

# MARKETING 195th

AI-Q

## in Pharma Marketing

JOIN FREE

LIVE WEBINAR

Date 24 Sep

Wednesday

Time 10:00PM

Egypt

Time 10:00PM

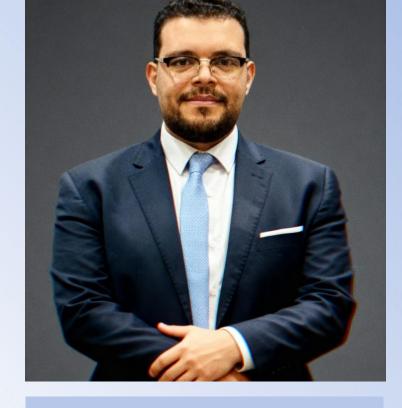
Time 11:00PM UAE Place Online Zoom 195<sup>th</sup> 1 Marketing Club 159th<sup>rth</sup> siness Club 44th Cairo Club



Dr.Mohamed Mohsen
Marketing Manager

CLUB FOUNDER, HOST DR. MAHMOUD BAHGAT LEGENDARY DIRECTOR





**Professional certificates** portfolio







## CONTENTS



- 02 Prompt Engineering
- 03 Al & Product Managers



- 05 Bias & Compliance
- 06 Future-Proofing





## **CONTENTS**

4 Quadrants of Al-Q

02 Useful Al Tools

03 ROI & Trends





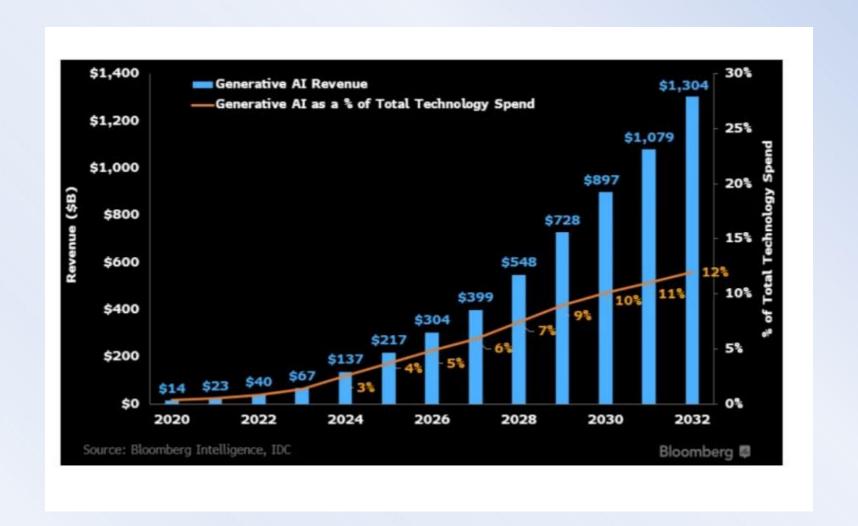
AI-Q in pharma marketing Updated Sep. 2025

## PART 01 LLM vs Agentic Al





## **Generative AI Revenues development**

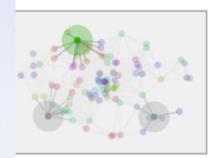


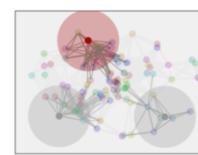




## Defining Large Language Models

Large Language Models are deep-learning systems trained on vast text corpora to predict the next word. They excel at generating fluent summaries, emails, and medical content, but operate reactively: one prompt yields one response without memory, planning, or external tool use.





b)  $\mathbf{X}_{i}(t-1)$  for  $v_{i} \in \mathcal{N}_{i}^{1}$ 

(c)  $\mathbf{X}_j(t-2)$  for  $v_j \in \mathcal{N}$ 

nation structure. (a) Node  $v_i$  has access to its ownformation of its 1-hop neighbors, but at time t - 2. (d) And the information of its 3-hop neighbors.







## Defining Agentic Al Systems

Agentic Al wraps an LLM core with memory, reasoning loops, and API tools to pursue multi-step goals autonomously. It can search PubMed, update CRM, and schedule MLR reviews, turning isolated prompts into persistent, auditable workflows that self-optimize over time while respecting regulatory guardrails.

- Learns patterns and relationships from large datasets.
- Training process is similar to how kids learn to recognize objects (through repeated examples).
- Uses supervised and unsupervised learning approaches.
- Breakthrough: ability to generate new, original content from learned data.





## LLM vs. Agentic Al: Head-to-Head

### Large Language Models

- Interaction: Single-turn, reactive responses.
- Strength: Fast, cheap, easy to prompt for ideation.
- Best For: Drafting content, brainstorming, summarizing.

## Agentic Al Systems

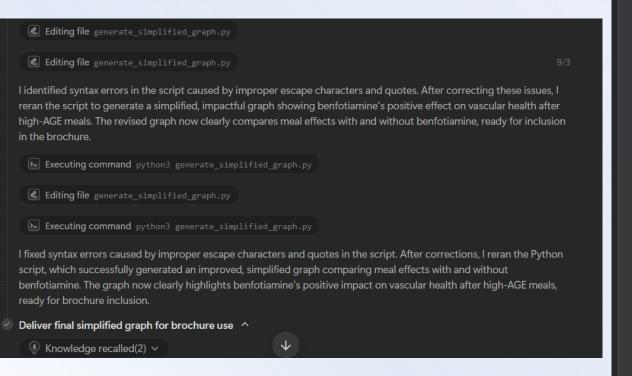
- Interaction: Multi-step, stateful orchestration.
- Strength: Autonomous, end-to-end process completion.
- Best For: Regulated processes, KOL mapping, launch sequencing.





#### Manus as Al agent

Manus, as an AI agent, learns from the context and sets customized rules based on the context of the user's prompt





Knowledge enables Manus to learn your preferences and task-specific best practices. Manus will automatically recall relevant knowledge when needed. Supports up to 20 entries.

#### ( Pending

Use wher

When extracting numerical data or performing calculations based on provided documents (e.g., PDFs, images of graphs)

#### Content

Always explicitly state the source (e.g., 'extracted from Figure X on page Y of the provided PDF', 'derived from the forest plot image') and the raw data points used for calculations or visualizations.





#### **Generative AI Development**

#### **Artificial Intelligence**

Al involves techniques that equip computers to emulate human behavior, enabling them to learn, make decisions, recognize patterns, and solve complex problems in a manner akin to human intelligence.

#### **Machine Learning**

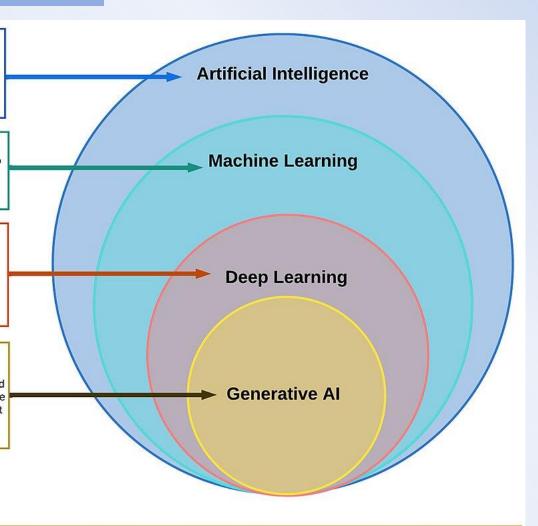
ML is a subset of AI, uses advanced algorithms to detect patterns in large data sets, allowing machines to learn and adapt. ML algorithms use supervised or unsupervised learning methods.

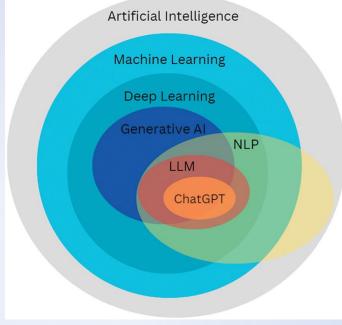
#### Deep Learning

DL is a subset of ML which uses neural networks for in-depth data processing and analytical tasks. DL leverages multiple layers of artificial neural networks to extract high-level features from raw input data, simulating the way human brains perceive and understand the world.

#### Generative Al

Generative AI is a subset of DL models that generates content like text, images, or code based on provided input. Trained on vast data sets, these models detect patterns and create outputs without explicit instruction, using a mix of supervised and unsupervised learning.





Unraveling AI Complexity - A Comparative View of AI, Machine Learning, Deep Learning, and Generative AI.

(Created by Dr. Lily Popova Zhuhadar, 07, 29, 2023)





## **MACHINE LEARNING**

#### **SUPERVISED**

Task Driven (Predict next value)



## UNSUPERVISED

Data Driven (Identify clusters)



Source: interactions.com

### REINFORCEMENT

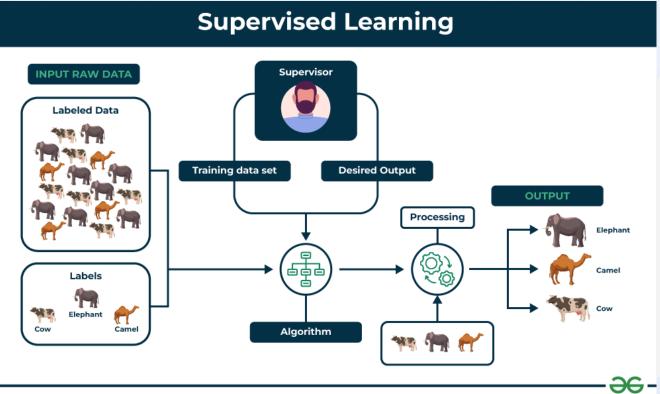
Learn from Mistakes and Corrections

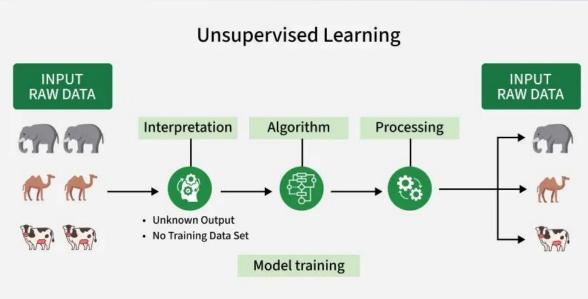






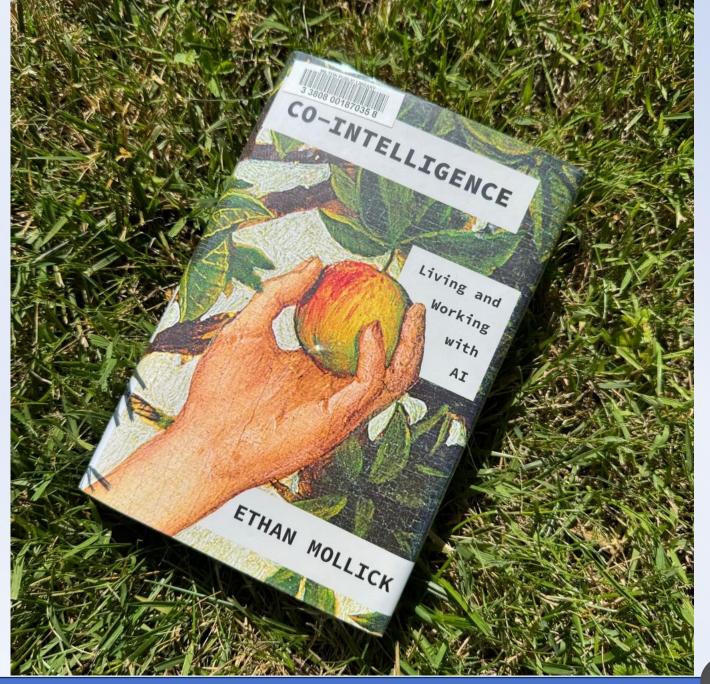
### **Supervised Vs. unsupervised Learning**















# PART 02 O2 Prompt Engineering







## The Art of Prompt Engineering

Precise prompts reduce hallucinations and enforce regulatory tone, turning raw model power into ready-to-use pharma marketing assets.



#### Role

Define the Al's persona (e.g., "You are a medical copywriter...").



#### Context

Provide background information and constraints.



#### Task

Clearly state the desired action (e.g., "Draft a patient brochure...").



#### Format

Specify the output structure (e.g., "Use headings and bullet points...").

## Zero-Shot vs. Few-Shot Prompting



#### Zero-Shot

Asks the model for an immediate answer with no prior examples.

Best for: Rapid brainstorming of congress hashtags or patient stories.



#### Few-Shot

Feeds the model 2-3 examples to anchor style and facts.

Best for: Branded messages where FDA consistency is critical.







# PART 03 Al & Product Managers





## Al Elevates Pharma PM Roles

Al transforms product management by acting as a cointelligent partner, not a replacement. It empowers PMs to work smarter, enabling faster decisions, deeper insights, and more strategic focus. The Al-Q framework emphasizes augmentation, freeing teams from dataheavy tasks to focus on high-value strategic work like KOL relationship-building and campaign innovation.







## The Human-Al Supervision Model



This model ensures AI outputs align with FDA/EMA standards, balancing efficiency with essential human oversight.







## **PART 04** Mindset & Strategy

**Dr. Mohamed Mohsen** 





## Shift to Co-Intelligence Thinking

#### **Old Mindset**

Al as a simple tool

Used for isolated, tactical tasks.

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### **New Mindset**

Al as a collaborative partner

Involved in every stage of the workflow to uncover novel solutions.





## Augment, Don't Automate



Al Handles

Data-intensive, repetitive tasks





Humans Focus On

Strategic, creative, relationship-based work

This symbiotic relationship enhances productivity without replacing human expertise, allowing PMs to invest more time in building KOL relationships and navigating regulatory complexities.





## Choose Your Collaboration Model



### The Centaur Model

For tasks with clear boundaries. Divide labor: Al handles data, humans handle judgment.

Example: Adverse event detection (Al flags, human reviews).



## The Cyborg Model

For integrated creative processes. Blend AI seamlessly into your thinking.

Example: Co-writing patient narratives with Al suggestions.







## **PART 05 Bias & Compliance**





## Solving Al Alignment Issues

All outputs must align with patient interests and pharma's ethical standards. Misalignment can lead to misleading messaging or unethical targeting. PMs must ensure Algenerated content supports therapeutic goals, respects vulnerable populations, and adheres to industry regulations to maintain trust and credibility.







## Mitigating Data Bias

Al models trained on internet data can perpetuate societal biases. A diverse human team is essential to identify and correct biased content, ensuring equitable messaging.











Biased Data In

**Biased Content Out** 

Human Review & Refine





## Establishing Robust Al Governance

Create cross-functional frameworks involving legal, medical, and marketing to define guidelines for responsible AI use.



#### Legal & Compliance

Define acceptable use and ensure regulatory adherence.



#### **Medical Affairs**

Validate clinical accuracy and scientific integrity.



#### Marketing

Ensure brand alignment and campaign effectiveness.



#### Risk Management

Mitigate bias, privacy issues, and reputational risk.







## **PART 06** Future-Proofing







## Assume Today's Al is the Worst

Al capabilities are improving exponentially. The tools we use today are the least powerful we'll ever work with.

Pharma teams must foster a culture of continuous learning and adaptation to stay ahead. Embracing Al now ensures readiness for future advancements and a sustained competitive advantage.



## Develop New Forms of Expertise



Al as Coach
Provides instant feedback to accelerate skill
development.



The New Expert

Masters who excel at collaborating with Al.



Al as Tutor

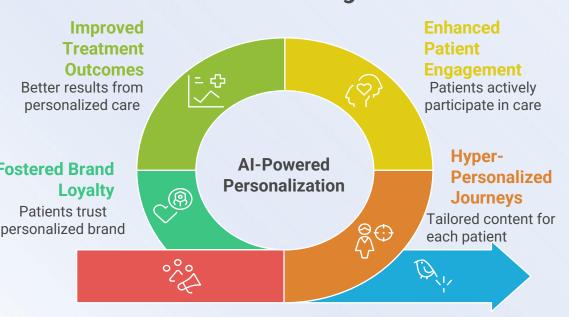
Acts as a personal guide for continuous learning.





## Aim for Positive Transformation

#### **AI-Driven Pharma Marketing Transformation**



## Mass Communication

Inefficient, impersonal healthcare journeys

## **Eucatastrophe Achieved**

Positive disruption reshapes pharma







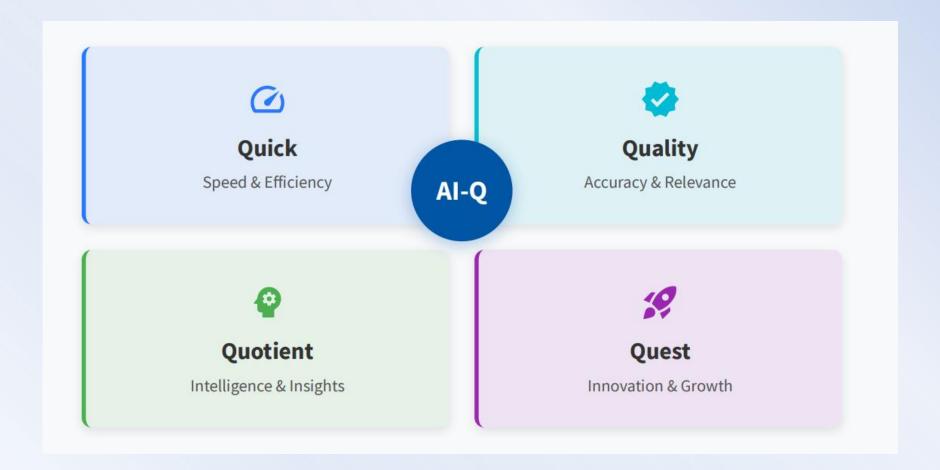


## **PART 07** 4 Quadrants of Al-Q





## 4 Quadrants of Al-Q









## Quick: Speed Up Execution



Accelerated Content Creation
Draft brochures, flyers, and training
materials in minutes.



Rapid Trend Analysis

Analyze prescription data and market trends instantly.



Faster Campaign Prep
Reduce allergy campaign preparation
time significantly.





## Quality: Enhance Communication

#### **AI-Driven Content Transformation**



**Data Simplification** 

Al transforms data into understandable formats

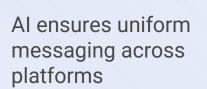


**Content Creation** 

Al generates patientfriendly materials



Messaging Consistency











## **Quotient: Smarter Decisions**



### **Doctor Segmentation**

Identify prescriber clusters for smarter field visits.



### **KOL Mapping**

Strategically identify and engage key opinion leaders.



### **Predictive Analytics**

Forecast market dynamics for datadriven launch planning.

in mohamed-mohsen-065896105/









to cope up with the current trends in Al and how to integrate with our work





in mohamed-mohsen-065896105/



# PART 08 Useful Al Tools





# Prompt generation and prompt engineering





### 1-Prompt generator Al



### generateprompt.ai/en/



Home

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Website ~

Features >

Al Prompt Engineering ~

#1 Free Al Prompt Generator

The Most Advanced Free AI Prompt Generator | Best Free ChatGPT Prompts Generator | Ultimate Free Prompt Engineering Tool



### **Free AI Prompt Generator.**

Generate precise and professional AI Prompts for ChatGPT, Claude, Gemini, and more. Enhance output quality and boost your productivity with the best results - no registration required and completely free.



#### Al Prompt Generator

Transform your ideas into professional prompts



#### **Prompt Checking**

Verify your prompt quality



#### **Image Prompts**

Create stunning AI images



#### **VEO3 Video Prompts**

Create stunning AI videos



#### Al Text Detector

Detect AI-generated text



#### Ai Humanizer

Humanize Al Text Easily with Our Free Al Humanizer Tool



#### Image to Prompt

Convert images to AI prompts



#### Image to Text

Extract text from images







Example of Prompt generated from Prompt generator AI <a href="https://generateprompt.ai/">https://generateprompt.ai/</a> Website and output created by <a href="https://www.pi.inc/">https://www.pi.inc/</a>

A professional medical representative engaged in a conversation with a doctor inside a modern, well-lit office setting. The representative is dressed in smart business attire, holding a tablet or presentation material, gesturing confidently as they discuss medical products or solutions. The doctor, seated at a sleek desk, listens attentively, dressed in a white lab coat with a stethoscope around their neck, displaying a focused and attentive expression. The office environment features medical charts or posters on the walls, a computer monitor, and professional decor, creating a realistic and authentic atmosphere. The scene is captured with a cinematic, highresolution style, emphasizing natural lighting, subtle depth of field to focus on the interaction, and warm tones to evoke professionalism and trust. The framing is dynamic, with a slight angle to add depth and intensity, highlighting the engaged expressions and body language of both individuals. The overall mood is serious yet approachable, conveying effective communication and professionalism in a healthcare setting.







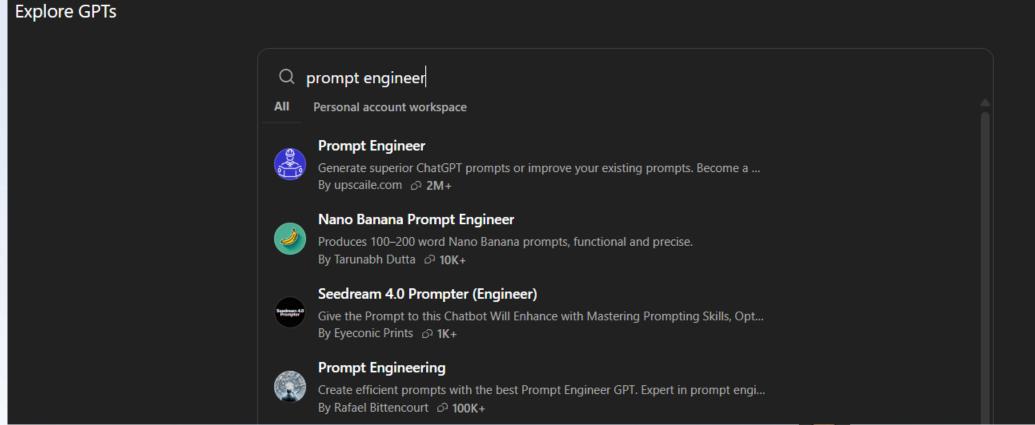
### **2-Chatgpt GPTs**





### chatgpt.com/gpts

ChatGPT-ready custom GPTs are pretrained to perform specific tasks that you can use to perform your tasks more accurately, e.g., writing a prompt specific to a certain use, for example, for <a href="mailto:nano banana or seedream">nano banana or seedream</a> to generate a professional image from these websites.







# Literature review, clinical trials search, and summary



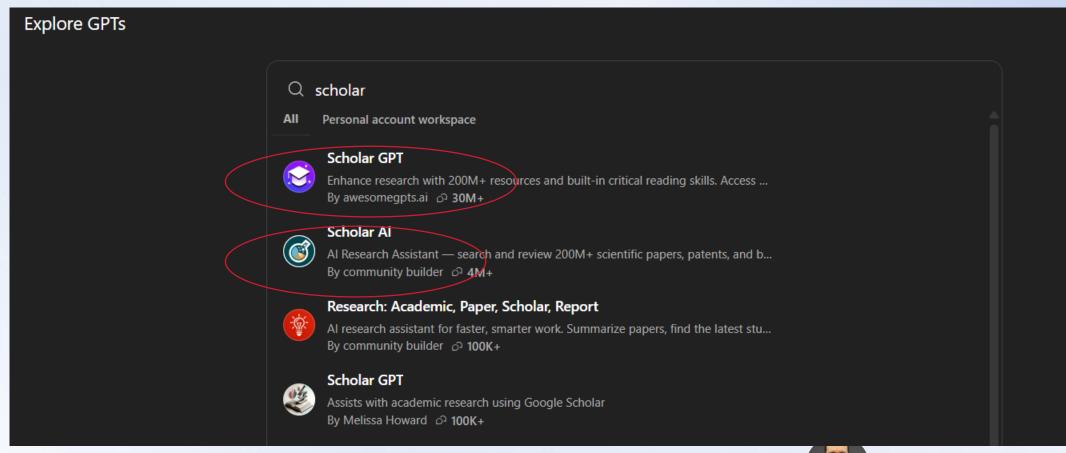


### 1- ChatGPT (GPTs)





To write a professional scientific content or summarize a scientific text, you can use Scholar GPTs. Write scholar in the search box and use the most frequently used custom GPTs









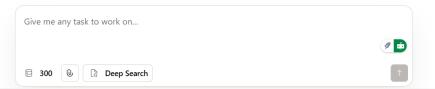




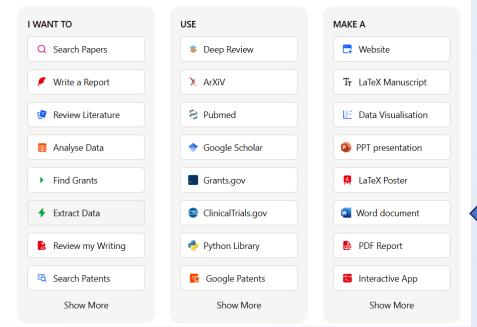
Al Agent Launched

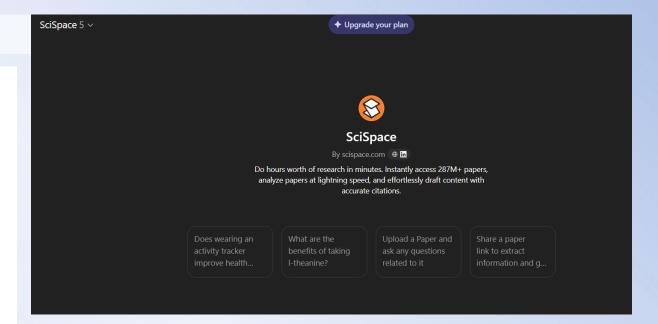
Write a research task or choose one below and SciSpace Agent will use the best

Al Models, Tools and Data to complete it for you.



Build your task





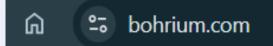
The most powerful tool is the custom AI agent to use it.
You can use it as a literature review tool, write a
comprehensive review from credible scientific sources, and
export as a usable file and use it in data visualizations

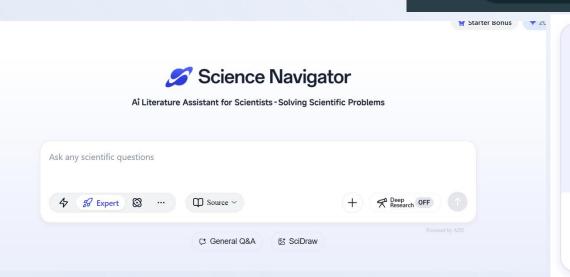
Specify the task you want to perform

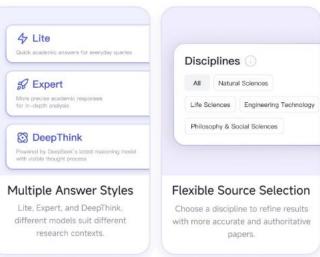


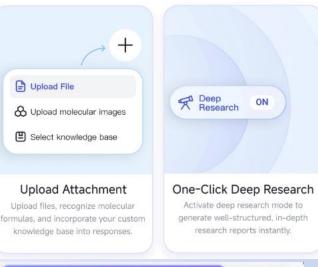


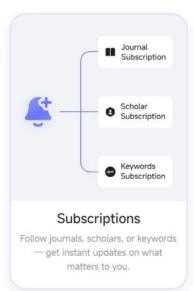
### 3- Bhorium science navigator

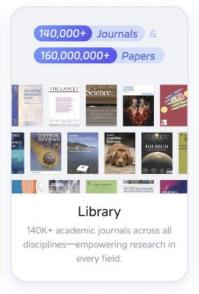


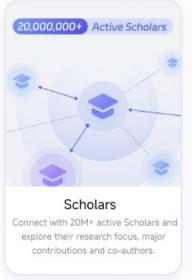




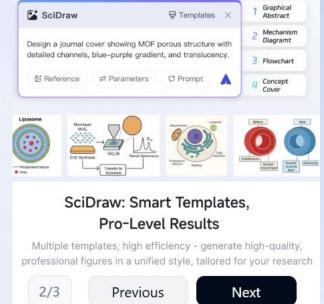
















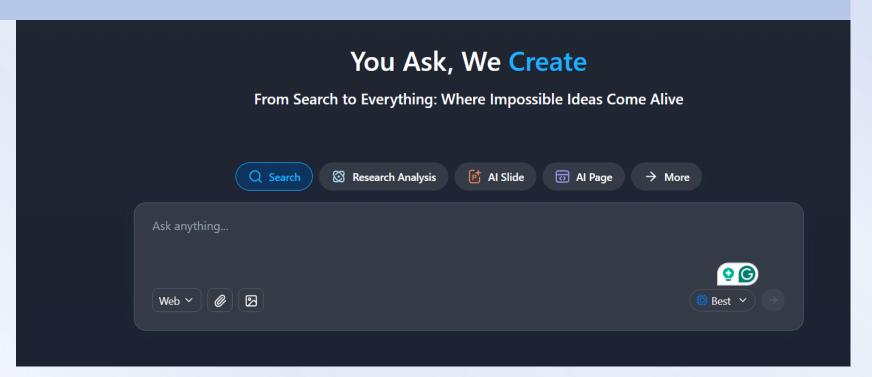
### 3- Felo Al



The magic of science and academia AI agent can make a comprehensive report on a topic with a simple prompt, using the most credible and relevant sources. Not just that, but it can make a high-quality presentation to use.

#### Find the example we did in the lecture:-

https://felo.ai/search/eXECKrLorCo33HnHtNbRUj?invite=erQ1XzrVQp0qL https://felo.ai/slides/JDFET2gPgSPJjbJCcxc6GH?modelType=PRO&invite=erQ1XzrVQp0qL







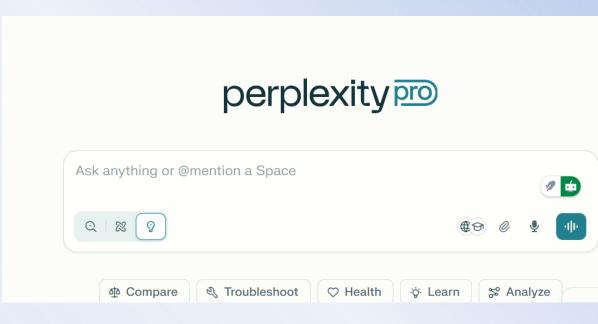
### **4- Perplexity scholar**

https://www.perplexity.ai/search/make-multivitamins-market-anal-55dh9V4DSHmFTwzj6BtTbg#0

#### **Perplexity – Key Features & Benefits**

- •Al Query Understanding interprets complex questions with context
- •Real-Time Web Search delivers fresh, reliable data
- •Summarization condenses info into clear insights
- •Source Transparency cites original sources
- •Conversational Interaction remembers context for follow-ups
- •Model Choice select AI models (Pro feature)
- •Labs Feature test advanced tools & early features
- •Extra Tools file uploads, image generation, content creation
- •The following example was done during the lecture using Perplexity Labs.

https://www.perplexity.ai/search/make-multivitamins-market-anal-55dh9V4DSHmFTwzj6BtTbg#0





# Al Visualizations and Mind Maps

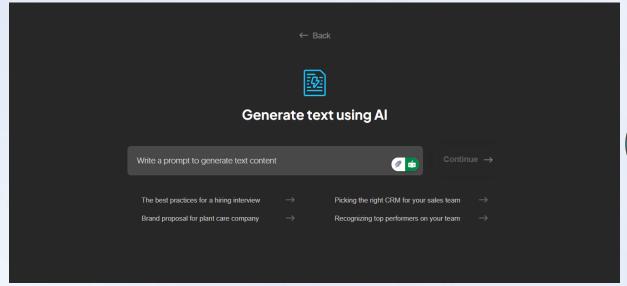




### 1- Napkin Al



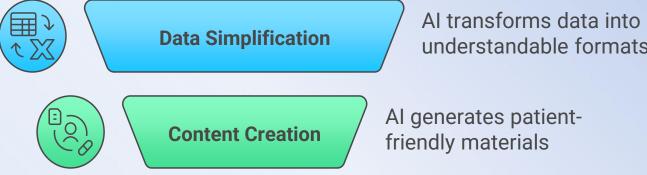
Use it to create attractive visuals from your text to use in a presentation

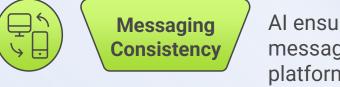


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### **Example used in the lecture:**

**Al-Driven Content Transformation** 





Al ensures uniform messaging across platforms





### 2- GitMind for diagrams and mind maps



## Making Ideas Count

About Us



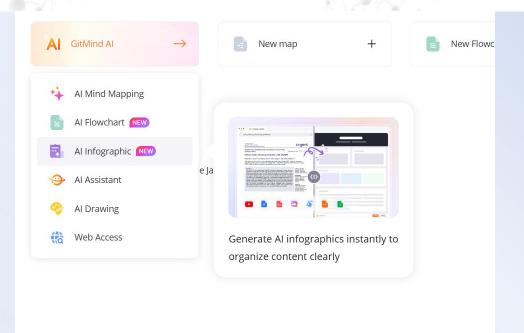
https://drive.google.com/file/d/19Gm EBh5SpR-

ZwASMZXZZXiFHEaYEdaDc/view?usp=s haring



**Al-powered** free collaborative mind mapping software for brainstorming and idea  $c\rho$  creation, stimulating the flow of ideas and allowing wisdom to spring forth organically

Try GitMind Al Now





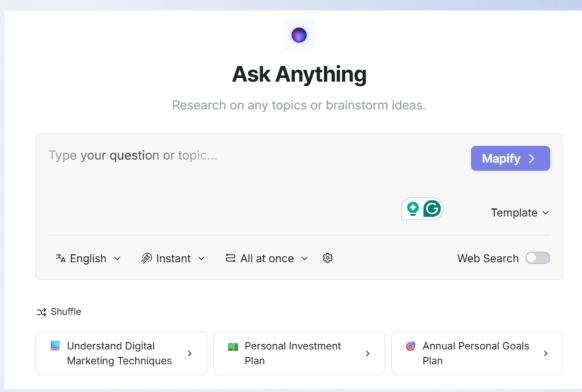


### **3- Mapify For Mind Maps**



You can use it for the same uses as Gitmind





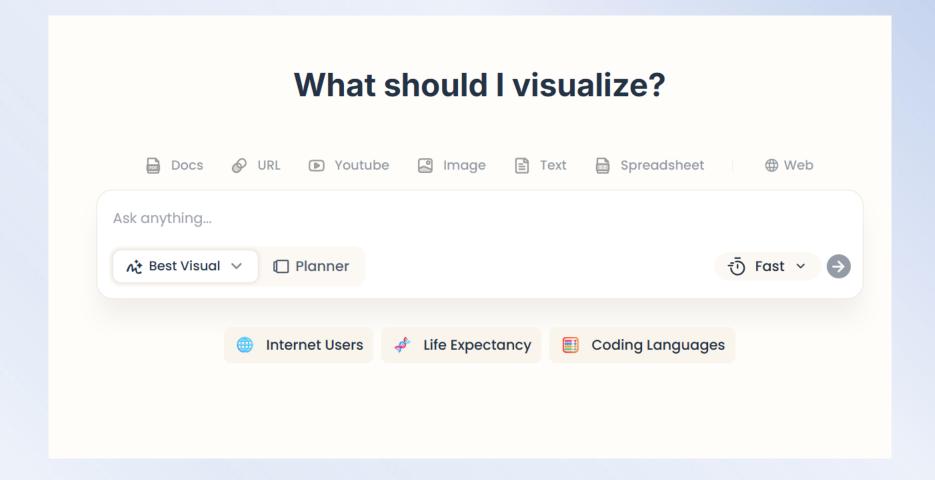








### mylens.ai/







## Al presentations





### 1- KIMI AI presentation Agent

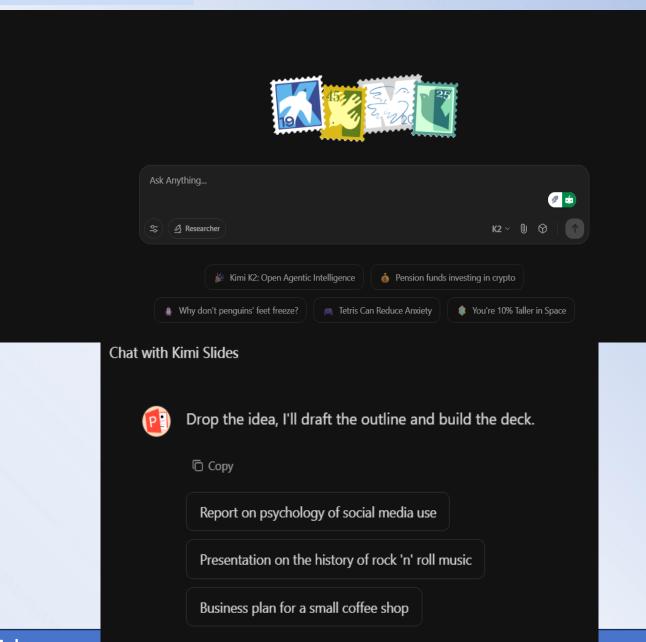


KIMI can perform many tasks, including presentations

https://drive.google.com/file/d/1JgxpqsSmHxO NSZkcwKLceJOg7qzO87/view?usp=sharing

Example of the multivitamins market performed during the lecture:

https://docs.google.com/presentation/d/1g5J11g0V4vdAerxo2cT4XtZyQwazJSof/edit?usp=sharing&ouid=100069317247850160393&rtpof=true&sd=true

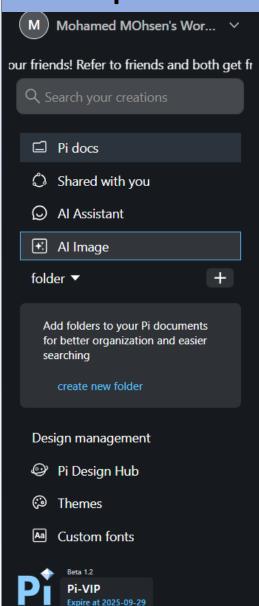


MA



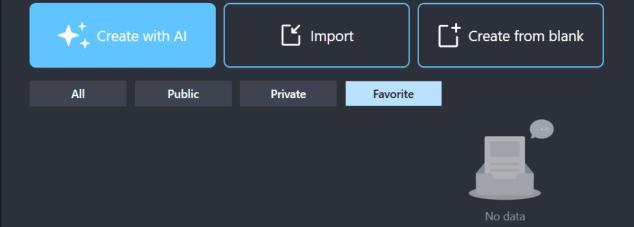
### 2- PI AI presentations





Professional eye-catching presentations and image generation using Al **Example of Multivitamins:** 

https://www.pi.inc/docs/361748646770140?share\_token=GGH6ZBT4GLCIQ





View / Desc

# Agentic Al





### 1- KIMI AI Agents

The future of open source AI agents, I invite you to learn more about it <a href="https://moonshotai.github.io/Kimi-K2/">https://moonshotai.github.io/Kimi-K2/</a>



### Kimi K2: Open Agentic Intelligence

Update(0905): We have an updated weight that enhances agentic coding and supports 256K context, see here

**Dr. Mohamed Mohsen** 

Kimi K2 is our latest Mixture-of-Experts model with 32 billion activated parameters and 1 trillion total parameters. It achieves state-of-the-art performance in frontier knowledge, math, and coding among non-thinking models. But it goes further — meticulously optimized for agentic tasks, Kimi K2 does not just answer; it acts.

And now, it is within your reach. Today, we are open-sourcing:





mohamed-mohsen-065896105/

### 2- Manus







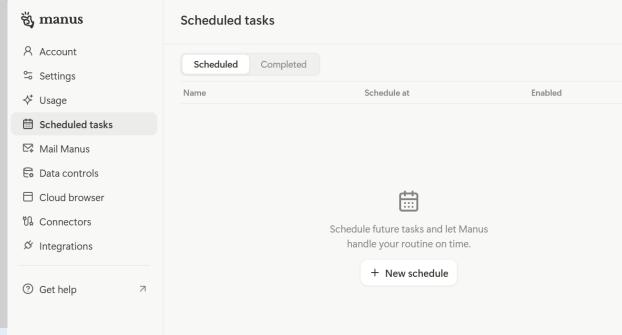
The most capable Agentic AI model, you can deep dive, generate insights, perform analytics, and more

### Example of performing insights based on the data given in a metaanalysis:

- 3. Calculation of Relative Risk (RR) and Relative Risk Reduction (RRR):
- Now, let's look at how RR and RRR are calculated from these event rates.
- •Relative Risk (RR): This compares the probability of an event happening in the experimental group to the probability of it happening in the control group.
  - Formula: RR = (Event Rate in Experimental Group) / (Event Rate in Control Group)
  - Calculation: 0.3449 / 0.2286 = 1.5089 ≈ **1.51**
  - Interpretation: This means the event (early suspension of medication) was about 1.5 times more likely to happen in the group receiving the combination therapy compared to the group receiving diclofenac alone.
- •Relative Risk Reduction (RRR): This tells us how much the treatment reduced the risk of a particular outcome. However, in this case, since the risk *increased* (which is a good thing, as it means faster relief), the value is negative.
  - Formula: RRR = 1 RR
  - Calculation: 1 1.5089 = -0.5089 ≈ -51%
  - Interpretation: The negative sign indicates an increase in the event rate, not a reduction. So, the combination therapy led to a 51% relative increase in the rate of early medication suspension due to symptom relief. This confirms the treatment's effectiveness in shortening the duration of pain.

#### **Explore more about Manus:**

https://manus.im/?index=1





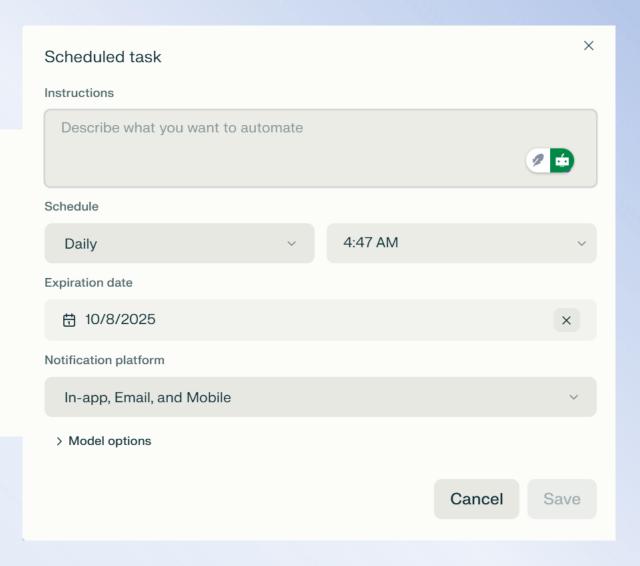


### 3- Perplexity Labs & Tasks

Explore more about tasks & labs in Perplexity, the most capable features, as you can make a complete report or assign a task with due dates or repetition to deliver on time

### perplexity









in mohamed-mohsen-065896105/

# Image generation





### 1- Seedream





deevid.ai/

### Seedream 4.0 Al Image Generator/Editor

**Seedream 4.0** is ByteDance's just released image generator/editor, regarded as an alternative for Nano Banana—Try it for Free on DeeVid.









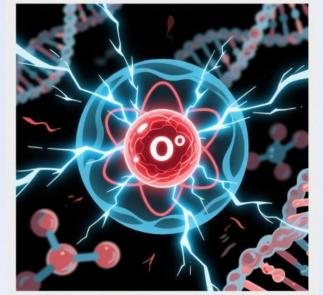
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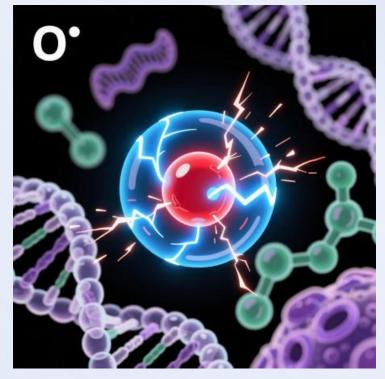
aistudio.google.com,

















# Learning and training





### 1- Notebook LM







notebooklm.google.com

The most powerful tool for studying and deep diving in your sources, just upload your materials and enjoy summaries in adios videos, mind maps, and more

**Example performed during the lecture:** 

https://notebooklm.google.com/notebook/6d99e153-ff02-4f38-b082-7da80ec7badc



Settings

:::

All

My notebooks

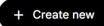
Featured notebooks

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#### Featured notebooks









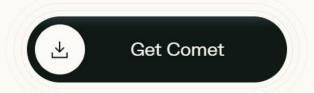


### **Al Browser**



# A personal AI assistant

A new browser from Perplexity



**Dr. Mohamed Mohsen** 





#### **Tarteel**





- •Al-powered recitation feedback instantly detects mistakes, skips, or mispronunciations while reading.
- •Al-assisted memorization tools hide text, test from memory, and reinforce retention intelligently.
- •Smart Al search & voice lookup find any verse instantly by reciting or typing part of it.
- •Al-driven progress tracking set goals, monitor consistency, and review mistakes with insights.
- •Accessible & family-friendly ad-free free tier, with premium and family plans for advanced AI features.









### **Other Productivity Tools**

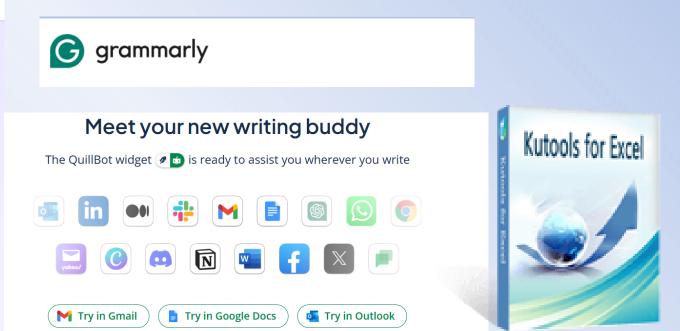


# Your DeepSeek & ChatGPT Al Assistant Anywhere

Chat, write, read, summarize, and create effortlessly with Sider, powered by ChatGPT and other leading Al models.

Easily access 
GPT-5, 
DeepSeek, 
Claude 4,

→ Gemini 2.5, **Grok 4** and more Al models in one place with Sider!







## Your 30-Day Al Pilot Roadmap



Select Use Cases
Choose one content type, one insight, one workflow.

2

Measure & Iterate

Track time saved, errors reduced,

3

Scale & Expand
Apply learnings to more brands
and complex workflows.



Govern & Review
Establish quarterly reviews for prompts, tools, and compliance.





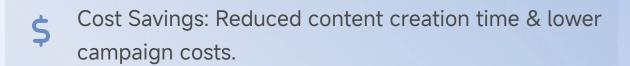


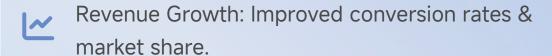




### ROI and Future Outlook

Al delivers measurable value across key business metrics. It reduces content creation time, lowers campaign costs, improves conversion rates, and accelerates deployment, positioning it as a strategic investment for long-term marketing success.





Efficiency Gains: efficient workflows & faster deployment.

Competitive Advantage: Market innovation leadership.





### **Next Steps**

**Omar Maher** 

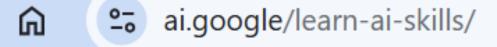
Abdelrahman Sleem
Al & Digital marketing topics

Train Social Media Algorithm
See the Al content to train the Algorithm to suggest similar content





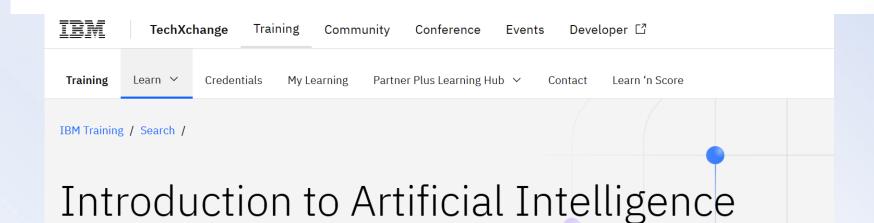
### **Courses**



AI SKILLS

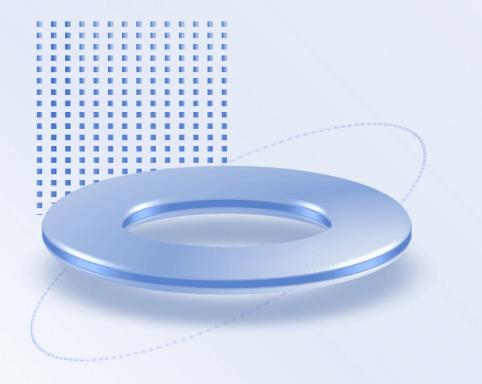
### Learn essential AI skills

We're building AI skills programs, trainings, and tools to address the specific needs of workers everywhere. Discover Google's courses and resources designed to help you succeed in an AI-driven world.









# THANKS





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