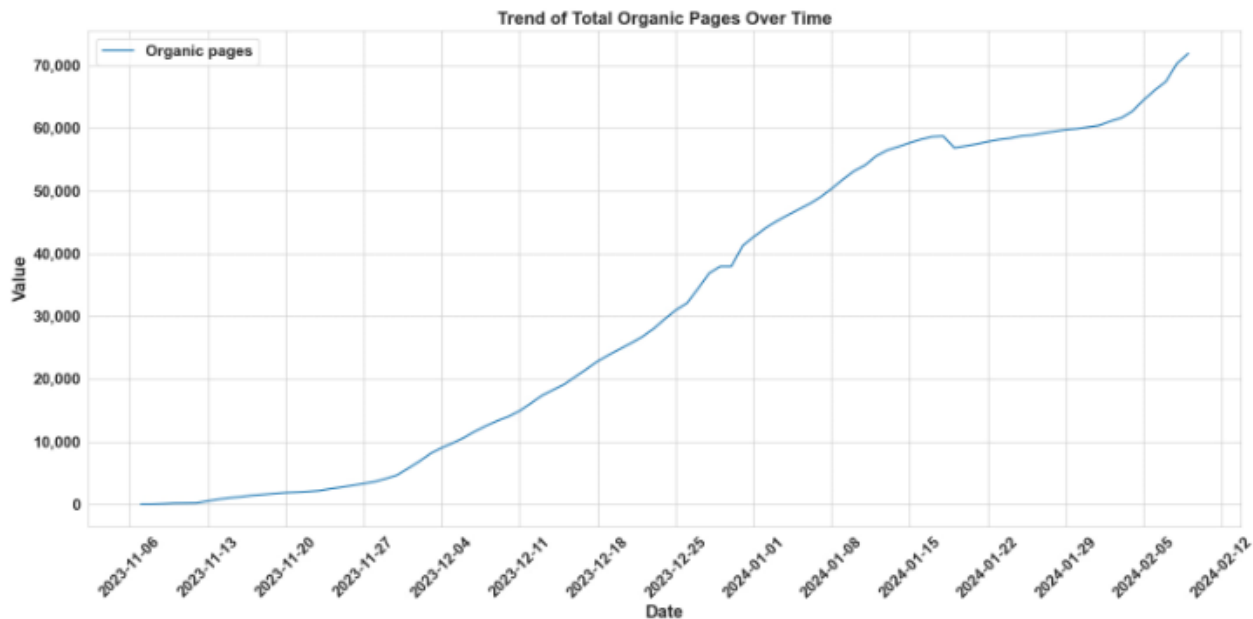
- More than 3 million **custom** Generative Pre-trained Transformer models (GPTs) have been created
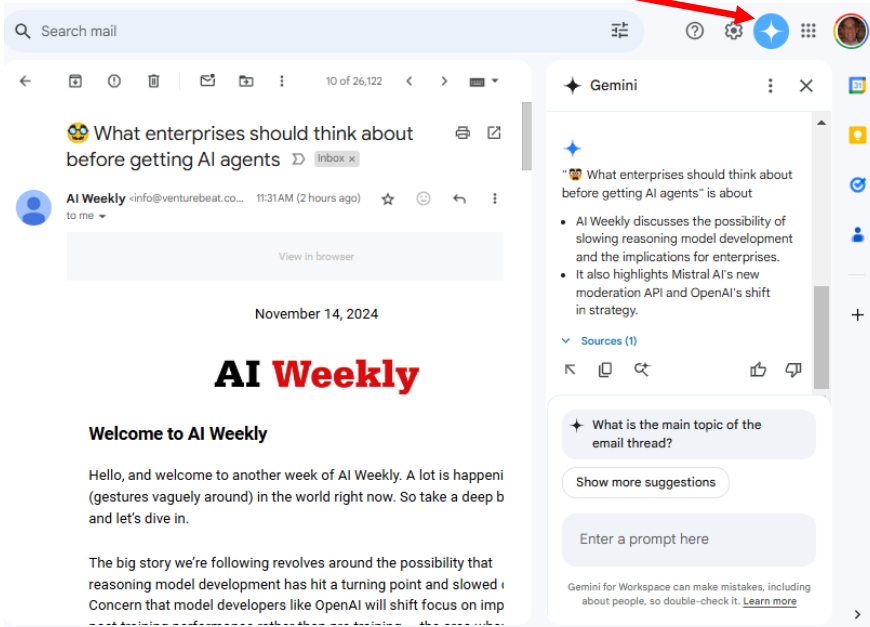- More than 159,000 are available in OpenAI's GPT store

What's the "same" about GenAIs

- Adoption will follow a long-standing pattern
- Divides are inevitable and distressing
- Efficiency, savings, safety, convenience are adoption propellants
- Tech affordances and social innovations flow back and forth

We are here with language models – 28% of U.S. adults use them

Market share %

Innovators 2.5 %

Early Adopters 13.5 %

Early Majority 34 %

Late Majority 34 %

Laggards 16 %
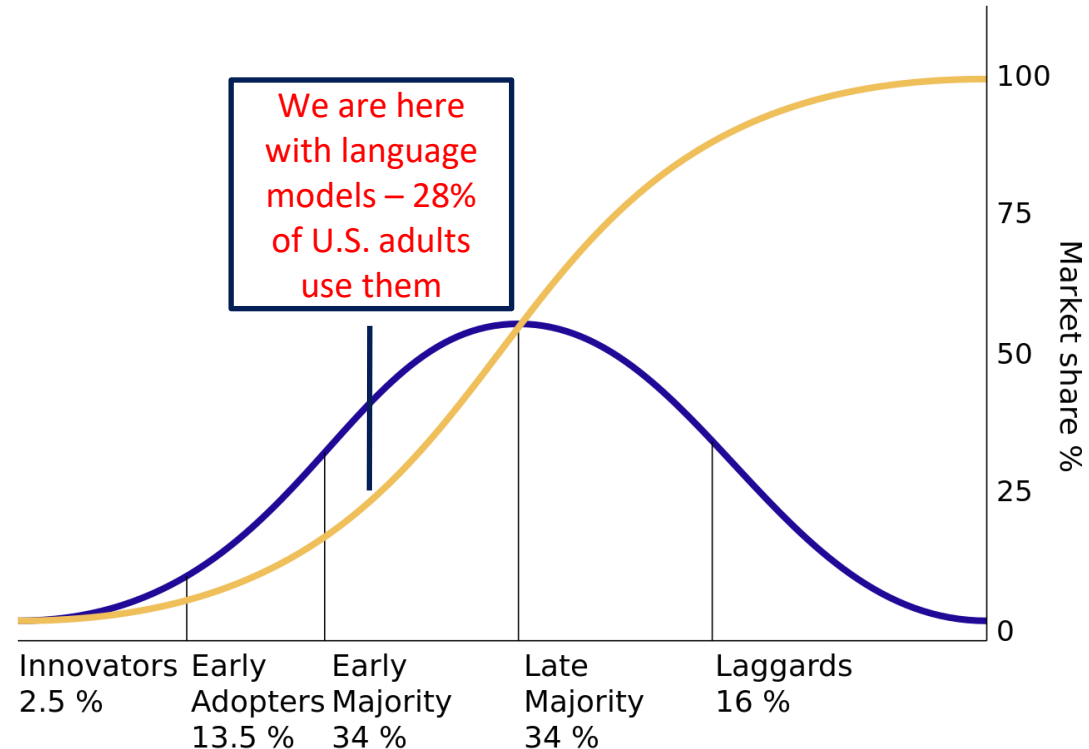
What's different about GenAIs

Built into existing popular tools

Rolling out at the same time as several other gigantic revolutions
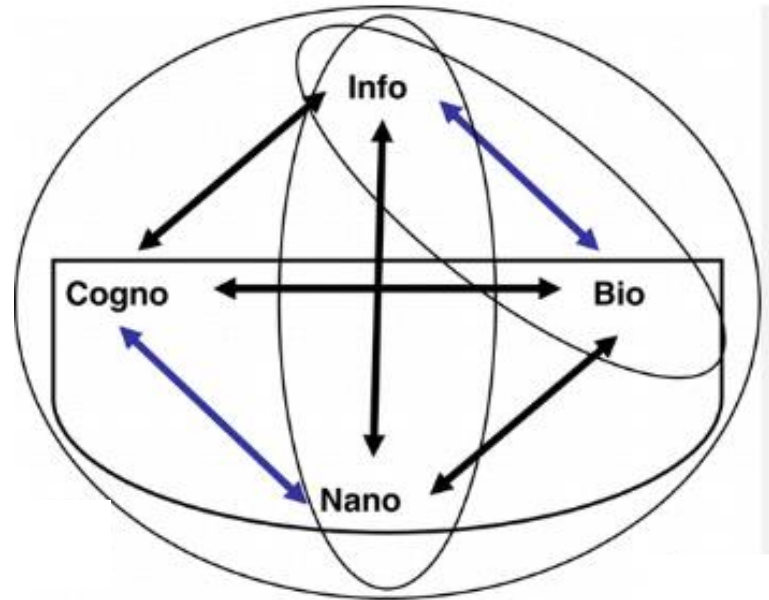
What's different about GenAIs

Human enhancement

Interfaces with tech

AI in robotics

What's different about GenAIs

Quantum
computing

How the public sees all this

Opinion about AI's social impacts

Artificial intelligence's level of impact on people's personal lives

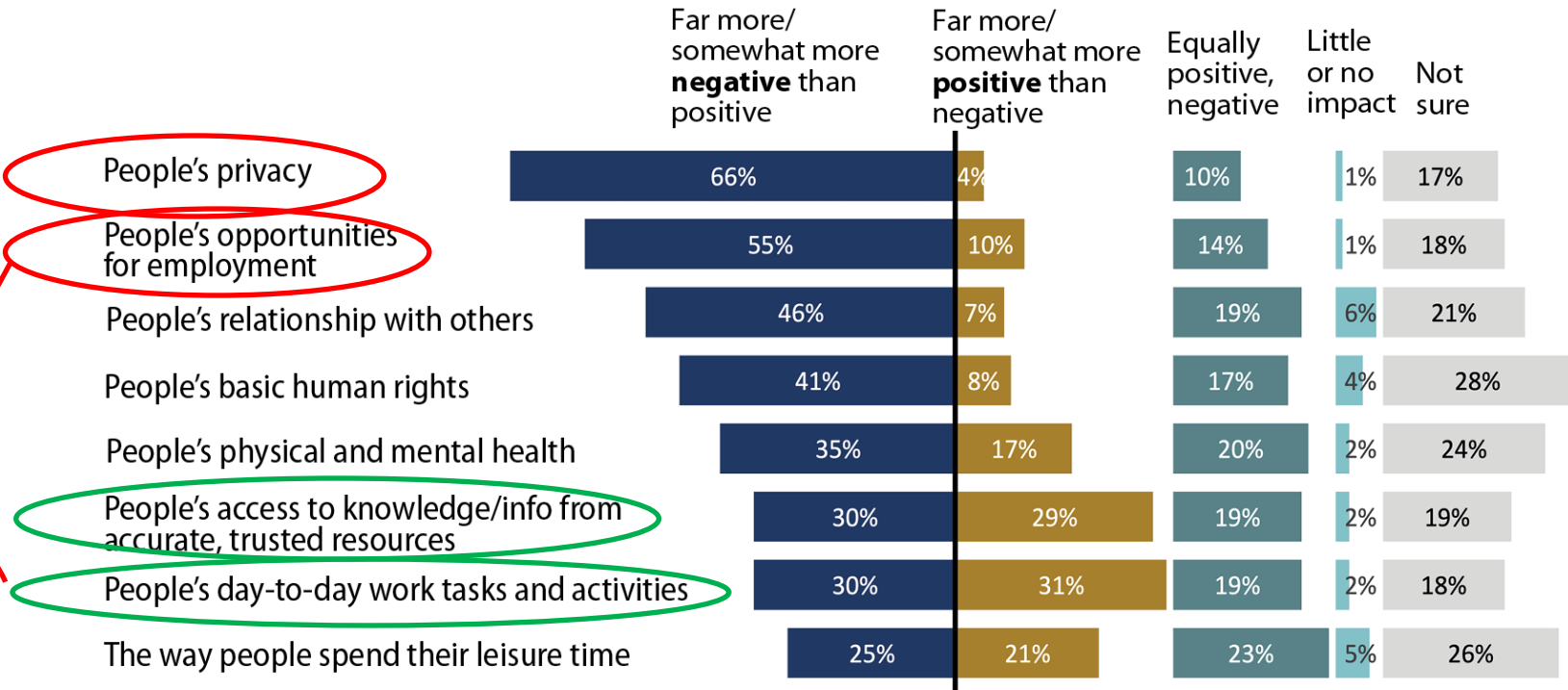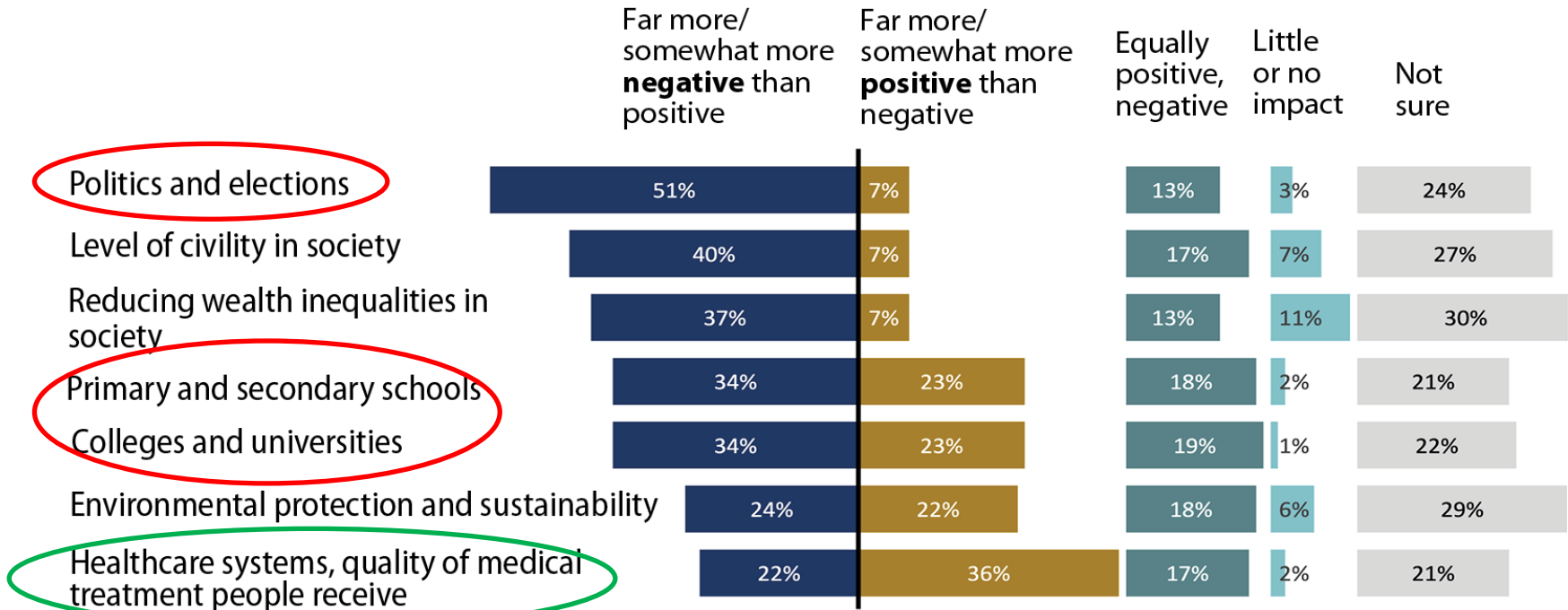*% of U.S. adults who say artificial intelligence will have _____ level of impact by the year 2040*

	Far more/somewhat more **negative** than positive	Far more/somewhat more **positive** than negative	Equally positive, negative	Little or no impact	Not sure
People's privacy	66%	4%	10%	1%	17%
People's opportunities for employment	55%	10%	14%	1%	18%
People's relationship with others	46%	7%	19%	6%	21%
People's basic human rights	41%	8%	17%	4%	28%
People's physical and mental health	35%	17%	20%	2%	24%
People's access to knowledge/info from accurate, trusted resources	30%	29%	19%	2%	19%
People's day-to-day work tasks and activities	30%	31%	19%	2%	18%
The way people spend their leisure time	25%	21%	23%	5%	26%

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Opinion about AI's societal impacts

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Artificial intelligence's level of impact on societal institutions and systems

% of U.S. adults who say artificial intelligence will have _____ level of impact by the year 2040

	Far more/somewhat more **negative** than positive	Far more/somewhat more **positive** than negative	Equally positive, negative	Little or no impact	Not sure
Politics and elections	51%	7%	13%	3%	24%
Level of civility in society	40%	7%	17%	7%	27%
Reducing wealth inequalities in society	37%	7%	13%	11%	30%
Primary and secondary schools	34%	23%	18%	2%	21%
Colleges and universities	34%	23%	19%	1%	22%
Environmental protection and sustainability	24%	22%	18%	6%	29%
Healthcare systems, quality of medical treatment people receive	22%	36%	17%	2%	21%

Why it matters economically

McKinsey & Company

The economic potential of generative AI

The next productivity frontier

June 2023

Estimates suggest it could add between **$2.6 trillion and $4.4 trillion** annually across 63 use cases analyzed

McKinsey & Company

THE 2024 MAD (MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & DATA) LANDSCAPE

Infrastructure

Analytics

Machine Learning & AI

Applications and Enterprise

Data governance
Privacy
Security

AI Observability
Safety
Speech-voice
Nonprofit

Applications - Horizontal

Applications - Industry

Open Source Infrastructure

Data Sources and APIs

Data and AI Consulting

Version 1.0 – March 2024   © Matt Turck (@mattturck) , Aman Kabeer (@AmanKabeer11) & FirstMark (@firstmarkcap)   Blog post: mattturck.com/MAD2024   Interactive version: MAD.firstmarkcap.com   Comments? Email MAD2024@firstmarkcap.com

FIRSTMARK
EARLY STAGE VENTURE CAPITAL

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GenAIs will create different secondary effects than social media did. Social media is optimized for attention and engagement. GenAIs are being optimized for **intimacy** in liberal democracies … and population **control/surveillance** by authoritarian regimes.

The world you can help build

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There will be an ever-shifting boundary between what's human intelligence and what's machine intelligence

Your story challenges us all to reimagine ...

Who we are: What happens when superior intelligence is all around us?

What we do: How do we change as GenAI agents help us and represent us?

How we connect: What becomes of trust as GenAI content becomes part of civic news and info ecology?

How we think: What shifts occur in our decision-making when augmented intelligence is everywhere?

Reasoning, meaning, purpose

- Draw on experiential knowledge, understanding, intuition, and emotional insight to make decisions and make meaning.

- Capable of flexible, multi-dimensional reasoning.

- Can perform critical thinking that involves intentionality, active judgment, self-reflection, and adaptation, influenced by memory, experience, contextual awareness.

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Ethics and moral judgment

- Can apply ethical reasoning to their judgments, often considering the social and moral consequences of their conclusions.

- Can consider values, empathy, social responsibility in fresh contexts.

- Can negotiate for conflict resolution.

Emotional smarts, contextual nuance

- Take advantage of lived experience, social interaction, emotional intelligence. Draw on embodied intelligence, situational knowledge.

- Have intuition, tacit knowledge, practical wisdom – aids trust building.

- Can critically consider the social implications of their acts, recognize interpersonal dynamics, and adjust their responses to align with nuanced contexts.

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Creativity, innovation, novelty

- Are curious and self-directed and capable of transformational thinking.
- Draw on imaginations, analogies, inventive problem-solving, and synthesis across diverse areas of knowledge to break with established patterns.
- Can generate entirely new ideas or paradigms, informed by people's capacity for independent thought and insight.

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Self reflection, meta-cognition

- Can examine their own thought processes, recognize cognitive biases, and adjust their approach to problems as they learn more.

-Can question their own assumptions, weigh evidence with a sense of accountability, and monitor their decision-making.

- Can draw on intuition and subjective insight.

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Ability to form abstract, theoretical constructs

- Can conceive theoretical frameworks and conceptual models that allow for deep analysis and synthesis.

- Abstract reasoning is central to philosophy, science, and ethics, where individuals create and test hypotheses in ways that push knowledge forward.

2026: Win World Series of poker

2027: Convincingly fake a song by a popular artist

By **2031** write an original Top 40 song

2030: Fold laundry

2033: Retail salesperson job functions will be fully automated

2035: Independently research and write high-quality machine learning paper

2040: Physically install electric wiring in a new home

2045: Prove math theorems for top math journal

2050: Solve long-standing unsolved problem in math and win Millennium Prize

Major takeaway: For most tasks, expert timelines to success shortened

Thousands_of_AI_authors_on_the_future_of_AI.pdf (aiimpacts.org)

2047: High-level machine intelligence is better and cheaper to implement than all humans -- down 13 years from earlier predictions

2116: Full automation of labor -- down 48 years from earlier predictions

Thousands_of_AI_authors_on_the_future_of_AI.pdf (aiimpacts.org)

Hybrid intelligence: The work ahead

Your special skills are critical

Stewards of knowledge

Promoters of truth

Creators of trust

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