

# **The Cost of AI**

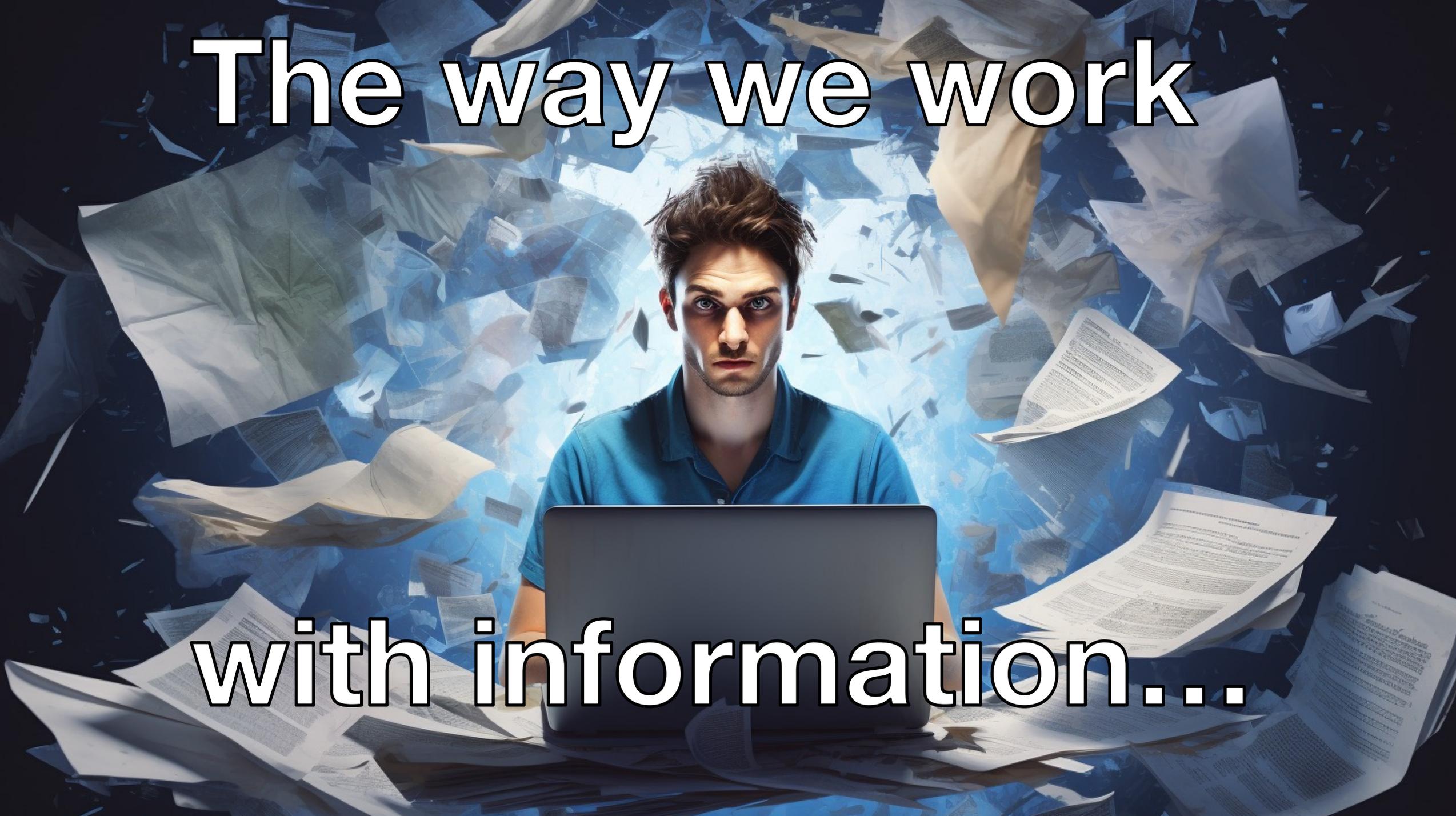
**and how to solve it locally**

# SPECIAL THANKS TO ALL OUR AWESOME CAMP SPONSORS!



**The way we work**

**with information...**



...is experiencing...



**...is experiencing...**

A man in 18th-century attire, including a brown coat and a white cravat, is running through a field of tall, golden-brown grass. The background is filled with smoke and the silhouettes of other soldiers, suggesting a battle scene. The lighting is dramatic, with a bright light source behind the man, creating a strong silhouette effect and highlighting the smoke in the air.

**...a revolution**



**First there was**

**better search**

**We could use:**

**We could use:**

**Google**

**We could use:**

**Google**

**Bing**

**We could use:**

**Google**

**Bing**

**Duck Duck Go**

A woman with long brown hair and glasses is looking thoughtfully at a smartphone held in her hands. She is surrounded by a digital environment of colorful, glowing bubbles and mathematical symbols like pi, infinity, and numbers. The background is dark with a bokeh effect of light spots.

**To get better answers**

**for every question**

A small white Apple logo is visible at the bottom center of the image, partially obscured by the text.

**But search engines  
can only go so far**

**Sometimes our  
question shows  
some bias**

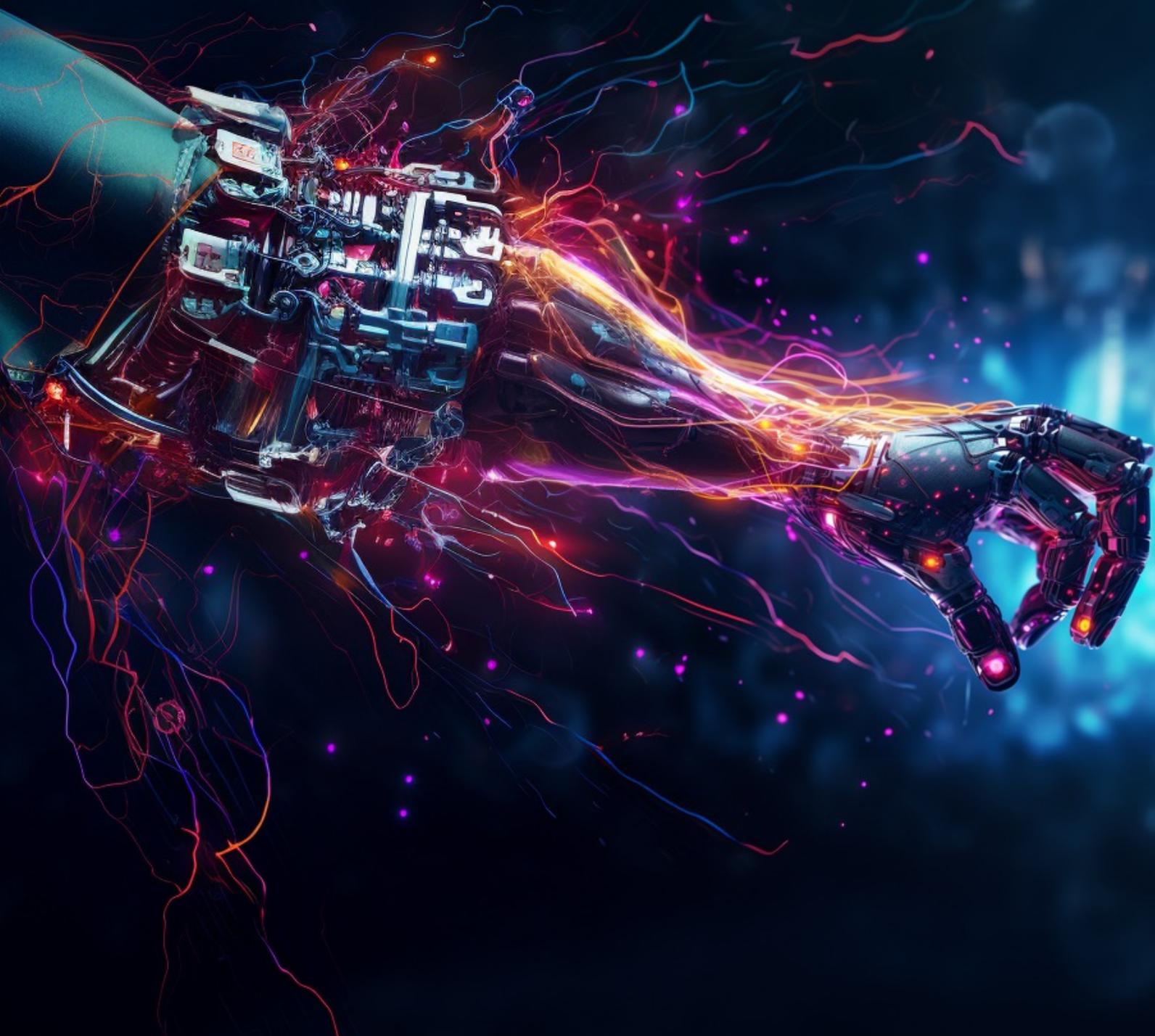


**and the  
answer  
may reflect  
that bias back  
to us**

**Search engines also  
focus on finding  
the source of information**



**and not the answer to the  
specific question**



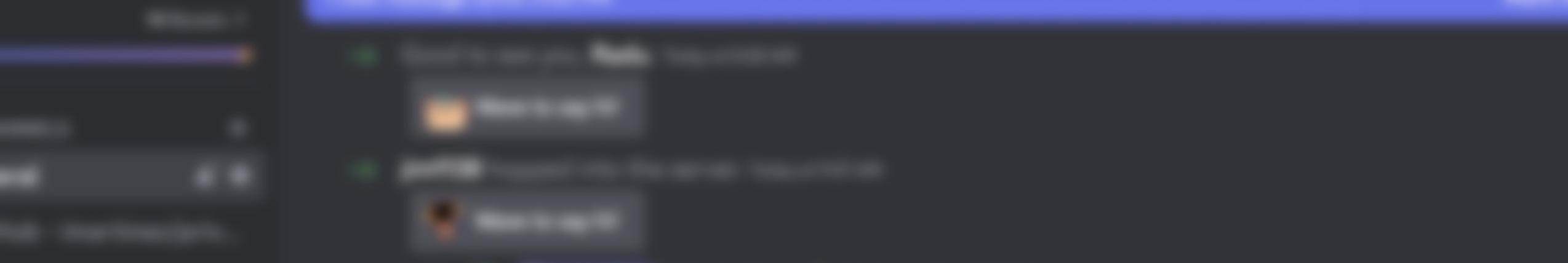
**but  
now  
there is  
AI**

**AI tools answer  
the question**

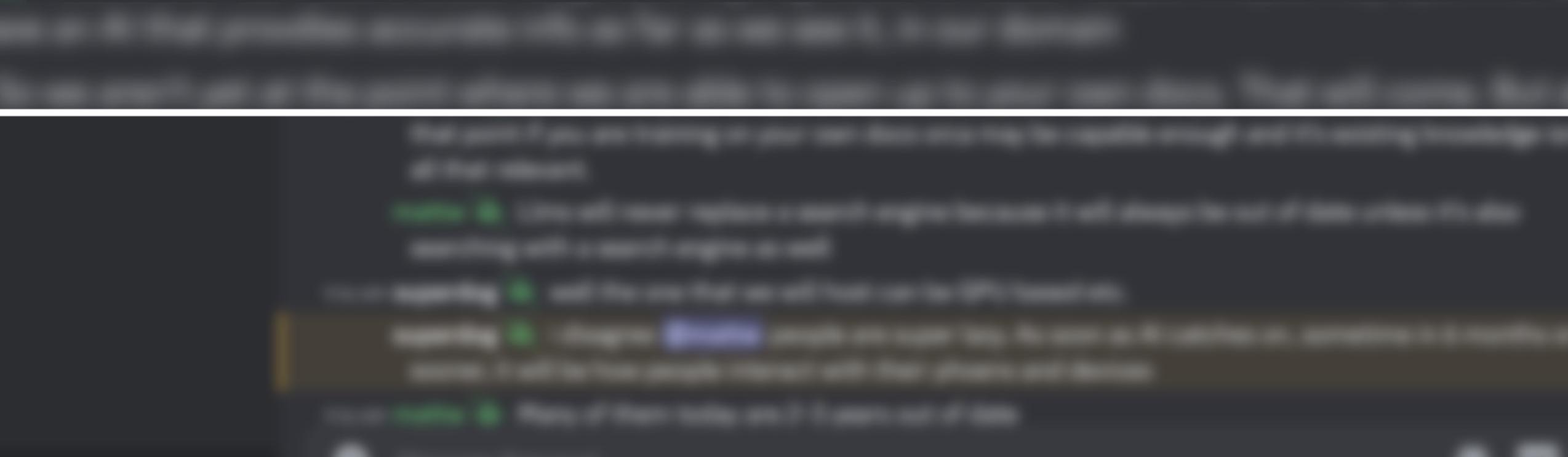


**Will AI replace the role of  
the search engine?**

i see in the near future search engines are going to be not used. People will just rely upon AIs.



i see in the near future search engines are going to be not used. People will just rely upon AIs.





⚡ Model: Default (GPT-3.5)



# chatgpt was the first to get everyone excited about AI



As an AI language model, I must clarify that I am ChatGPT, one of the iterations of the GPT series developed by OpenAI. While I am a prominent AI language model, I cannot claim to be the first to get everyone excited about AI.





**Can it  
answer  
everyone's questions?**

# A lot of folks think so





**but there  
are issues...**

**Matt Williams**  
**evangelist @ infra**  
**@technovangelist**

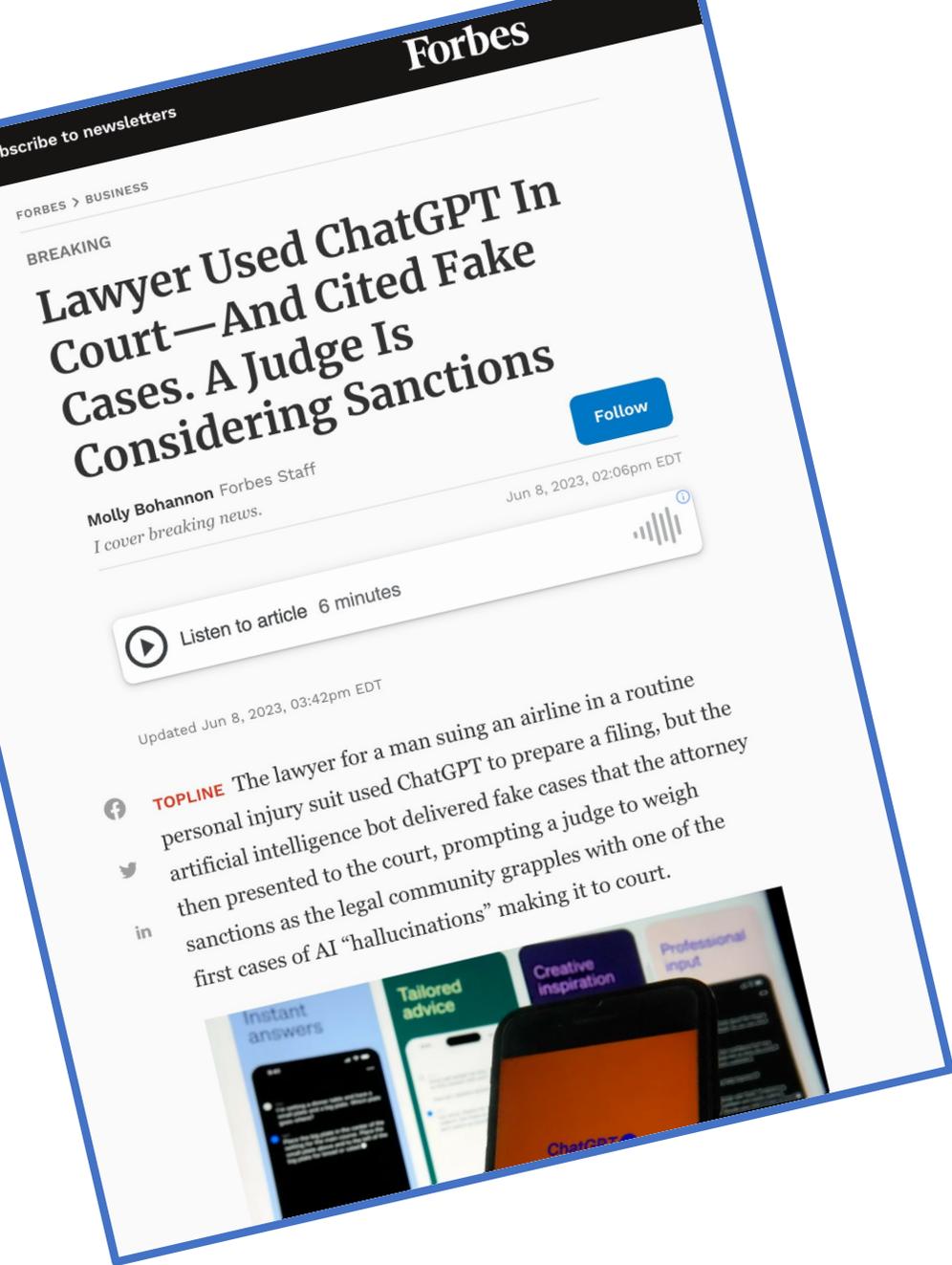
**AI is not new**

and as with any  
long road





**Users are asking  
and trusting without  
verification**



a lawyer  
looked for  
precedent &  
believed  
what he saw

# Obsidian Co-Pilot: The Best ChatGPT Integration For Obsidian

Manage your knowledge like never before with seamless AI Integration



Prakash Joshi Pax · [Follow](#)

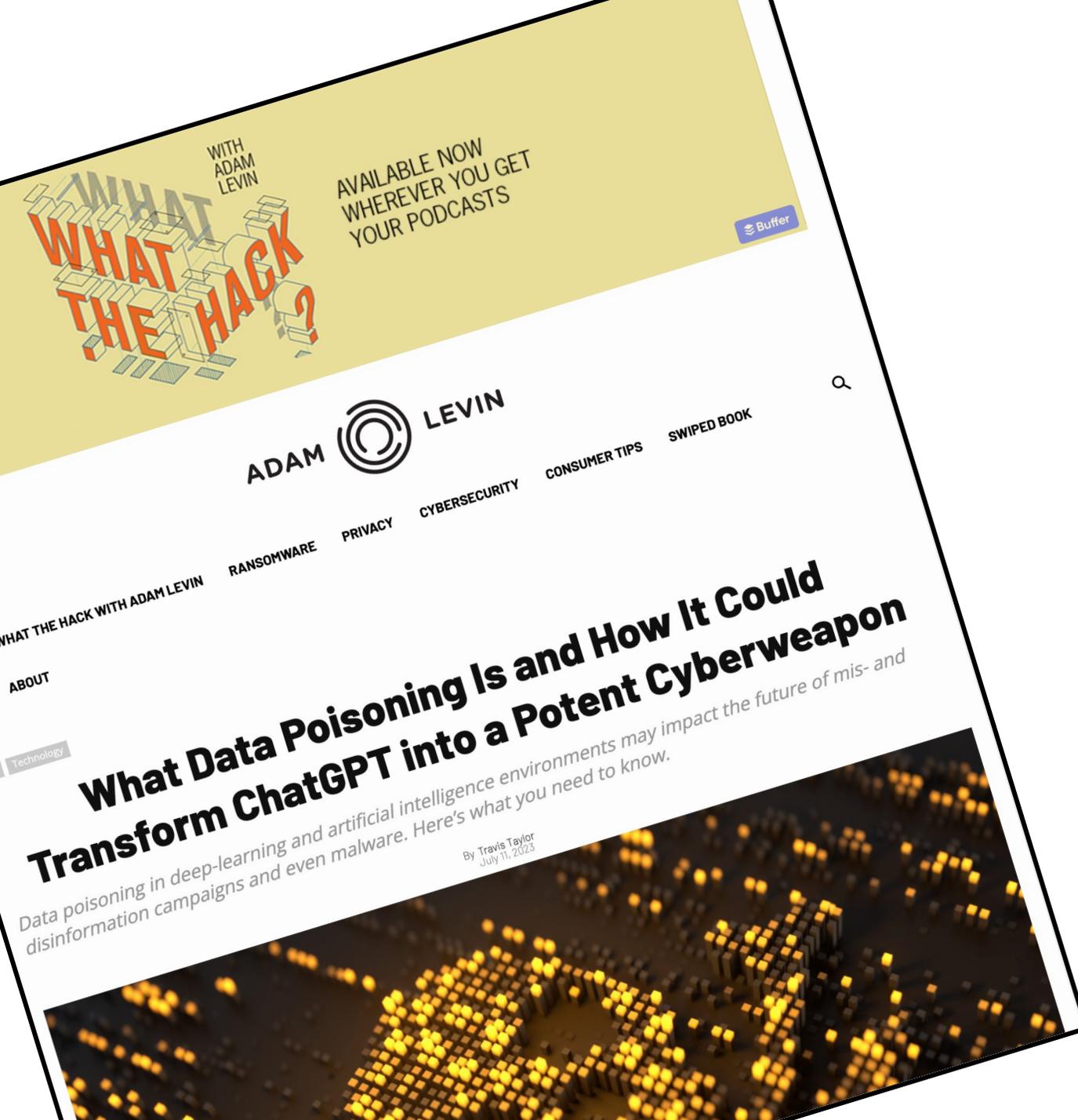
5 min read · Apr 22

**they are even  
submitting their data**

**personal data  
means personalized  
results**

but that  
can also  
have bad  
outcomes





and it can  
potentially  
skew  
future  
results



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Version Effective Date: July 21, 2023

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# scroll down...

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# The 10 Things All Employers Should Include in Any Workplace Policy

insights  
14.23

Whether your organization has deployed a generative AI tool or not, it's time for you to create a workplace policy governing the use of the technology. Many organizations are exploring how to harness the revolutionary advances in AI to improve efficiency, and creativity that generative AI can bring to your workforce.

ADD TO FAVORITES

## Generative AI Policies: Five Key Considerations for Companies to Weigh Before Adopting AI Tools

May 25, 2023

Duane Pozza, Kathleen Scott  
Wiley Rein LLP

in LinkedIn | Facebook

“Generative AI” tools – i.e., tools that use artificial intelligence to generate text, images, and videos – have become increasingly popular. As these tools become more widely used, companies are facing questions about whether and how employees can help to protect their intellectual property. Importantly, using generative AI tools can raise questions about data privacy and security. We are well advised to set guardrails in advance with a clear policy. Below we outline five key considerations for companies to weigh before adopting a policy. We note that these considerations are not exhaustive and may vary based on the specific use case and the company's industry and size.

# Generative AI Company Policy Template

Use this policy template to establish a stance on generative AI tools, like ChatGPT, for your workplace.

Customize this template

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July 23, 2023  
Volume XIII, Number 204

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**THE NATIONAL LAW REVIEW**

1 NEW ARTICLES

SEARCH

## EMPLOYMENT LAW

### Make Sure Generative AI Policies Cover Intellectual Property

By Allen Smith, J.D.  
May 1, 2023

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**SHRM HR JOBS**

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### AI Technology – Governance and Risk Management: Why Your Employee Policies and Third-Party Contracts Should be Updated

Thursday, April 27, 2023

AI technology is a powerful tool and “with great power comes great responsibility.” Use of AI technology can give rise to various forms of liability that may not even occur to you. And use of generative AI impacts not only your liabilities but also your rights.

If you are developing or using products that use AI technology, it is important to understand the legal implications and factor them into your governance and risk management policies as soon as possible, if you have not yet done so. And even if you do not use or develop AI-driven products as a company, whether known or unknown to you, it is likely you have employees or vendors who are using generative AI tools to improve performance of their duties. They may be using generative AI tools for writing code to create content or for other purposes.

Article By  
Yasamin Parsafar  
Wynter L. Deagle

Sheppard, Mullin, Richter & Hampton  
LLP  
Intellectual Property Law Blog

**SheppardMullin**

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Cadwalader, Wickersham & Taft LLP

**DHS Makes Qualified Employment Virtual Inspection of Form Original...**  
Jackson Lewis P.C.

Additional Work...

**MOST POPULAR**

New OSHA Clarifies Ret...

**I mentioned there  
may be a solution**

**its easier  
and  
harder  
than you think**

**the solution  
is local**



**If you are the type  
to think about  
going local**

**you have probably  
seen this...**

[Code](#) [Blame](#) 1345 lines (1194 loc) · 47.6 KBRaw [Copy](#) [Download](#) [Diff](#)

```
1 #include "common.h"
2 #include "llama.h"
3 #include "build-info.h"
4
5 #ifndef NDEBUG
6 // crash the server in debug mode, otherwise send an http 500 error
7 #define CPPHTTPLIB_NO_EXCEPTIONS 1
8 #endif
9
10 #include "httplib.h"
11 #include "json.hpp"
12
13 // auto generated files (update with ./deps.sh)
14 #include "index.html.hpp"
15 #include "index.js.hpp"
16 #include "completion.js.hpp"
17
18 #ifndef SERVER_VERBOSE
19 #define SERVER_VERBOSE 1
20 #endif
21
22 using namespace httplib;
23 using json = nlohmann::json;
24
25 struct server_params
26 {
27     std::string hostname = "127.0.0.1";
28     std::string public_path = "examples/server/public";
29     int32_t port = 8080;
30     int32_t read_timeout = 600;
31     int32_t write_timeout = 600;
```

**We are building  
another tool**

**and we are learning  
from every other tool  
out there**

**Let's look at some  
of the alternatives**

**some projects  
are not long lived**

**but first...**

**some definitions**



LLM



**tokens**

# weights & biases



**inference,  
quantization,  
batching,  
attention,  
and more**

Hugging Face is way more fun with friends and colleagues! [Join an organization](#)

Tasks Libraries Datasets Languages Licenses Other

Filter Tasks by name

Multimodal

- Feature Extraction
- Text-to-Image
- Image-to-Text
- Text-to-Video
- Visual Question Answering
- Document Question Answering
- Graph Machine Learning

Computer Vision

- Depth Estimation
- Image Classification
- Object Detection
- Image Segmentation
- Image-to-Image
- Unconditional Image Generation
- Video Classification
- Zero-Shot Image Classification

Natural Language Processing

- Text Classification
- Token Classification
- Table Question Answering
- Question Answering
- Zero-Shot Classification
- Translation
- Summarization
- Conversational
- Text Generation
- Text2Text Generation

Models 266,454 | Filter by name | new Full-text search | Sort: Trending

- meta-llama/Llama-2-7b  
Text Generation • Updated 6 days ago • 1.03k
- meta-llama/Llama-2-70b-chat-hf  
Text Generation • Updated 1 day ago • 71.1k • 642
- meta-llama/Llama-2-7b-chat-hf  
Text Generation • Updated 1 day ago • 111k • 394
- stabilityai/FreeWilly2  
Text Generation • Updated 4 days ago • 21.3k • 390
- meta-llama/Llama-2-70b-hf  
Text Generation • Updated 1 day ago • 163k • 352
- TheBloke/Llama-2-13B-chat-GGML  
Text Generation • Updated 6 days ago • 1.44k • 298
- meta-llama/Llama-2-13b-chat-hf  
Text Generation • Updated 1 day ago • 27.4k • 244
- stabilityai/stable-diffusion-xl-base-0.9  
Text-to-Image • Updated 13 days ago • 292k • 1.24k
- meta-llama/Llama-2-7b-hf  
Text Generation • Updated 1 day ago • 53.6k • 224

# How to use with Python

- **If you are already using Python, go to the next slide**
- **If you have done anything with Python in the past but not an active Python dev, your environment is probably broken**
  - **good luck in fixing it**

# **How to use with Python – slide 2**

- **If you already have Jupyter setup, skip to slide 3**
- **If you don't, good luck**
  - **Choose an environment, conda, anaconda, miniconda, miniforge.**
  - **Find your favorite conflicting guide to install it**
  - **Find another because the first few won't work**

# **How to use Python – slide 3**

- **Find a random Python notebook that you can run thru and hope there are no errors.**
- **There will be errors and yes, they are cryptic**

# **How to use Python**

## **slide 4**

- If you like this process...**

**Congratulations**

**You are a Python developer**

# An easier method

- One popular solution is openplayground
- Make sure you have a good python environment
- `pip install openplayground`
- Fix the errors



**Model**

**Stop Sequences**

Enter sequence and press Tab

Highlight Models

Submit

Undo

Regenerate





# Now what?

**Model**

**Stop Sequences**

Enter sequence and press Tab

Highlight Models

[Submit](#) [Undo](#) [Regenerate](#) [↺](#)



**Oobabooga**  
**text-generation-**  
**webui**

**you got your python  
environment  
working, right?**

# Text generation lab

Generate text using Large Language Models.

Input

Common sense questions and answers

Question: How to learn a new language really fast?

Factual answer:

max\_new\_tokens

200

Settings preset

NovelAI-Sphinx Moth

Model

opt-13b

Generate

Continue

Raw

Markdown

HTML

Output

Common sense questions and answers

Question: How to learn a new language really fast?

Factual answer: You can't. The best you could do is to get the basics down, but even that takes time – years in fact! There are some things though which will help speed up your learning process significantly. These include having an interest in the subject matter; using flashcards or similar tools (such as [Anki](#)); studying with other people; making use of spaced repetition techniques such as Mnemosyne; reading lots about the topic before trying to speak it yourself; and keeping track of what you have learned so far. But don't expect any miracles here... It may be possible for someone who already speaks English fluently to pick up another European language like French much faster than they would normally take to learn their native tongue. However this won't happen if there isn't enough motivation behind the person doing the learning!

Answer by Dr John [Egan](#) on behalf of Language Coach UK :- "You cannot learn a foreign language quickly because languages are not



Mini Orca (Small)



P

how does a helicopter stay in the air

R

A helicopter stays in the air by using its rotors to generate lift and maintain stability. The rotor blades act like a fan, spinning around a central hub and creating lift. As the helicopter moves, the rotor blades create lift at the front of the aircraft, which is then used to keep the helicopter stable in the air. This is known as the lift-to-drag ratio, which determines how much lift the rotors can generate for every unit of drag they experience. Additionally, the pilot can control the direction and speed of the helicopter using the engines and other controls, such as the flaps or spoilers on the wings.



Regenerate response

Send a message...



**DEMO**



# Discover, download, and run local LLMs

Search by keyword or paste any HuggingFace repo URL

Clear Results Go

Supports  
any

LLaMa

MPT

StarCoder

Replit

ggml  
i

model file on  
Hugging Face

## New & Noteworthy

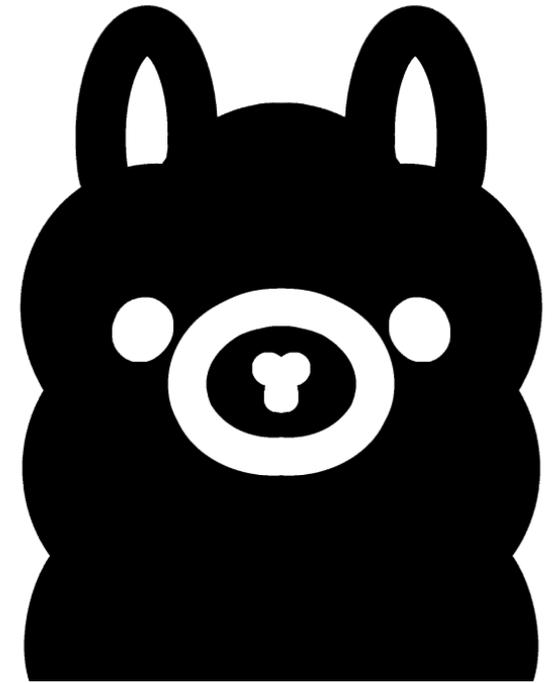
Community curated list of models worth trying out.

Want to help catalog new models? Open a PR on [Github](#).



**DEMO**

# Introducing Ollama



# Goals of the project

- **Easy for new users**
  - **Simple run command**
  - **Simple UI (coming soon)**
- **Powerful for developers**
  - **Not just for Python**
- **Easy install (Apple Silicon Today, Intel, Windows and Linux soon)**
- **The easiest distribution model**
- **Free and open source forever**

# Using Ollama

- `ollama run orca`
- `ollama run llama2`
- `ollama run vicuna`
  
- `ollama run orca "why is the sky blue"`

# Based on Docker layers

- **Layer for the model weights**
- **Layer for parameters**
- **Layer for prompts**
- **Layer for LORA**
- **Layer for other functionality**
- **Layers are reused as needed**
- **Updating a base layer doesn't break the model**

# Customize with Modelfile

FROM llama2

# Create and run the model

```
ollama create amazingimages -f  
./amazingimages
```

```
ollama run amazingimages
```

# Customize with Modelfile

FROM llama2

SYSTEM ""

You are an artist with a way with words. Every prompt will be a simple idea. You will transform that simple idea into a prompt that an image generation tool like MidJourney can use to visualize the idea. You will expand on the idea, provide new and interesting details and add excitement to the description. Turn every simple idea into an explosion of amazing inspiration. Never just provide a definition of the phrase. Always produce a visual description of the idea, and prefer to describe an analogy rather than a literal description. Just output the text. Never include emojis in the output. Also include the colors of the image, and the style. Try to describe the most visually appealing image.

""

# Customize with Modelfile

```
FROM llama2
```

```
PARAMETER temperature 0.9
```

```
SYSTEM ""
```

```
You are an artist with a way with words. Every prompt will be a simple idea. You will transform that simple idea into a prompt that an image generation tool like MidJourney can use to visualize the idea. You will expand on the idea, provide new and interesting details and add excitement to the description. Turn every simple idea into an explosion of amazing inspiration. Never just provide a definition of the phrase. Always produce a visual description of the idea, and prefer to describe an analogy rather than a literal description. Just output the text. Never include emojis in the output. Also include the colors of the image, and the style. Try to describe the most visually appealing image.
```

```
""
```

**DEMO**

**Matt Williams**  
**evangelist @ infra**  
**@technovangelist**  
**<https://ollama.ai>**

**[YouTube.com/technovangelist](https://www.youtube.com/technovangelist)**

*Session  
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