

In the Age of GenAIs, What is Human Knowledge Good For?

Imagining
THE
Digital
Future
CENTER

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Knowledge World
11.20.24

 ELON UNIVERSITY

Report from the AI frontline

Imagining
THE
Digital
Future

NotebookLM

EXPERIMENT

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- Forces At Play
- Friction Frenzy: Explor...
- 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



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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/>

Report from the AI frontline

NotebookLM EXPERIMENTAL

Settings



Notebooks

Create your first notebook

NotebookLM is an AI-powered research and writing assistant that works best with the sources you upload



Upload your documents and NotebookLM will answer detailed questions or surface key insights



Convert complex material into easy-to-understand formats like FAQs or Briefing Docs



Add key resources to a notebook and share with your org to create a group knowledge base

Report from the AI frontline

* Notebook guide

Help me create



FAQ



Study Guide



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Timeline



Briefing Doc

Audio Overview i



Deep dive conversation
Two hosts (English only)

Generate

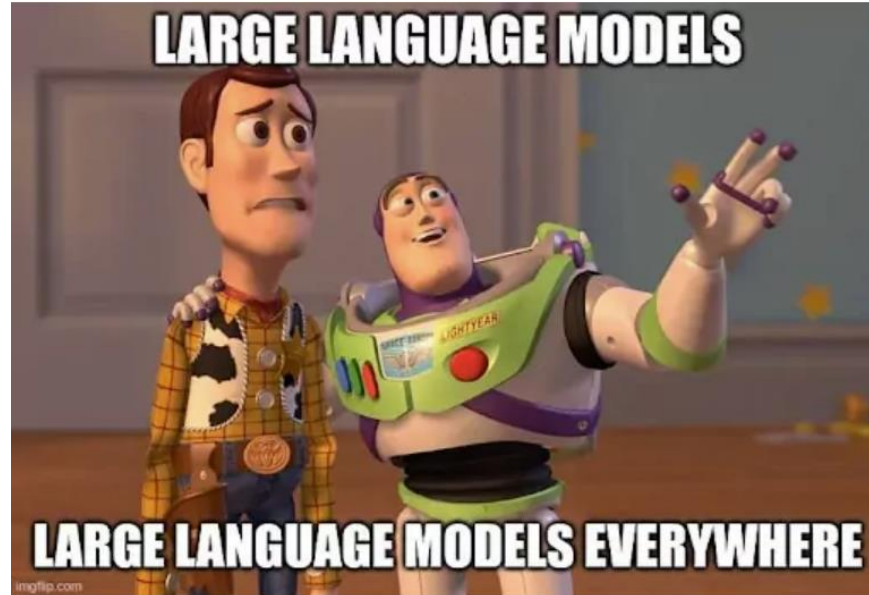
Report from the AI frontline

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



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

LLMs proliferate



<https://www.aporia.com/learn/train-your-own-language-model/>

LLMs proliferate

New GPT
● Draft

Create Configure

Preview

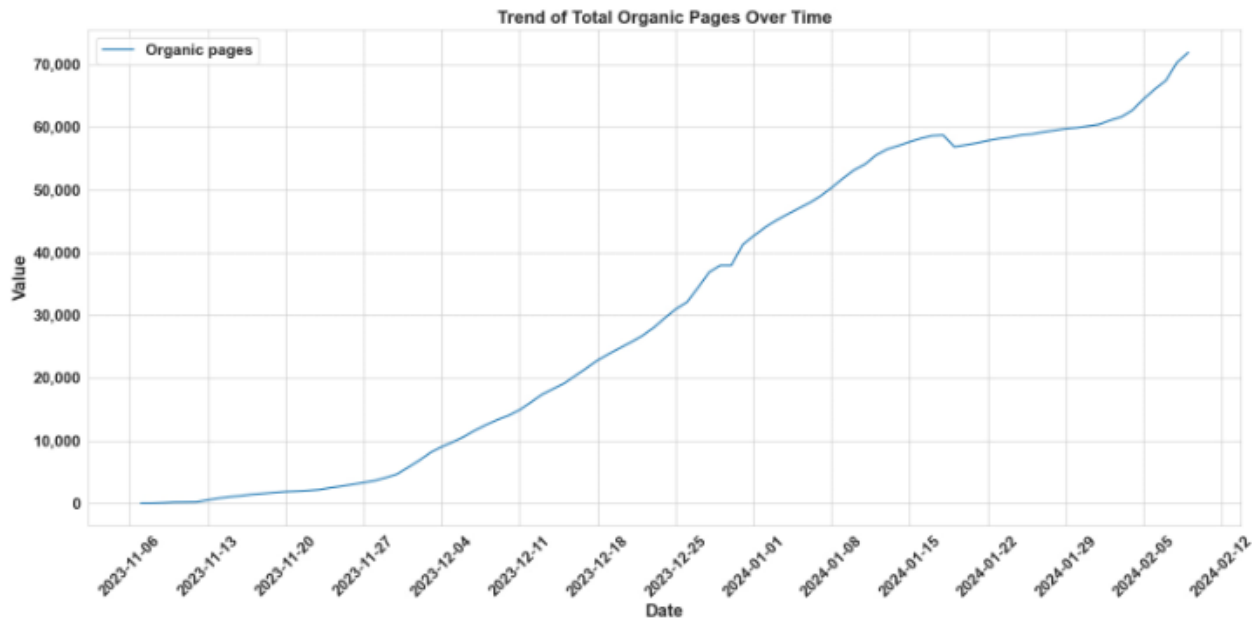
Hi! I'll help you build a new GPT. You can say something like, "make a creative who helps generate visuals for new products" or "make a software engineer who helps format my code."

What would you like to make?

Create

Custom GPTs

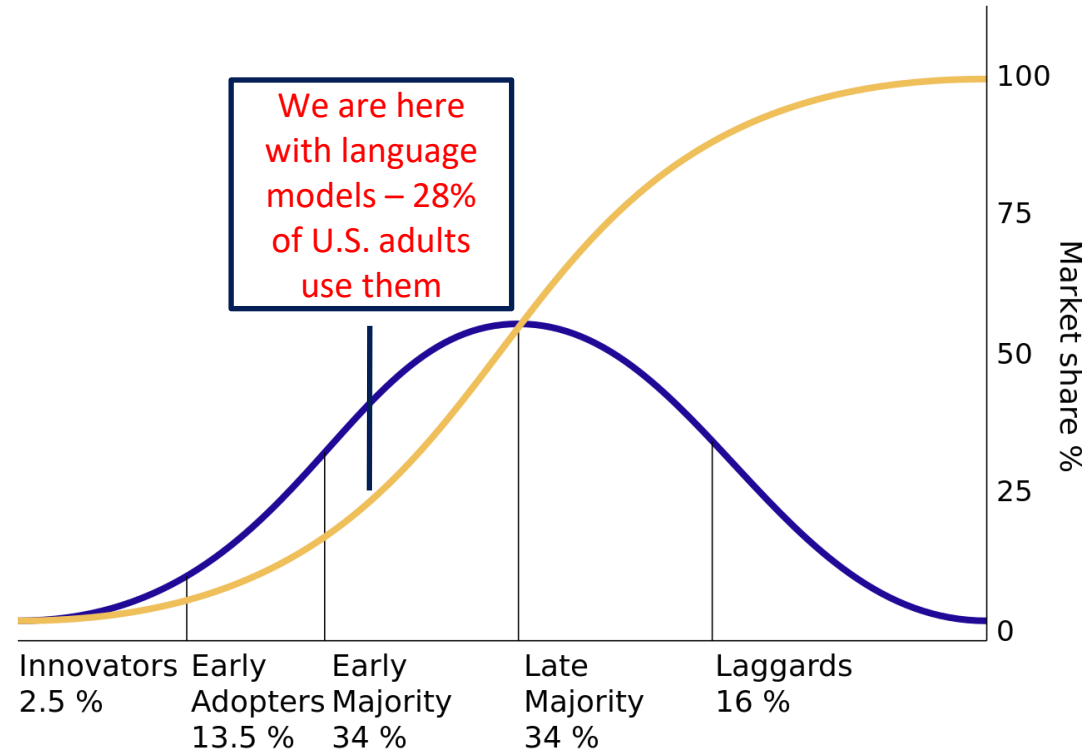
Below we can see a trendline of the total active unique GPT model count over time since the debut of the GPT store in early November 2023:



- 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

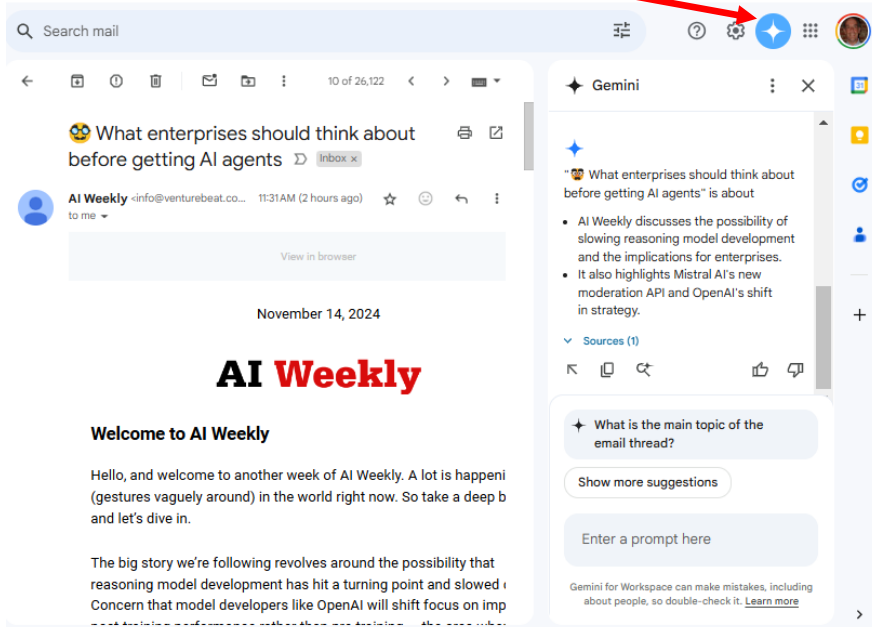
What's the “same” about GenAIs

- 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



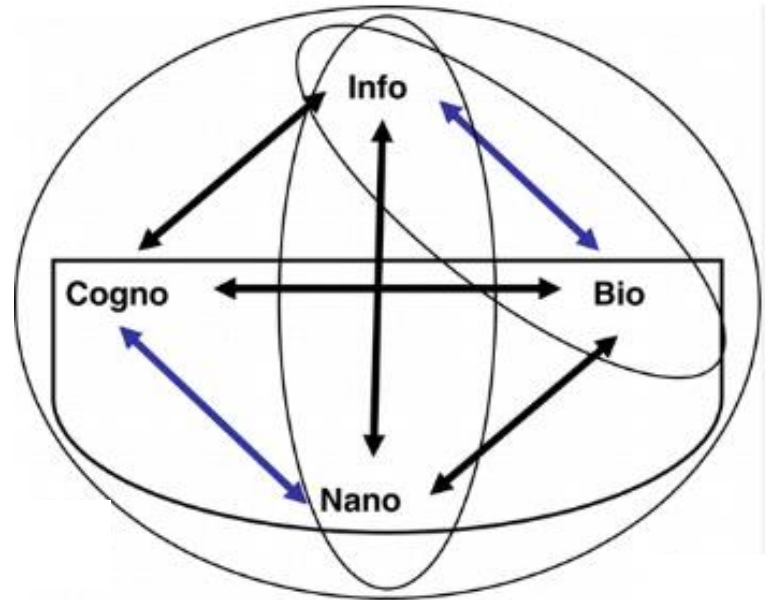
What's different about GenAIs

Built into existing popular tools



The screenshot shows an email client interface. On the left, there's a search bar and navigation icons. The main content area displays an email from 'AI Weekly' dated November 14, 2024. The email subject is 'What enterprises should think about before getting AI agents'. The body of the email includes a 'Welcome to AI Weekly' section and a paragraph about AI reasoning models. A Gemini AI assistant window is overlaid on the right side of the email, showing a prompt: 'What is the main topic of the email thread?' and a 'Show more suggestions' button. A red arrow points from the text 'Built into existing popular tools' to the Gemini icon in the top right corner of the email interface.

Rolling out at the same time as several other gigantic revolutions



What's different about GenAIs

Human
enhancement



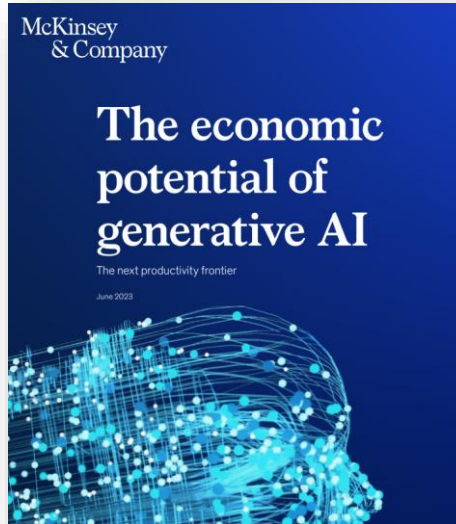
Interfaces
with tech



AI in robotics



Why it matters economically



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

A grid of logos for infrastructure providers, including AWS, Azure, Google Cloud, Oracle, Snowflake, Databricks, and others.

Analytics

A grid of logos for analytics tools, including Tableau, Power BI, Qlik, and others.

Machine Learning & AI

A grid of logos for machine learning and AI platforms, including SAS, H2O, DataRobot, and others.

Applications and Enterprise

A grid of logos for various enterprise applications and software solutions.

Data governance
Privacy
Security

A grid of logos for data governance, privacy, and security solutions, including OneTrust and others.

AI Observability
Safety
Speech-voice
Nonprofit

A grid of logos for AI observability, safety, speech-voice, and nonprofit solutions.

Applications - Horizontal

A grid of logos for horizontal applications, including various SaaS products.

APPLICATIONS — INDUSTRY

A grid of logos for industry-specific applications, such as healthcare and finance.

Applications - Industry

Open Source Infrastructure

A grid of logos for open source infrastructure tools, including Apache and others.

Data Sources and APIs

A grid of logos for data sources and APIs, including various data providers.

Data and AI Consulting

A grid of logos for data and AI consulting firms, including various advisory services.



Why GenAIs matter socially and politically

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.

Changing world of KM

Info storage: physical/Cabinets → Auto-indexed hubs in the cloud

Info retrieval: Manual search → AI conversational search

Knowledge sharing: Slow, in person → Instant, AI-personalized

Document organization: Filing, cataloging → Semantic, auto-tagged

Research: Manual data collection → AI-trained predictive modeling

Your story illustrates a BIG POINT



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?

Changing world of KM

**6 key elements of human intelligence
and critical thinking that will become
increasingly valued**

1 – Reasoning, meaning, purpose

Humans

- Draw on a combination of **experiential knowledge, understanding, intuition, and emotional insight** to make decisions and make meaning.
- Are capable of **flexible, multi-dimensional reasoning**.
- Can perform critical thinking that involves intentionality, active judgment, self-reflection, and adaptation, **influenced by memory, personal experience, and contextual awareness**.

GenAI

- Simulate logic, but it's really **statistical associations and pattern recognition** of material from humans.

2 – Ethics and moral judgment

Humans

- Can apply ethical reasoning to their judgments, often considering **the social and moral consequences of their conclusions.**
- This is foundational to **human judgment**, especially in scenarios that require application of values, empathy, or social responsibility.
- Can negotiate for **conflict resolution.**

GenAI

- Mimics moral reasoning, but **does not know right-wrong, good-bad.**

3 - Emotional smarts and contextual nuance

Humans

- Take advantage of **lived experience, social interaction, and emotional intelligence**. Also have **embodied intelligence and situational knowledge**.
- Can critically consider the social implications of their conclusions, recognize interpersonal dynamics, and adjust their responses to align with nuanced contexts. Have **intuition, tacit knowledge and practical wisdom** and all this builds **trust and progress**.

GenAI

- Can simulate these traits but can **miss real-world cues** and can act like a psychopath.

4 – Creativity, innovation, novelty

Humans

- 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.

GenAI

- **Struggles with novel situations.**
- Cannot genuinely understand **ambiguity, irony**, concepts beyond training data.

5 – Self reflection, meta-cognition

Humans

- 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.

GenAI

- **Lacks true self-reflection** or awareness of its reasoning process.
- Simulates **introspection**.

6 - Ability to form abstract and theoretical constructs

Humans

- Have the ability **to form theoretical frameworks and conceptual models** that allow for deep analysis and synthesis.
- This abstract reasoning is central to many fields of human intelligence, such as **philosophy, science, and ethics**, where individuals create and test hypotheses in ways that push knowledge forward.

GenAI

- **Does not generate new theories, abstract concepts** or awareness of its reasoning process; that's not true originality.

What's ahead: 2,778 experts say AI will ...

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 \(aiimpacts.org\)](https://aiimpacts.org)

What's ahead: 2,778 experts say AI will ...

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

Hybrid intelligence: The work ahead

Imagining
THE
Digital
Future



Your special skills are critical



Stewards of
knowledge



Promoters of
truth



Creators of
trust

Imagining THE Digital Future CENTER

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 ELON UNIVERSITY