



SCISPACE

# The Impact of AI on Research

- Saikiran Chandha



# LBD (literature-based discovery)

“Robot scientists”, also known as “Self-driving labs”



## ARTIFICIAL INTELLIGENCE

# AI Generates Hypotheses Human Scientists Have Not Thought Of

Machine-learning algorithms can guide humans toward new experiments and theories

By Robin Blades on October 28, 2021

Review Article | [Published: 30 January 2023](#)

## The rise of self-driving labs in chemical and materials sciences



[Milad Abolhasani](#) & [Eugenia Kumacheva](#)

[Nature Synthesis](#) 2, 483–492 (2023) | [Cite this article](#)

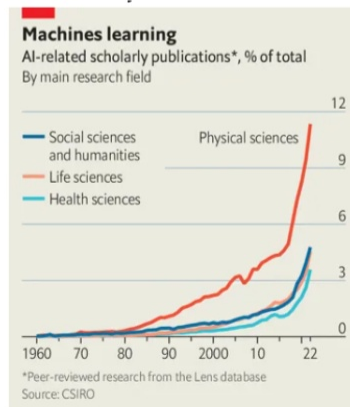


IMAGE: THE ECONOMIST

# Language models can read and evaluate more research, evidence, and reasoning steps than humanly possible

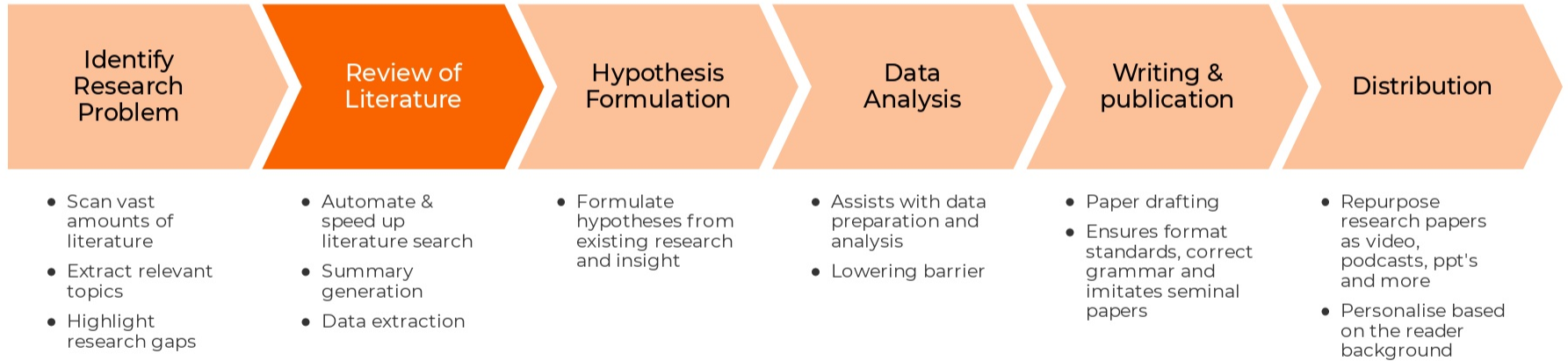
## 100MM CHARACTERS

Takes a full-time employee 10 months to read if they read full time (1667 hours)\*

This would cost \$42,000 to pay an average research assistant to read\*

It takes large language models minutes

\*There are an average of 5 characters per word. The average person reads 200 words per minute. We assume a full-time employee works 40 hours per week. The average research assistant makes \$51,370 per year.



## PROBLEM

# The Information Overload Challenge

How do we navigate, research, and extract the most valuable insights from this vast sea of information?

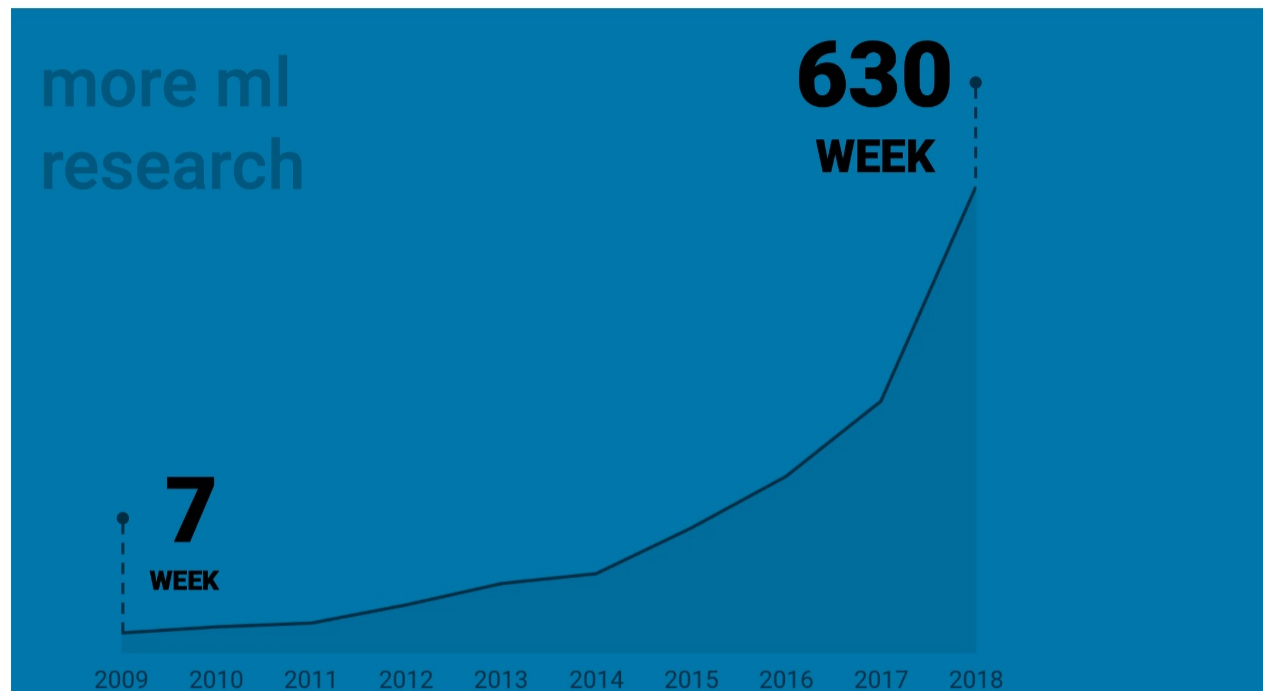


**Information is exploding, but the human capacity to consume is constant**

- 90% of online content may be synthetically generated by AI technologies by 2026

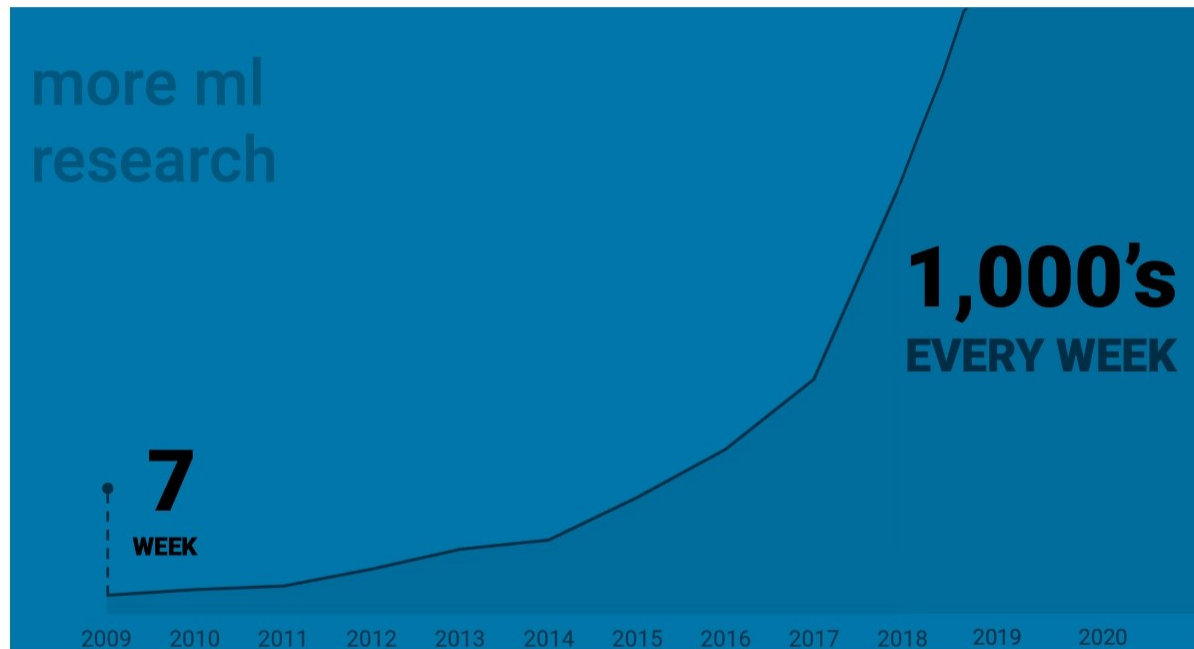
## e.g. in scientific research

- 3.5 M papers/year
- 72% don't make it to the reading list
- 70% read 1 article/week
- 90% never cited



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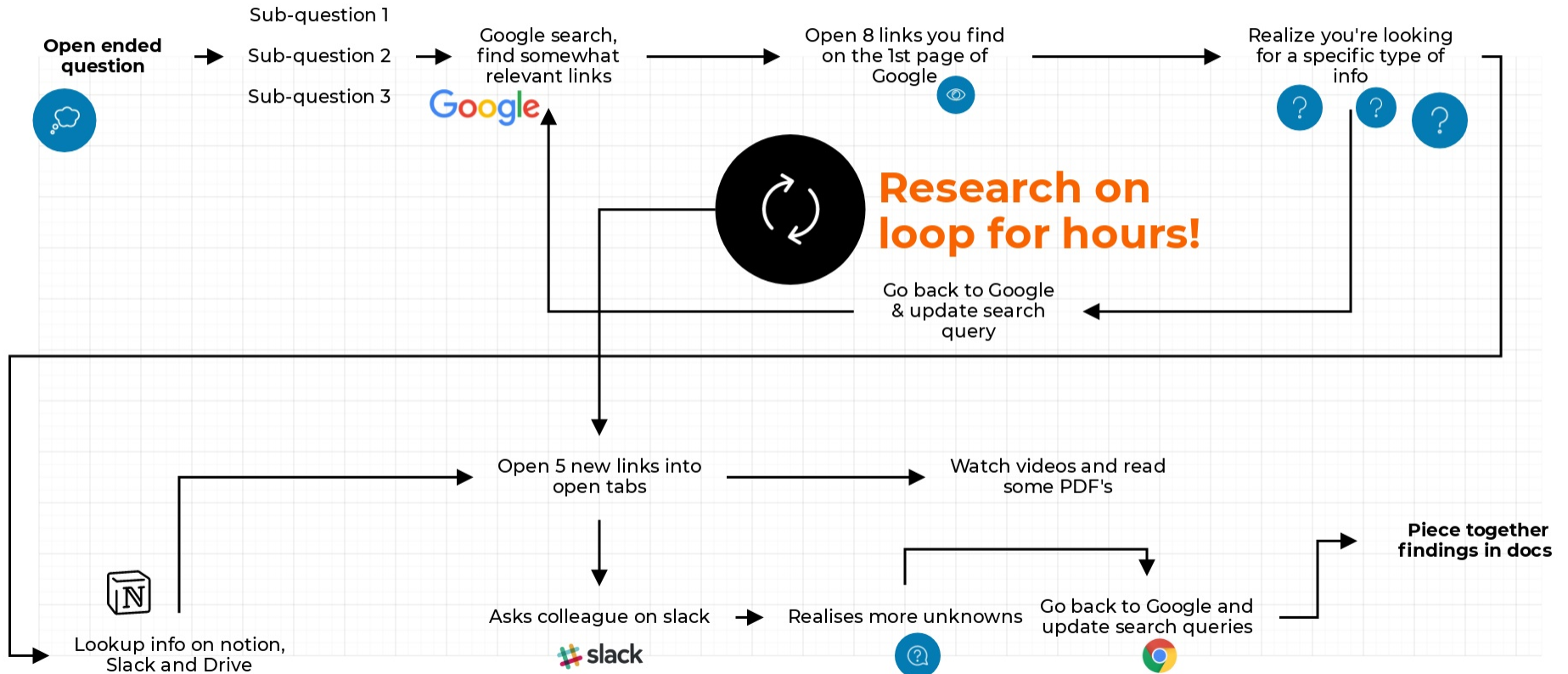
**“I have about ~100 open tabs across 4 tab groups of papers/posts/github repos I am supposed to look at, but new & more relevant ones come out before I can do so. Just a little bit out of control.”**



Andrej Karpathy

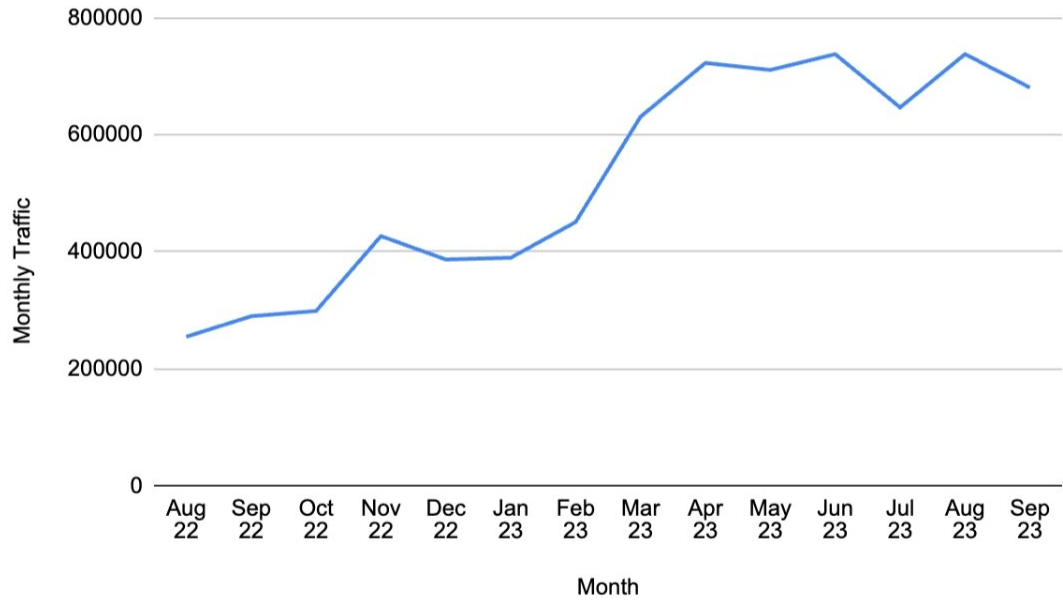


# We have all lived this workflow everyday!

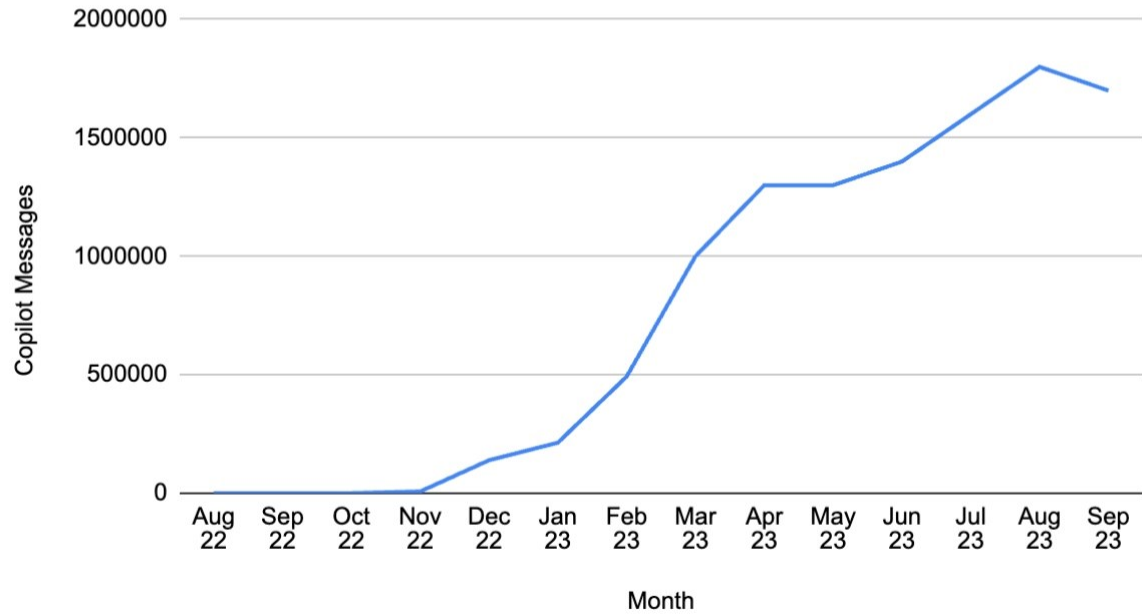


Category	Title	Description	Action
<p>118 Courses</p>	<p>118 Courses</p>	<p>118 Courses</p>	<p>118 Courses</p>
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<p>118 Courses</p>	<p>118 Courses</p>	<p>118 Courses</p>	<p>118 Courses</p>

## MOM Traffic



## MOM questions asked





SciSpace

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**Dr. Joyjit Chatterjee** (He/Him) • 1st

Forbes 30U30 Europe | AI Innovation 🚀 | Green Talents Awardee (Ger...

3mo • 🌐



This is really useful - for any researcher, either in industry or academia, it takes immense effort in identifying state-of-the-art and finding the best ways to solve a particular problem. True that ChatGPT and Bard et al. have made this process a little easier, but obviously we all have seen how unreliable they can be. That is where such domain-specific tools that have been customised and fine-tuned in their AI capabilities to the specific area (literature review in this case) come into action. As I tried this SciSpace tool, I was impressed with its ability to show the top "real" papers in a field, its TL;DR etc. I would recommend this tool, and hope that it gets even better with time and helps everyone in R&D spend the saved time on developing new, innovative solutions for contributing to a better world.

“We will fix the hallucination problem; may take a year or two.”  
– *Sam Altman, OpenAI CEO*

## **Google Gemini Eats The World – Gemini Smashes GPT-4 By 5X, The GPU-Poors**

Compute Resources That Make Everyone Look GPU-Poor

# Thanks!

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