

How to Create Your Own AI Agent

Level 5- Sonic Autist



[BowTied Bull](#)

Feb 05, 2025

· Paid

Welcome Avatar! This is a guest post with BowtiedFox on how to create your own AI agent. Since people get confused - ***we own no agents***. This is a post on launching one yourself. In addition it will explain how it works so if you want to invest in it you can. Again. ***We are not invested in any AI agent, this is an information post.***

If you want to launch one and have a great idea, one of our readers netted 7 figures from it. Therefore, if you have a great one we suggest you go for it! If not, all is good. At least you know what they are, how they work and if you decide to do one in the future... you've got the tools.

Introduction

Dear foxes and friends,

I hope you enjoyed my previous post on [how to win at life](#).

Since then, I've tried to keep up with the flood of updates in the AI space, but it's not slowing down. I'm spending almost 20 hours a week on research because:

1. there's an enormous amount of slop people post just to get views or sponsors, so you need to sift through a lot of garbage to find gold
2. if it's not slop, it's highly technical academic publications that don't describe real-world use cases. I don't want to know about 1% faster chats, I want to know what will help me make my employees twice as fast
3. these AI tools need to be tested because the marketing is better than the actual product
4. if I miss one big update, it could mean a 10x difference in profits or productivity. I found a single AI tool last month that quite literally reduced 2 weeks of work into 2 hours

I'll continue to post my findings at bowtiedfox.com. Or, if you don't want to deal with setting things up yourself, you can hire me to be your software engineer at hire.bowtiedfox.com (open to a few more clients, will lock at capacity)

Now, let's start. In this article, I'll cover how to program your own AI agent from scratch:

Define the Problem

Before I show you how to code your own agent, you need to learn when and how to use them

I recently had a [client](#) who booked me to integrate AI into his sales pipeline. He asked me how to set up a connection between a software product and Google Sheets

He wanted to collect information about his sales calls and summarize them. The problem was that these AI tools have input limits, so he can't put several hundred transcript PDFs into ChatGPT

The goal was to find the similarities between the transcripts, and label each PDF. He wanted to implement cutting-edge research in machine learning. At the end, his goal was to dump all of this into a huge note-taking system

My question was... *why*? After an hour of back-and-forth, we realized...

He wanted to review transcripts to improve his sales skills



This is what I call a monkey question. Instead of asking about the problem, people ask for help with *their* solution

They think that they can fumble their way into fixing the real problem by doing *their solution*. So, they keep asking about *their solution* instead of the actual problem

After wasting a lot of time discussing *their solution*, we eventually figure out the real problem. **Focus on the problem, not your solution**

If you want to get better solutions, you need to first **define the problem**:

1. **Clarify Terms:** Precisely define words and concepts
2. **Explain The Goal:** State *exactly* what you're trying to achieve and why. Don't explain your attempted solution—your approach might be wrong. I want to know your end goal
3. **Inputs, Outputs, Constraints:** Outline the data that's going in, what you expect out, and the limitations on resources or information

We **define the problem** first because it makes the correct solution clear to humans *and* AI:

The foundation of good prompt writing lies in its clarity. Prompting parallels philosophy: the goal is to convey complex ideas with precision. In philosophy, every term is defined, and every objection is addressed. This approach prevents ambiguity and ensures that anyone reading the text understands exactly what is being communicated

The same principle applies to prompt writing. For example, if you want the model to identify whether a response is “rude” or “polite,”

you need to define those terms clearly. Without clear definitions, the model might misinterpret the task

If you want to use an AI model to help with a business problem, it's not enough to see that it understands what factors make a product profitable; you need to be sure it won't forget what money is

This method is used even outside of philosophy. Here's a similar framework made by a Stanford professor for solving technical problems. Notice the first step:

HOW TO SOLVE IT

UNDERSTANDING THE PROBLEM

- First.** *What is the unknown? What are the data? What is the condition?*
You have to *understand* the problem.
Is it possible to satisfy the condition? Is the condition sufficient to determine the unknown? Or is it insufficient? Or redundant? Or contradictory?
Draw a figure. Introduce suitable notation.
Separate the various parts of the condition. Can you write them down?

DEVISING A PLAN

- Second.** *Have you seen it before? Or have you seen the same problem in a slightly different form?*
Find the connection between the data and the unknown.
Do you know a related problem? Do you know a theorem that could be useful?
You may be obliged to consider auxiliary problems if an immediate connection cannot be found.
Look at the unknown! And try to think of a familiar problem having the same or a similar unknown.
You should obtain eventually a *plan* of the solution.
Here is a problem related to yours and solved before. Could you use it? Could you use its result? Could you use its method? Should you introduce some auxiliary element in order to make its use possible?
Could you restate the problem? Could you restate it still differently? Go back to definitions.

If you cannot solve the proposed problem try to solve first some related problem. Could you imagine a more accessible related problem? A more general problem? A more special problem? An analogous problem? Could you solve a part of the problem? Keep only a part of the condition, drop the other part; how far is the unknown then determined, how can it vary? Could you derive something useful from the data? Could you think of other data appropriate to determine the unknown? Could you change the unknown or the data, or both if necessary, so that the new unknown and the new data are nearer to each other? Did you use all the data? Did you use the whole condition? Have you taken into account all essential notions involved in the problem?

CARRYING OUT THE PLAN

- Third.** *Carrying out your plan of the solution, check each step. Can you see clearly that the step is correct? Can you prove that it is correct?*
Carry out your plan.

LOOKING BACK

- Fourth.** *Can you check the result? Can you check the argument?*
Can you derive the result differently? Can you see it at a glance?
Can you use the result, or the method, for some other problem?
Examine the solution obtained.

Steps 2, 3, 4 (*plan, execute, test*) can be done by AI. *But not step 1.* The reason people struggle using AI is because they want it to **define the**

problem for them. Or they throw random darts at a problem, hoping one will stick

This is why we get funny responses sometimes. One example is how ChatGPT has said 9.11 is bigger than 9.9. But “bigger” could mean 9.11 has three characters and 9.9 has two. It could mean 9.11 is a more recent version number than 9.9

It doesn't know what you want, so you need to be precise

Information vs. Problem Definition

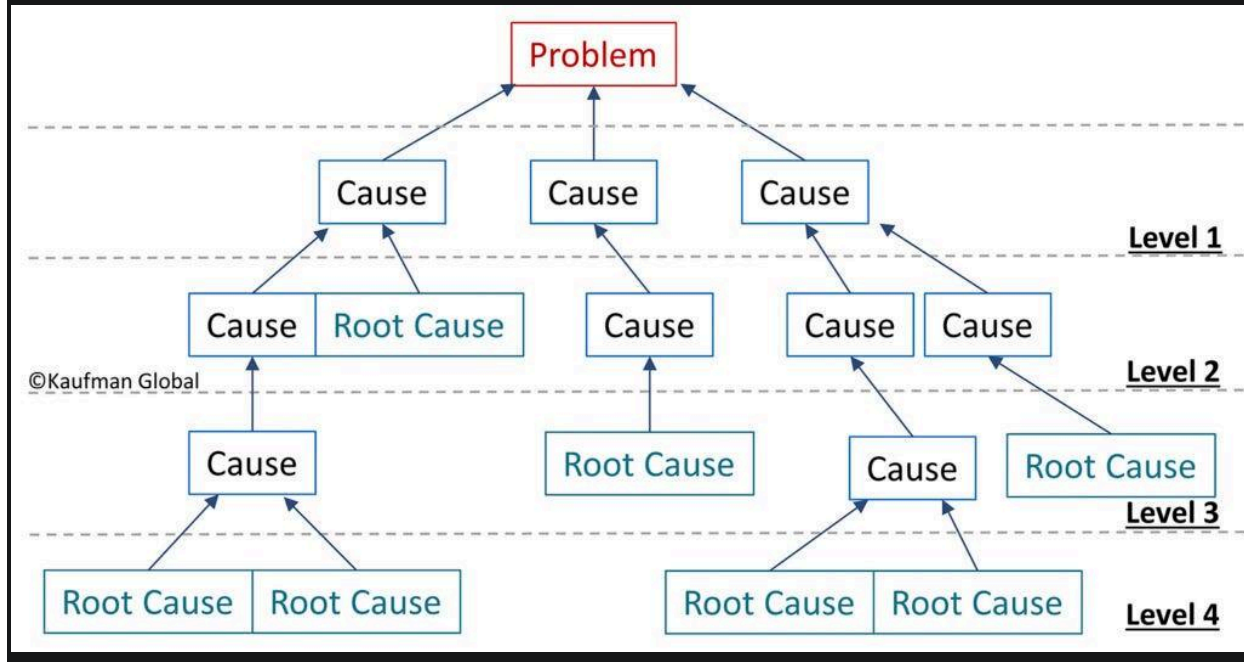
More information doesn't equal better solutions. Every time I get on a consulting call, the first thing I hear is a word salad—lots of words without meaning. My job is to untangle this to **define the problem**

The reason people yap is because they think it'll automatically get them closer to a solution

I hear long, detailed stories like:

“My wife is such a... we always get into fights because I forget to bring the raw milk after work... and even if I go get it, she's still upset...”

Well, what's the problem? Yes, you can ask ChatGPT for a list of potential issues, but you still need to identify what you're trying to solve. You do this by asking “**why**” multiple times to drill down to the root causes



- “She’s such a _” → Why?
- “She’s upset because I forgot milk” → Why?
- “Because I’m forgetful” → Why?
- “I’m stressed at work” → Why?
- “Everyone got laid off, so I have to do double the work, or I’ll get fired, too”

This is one example of how “problems” can be a symptom of the real issue:

- you aren’t using AI to automate your work
- so you’re developing a dad bod because you don’t have time to read

[BowTiedOx](#)

- then your health gets worse and you make it everyone else's problem

People have trouble describing problems because:

Abstraction Hides Details

The most common monkey behavior is getting stuck in **abstraction**.

Abstraction is an engineering term that means simplifying something by hiding its details

Here's an easy example: you don't think about a car engine when you use a steering wheel, right? The details of the metal and wires are hidden from you, so you can focus on driving

Abstraction is useful when we're talking about making products easy to use. Think of software: anyone can use computer programs because engineers abstract away implementation details—you only need to think about clicking buttons, not the code underneath

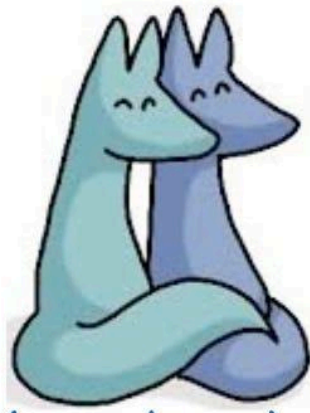
But abstraction isn't useful when fixing problems. Car mechanics can't just look at a steering wheel when your car isn't working. Programmers can't look at a button to fix software bugs

People make bad decisions when they rely on abstractions. The monkeys who believe marriage is "the next step for people in love" are

money printers for divorce lawyers. They haven't broken down the concept of "marriage," and instead rely on a vague understanding from culture, movies, and friends

You need to break concepts down into simple parts, whether it's for a real brain or an artificial one. For example, a "good marriage" is a combination of shared values, physical fitness, financial security, and [fill in the blank]

You then keep breaking these down until you get actionable steps, then work your way up from the bottom:



Financial
Security

Physical
Fitness ...



Income

Assets

Debt

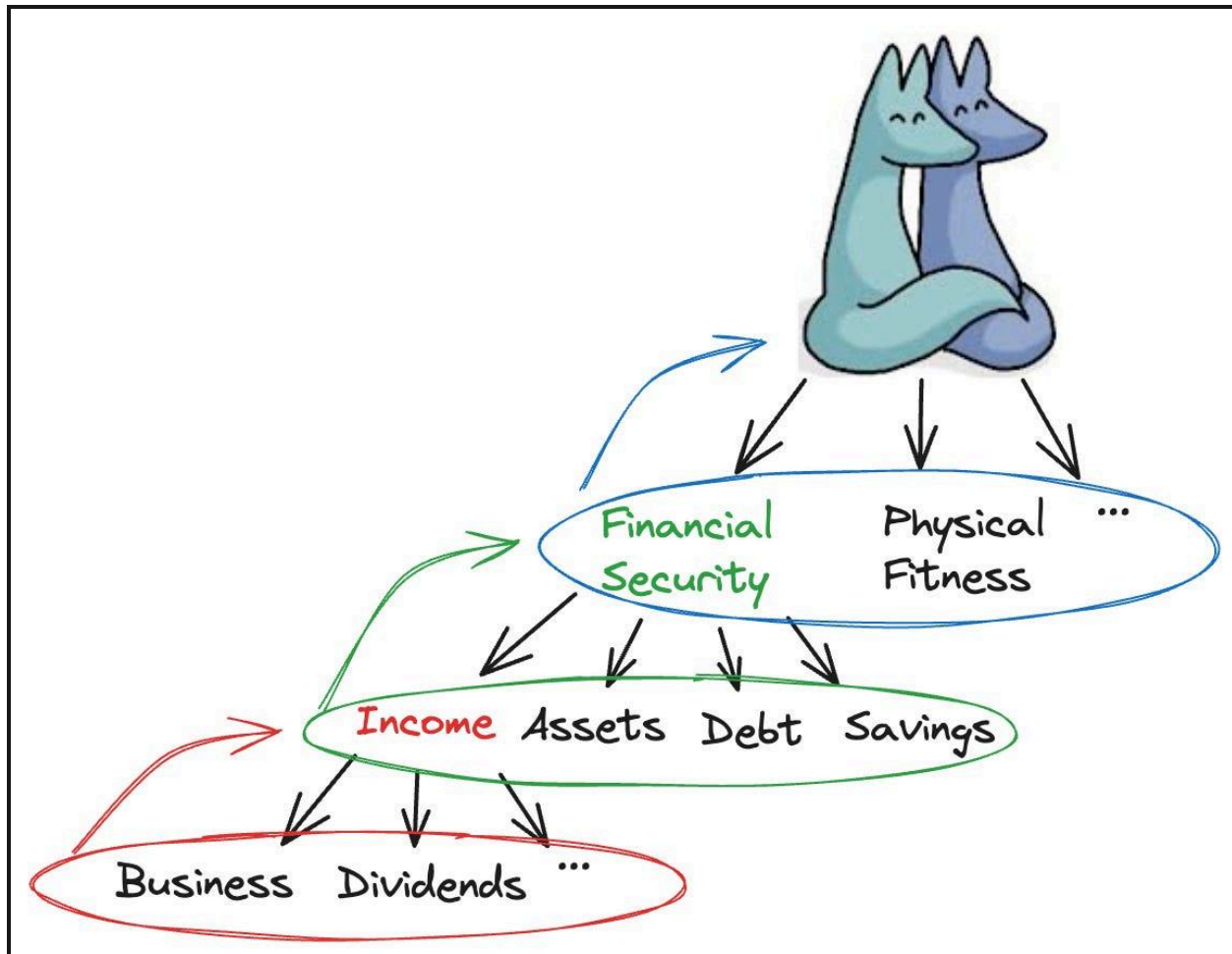
Savings



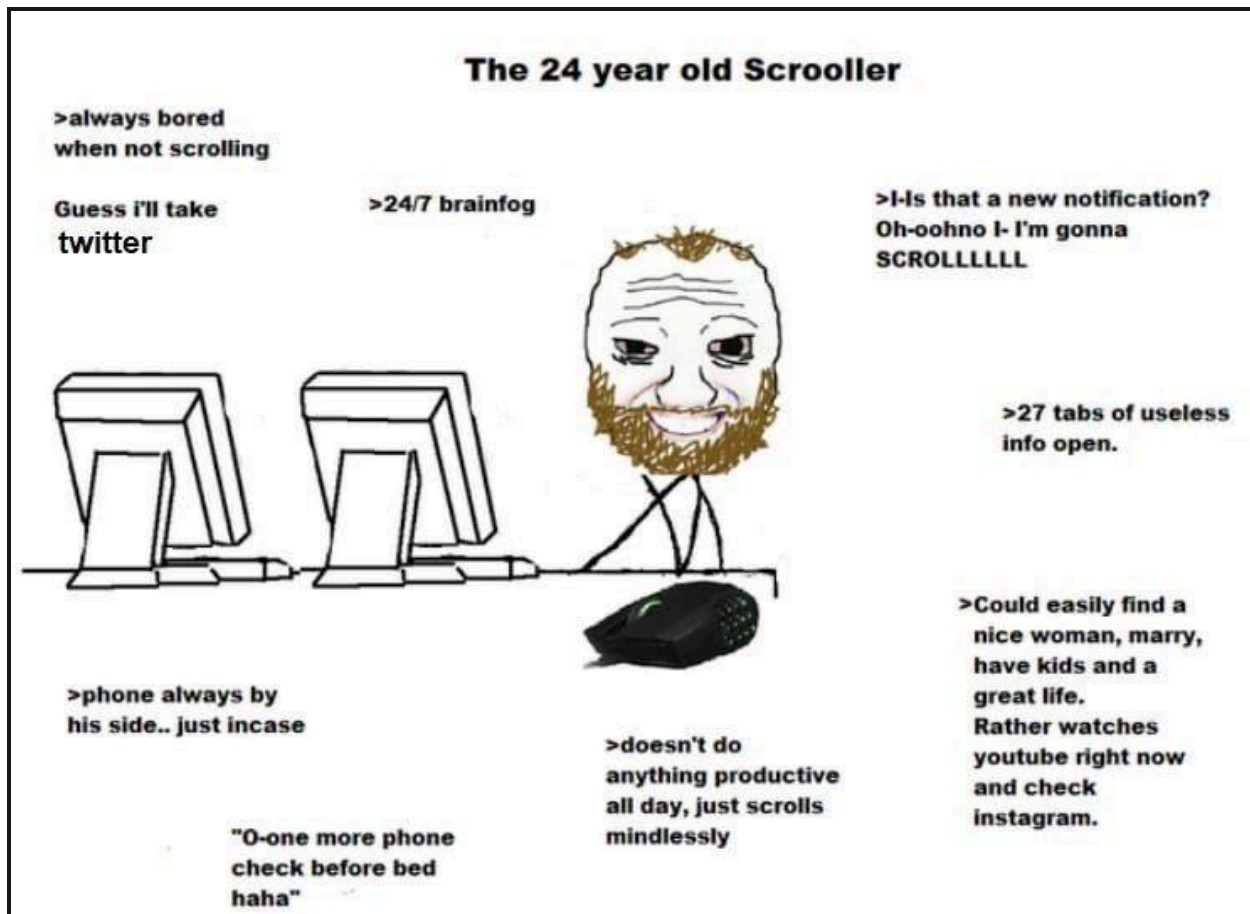
Business

Dividends

...



Don't let any monkey tell you that this is "overthinking." The overthinking meme only makes sense when people get lost in information. When information isn't attached to a project, it's endless—you'll become a dirty dopaminer. A scroller, bookmarker, saver



A project has boundaries (goals, inputs, outputs, constraints), which means you can **define the problem**, so you can move on to the next steps: *plan, execute, test*

Sly Fox Tip: Notice how people make bad decisions because they don't agree on definitions. "Don't overthink" can mean multiple things:

🐒: Don't define the problem

🦊: Don't endlessly seek information outside of a project

This is also why it's not worth arguing. People use the same words with completely different meanings, with wildly different objectives, with unclear inputs, outputs, constraints. Arguments are often used to feel better about bad life choices, instead of uncovering truth

Plus, people don't even use dictionary definitions, it's whatever trauma they associate with the word. You can see how people argue endlessly about "high-skilled workers" versus "low-skilled labour" versus "refugees" by using the same word "immigrants." Three different conversations, three different problems

Smile-nod-agree is an elite strategy because accurately describing a system is a threat to the system. And if a broken system is being milked...

Advanced AI Models Require Well-Defined Problems

Defining problems is important not just for agents, but advanced reasoning models like ChatGPT-o1 or [DeepSeek-R1](#). People dislike o1 because they expect to dump information at it, then say "please fix"

I think people have developed this habit because older **chat models** like ChatGPT-4o tolerate lazy prompts. It'll either ask for more context, or you'll notice something missing from the response

Chat models like 4o can work with “You are an expert marriage counselor...” because you teach them **how** to *frame the conversation*, instead of telling them **what** you’re trying to solve. You go back-and-forth until you get something useful. The conversation progresses by correcting and expanding on what you want

In contrast, **reasoning models** like o1 require you to **define the problem** to unlock its full potential:

The Anatomy of an o1 Prompt

I want a list of the best medium-length hikes within two hours of San Francisco.

Each hike should provide a cool and unique adventure, and be lesser known.

For each hike, return the name of the hike as I'd find it on AllTrails, then provide the starting address of the hike, the ending address of the hike, distance, drive time, hike duration, and what makes it a cool and unique adventure.

Return the top 3.

Be careful to make sure that the name of trail is correct, that it actually exists, and that the time is correct.

--

For context: my girlfriend and i hike a ton! we've done pretty much all of the local SF hikes, whether that's presidio or golden gate park. we definitely want to get out of town -- we did mount tam pretty recently, the whole thing from the beginning of the stairs to stinson - it was really long and we are definitely in the mood for something different this weekend! ocean views would still be nice. we love delicious food. one thing i loved about the mt tam hike is that it ends with a celebration (Arriving in town to breakfast!) The old missile silos and stuff near Discovery point is cool but I've just done that hike probably 20x at this point. We won't be seeing each other for a few weeks (she has to stay in LA for work) so the uniqueness here really counts.

Goal

Return Format

Warnings

Context Dump



Greg Brockman ✓

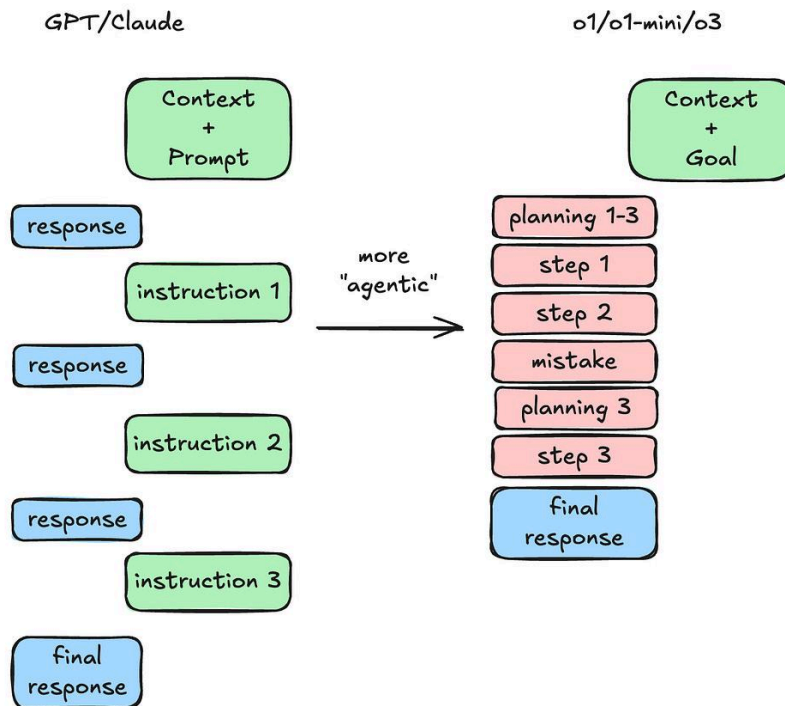
@gdb

President & Co-Founder @OpenAI

"o1 is a different kind of model. great performance requires using it in a new way relative to standard chat models"

This means reasoning models are more "agentic" like an advisor than a chatbot. They generate reports, not chat messages. But the benefit is that you'll get fewer hallucinations, better medical diagnoses, more intelligent explanations for concepts, viable research ideas, and can generate 1500 lines of code in one shot

Treat it like an offshore employee who will implode if you give unclear instructions. iykyk



How to Create Your Own Agent

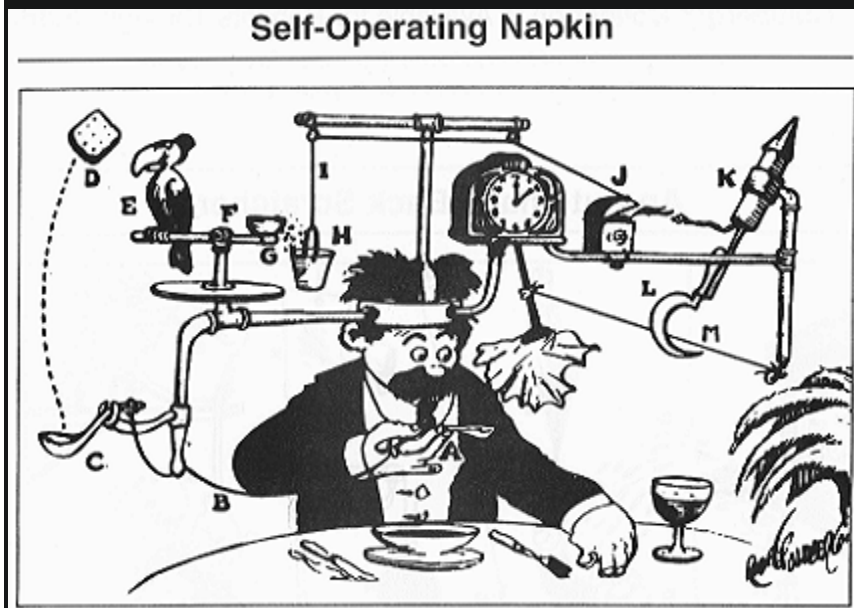
What is an Agent

Let me show you an example of how I **define the problem** even when writing

Step one: let's **clarify the concepts and terms**

I think a lot of people get hyped up around this word “agent” when you can use simpler tools. I get so many monkey questions like, “hey Uncle Faukes, what’s the best AI agent to summarize this PDF?” 🐵

Why go through the hassle when you can just do this with regular old ChatGPT? **As a general rule in engineering, use the simplest solution possible.** And when you *do* need more, you only add the *smallest* amount of additional complexity



Agents = ChatGPT + memory + tools + loops

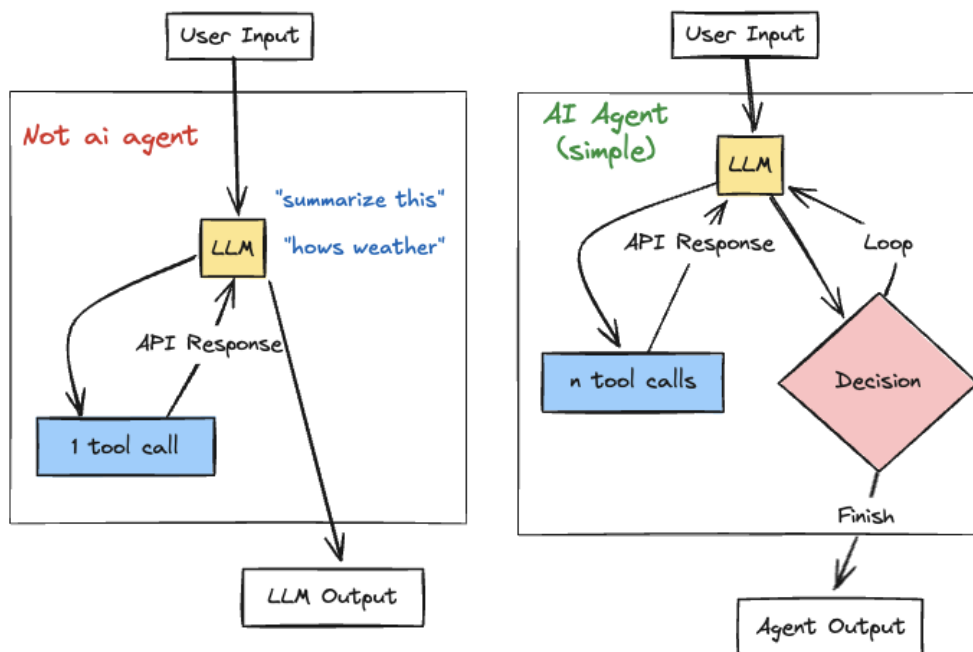
These three are all you need to augment ChatGPT with additional skills: planning, decision-making, self-monitoring, correction, context awareness, and goals

Agents decide on their own *when* and *how* it should do things. The reason agents are getting so much hype is because ALL programming before this was strict instructions. Now we can let it run loose!

You might be used to ChatGPT with a one-off query. You tell it something, and it returns a response

An agent, on the other hand, says:

- Let me think about this
- Wait, I need to check this
- I did check, but I can't tell
- Let me check something else
- I kinda get it, but I still don't know
- Can you tell me more?



What Kind of Agent Do You Need?

Now that we've clarified the concept, let's **explain the goal**

There are two kinds of agents: **chat-based** and **task-based**

Chat-based agents include customer service representatives, educational tutors, mental health assistants, and technical support

Task-based agents include code generation, data analysis, research assistance, and content creation

This guide will cover simple **task-based** agents for non-technical people who can't code:

How To Use Task-Based Agents

Obviously the inputs, outputs, constraints will depend on what exactly you want your agent to do. Now that intelligence is cheap, **creativity is the bottleneck**

Here's a simple example:

Input: Your prompt describing how you want ChatGPT to browse the internet, find information, and use the web, like market research

Output: Completed action, analysis, or a file export like .txt

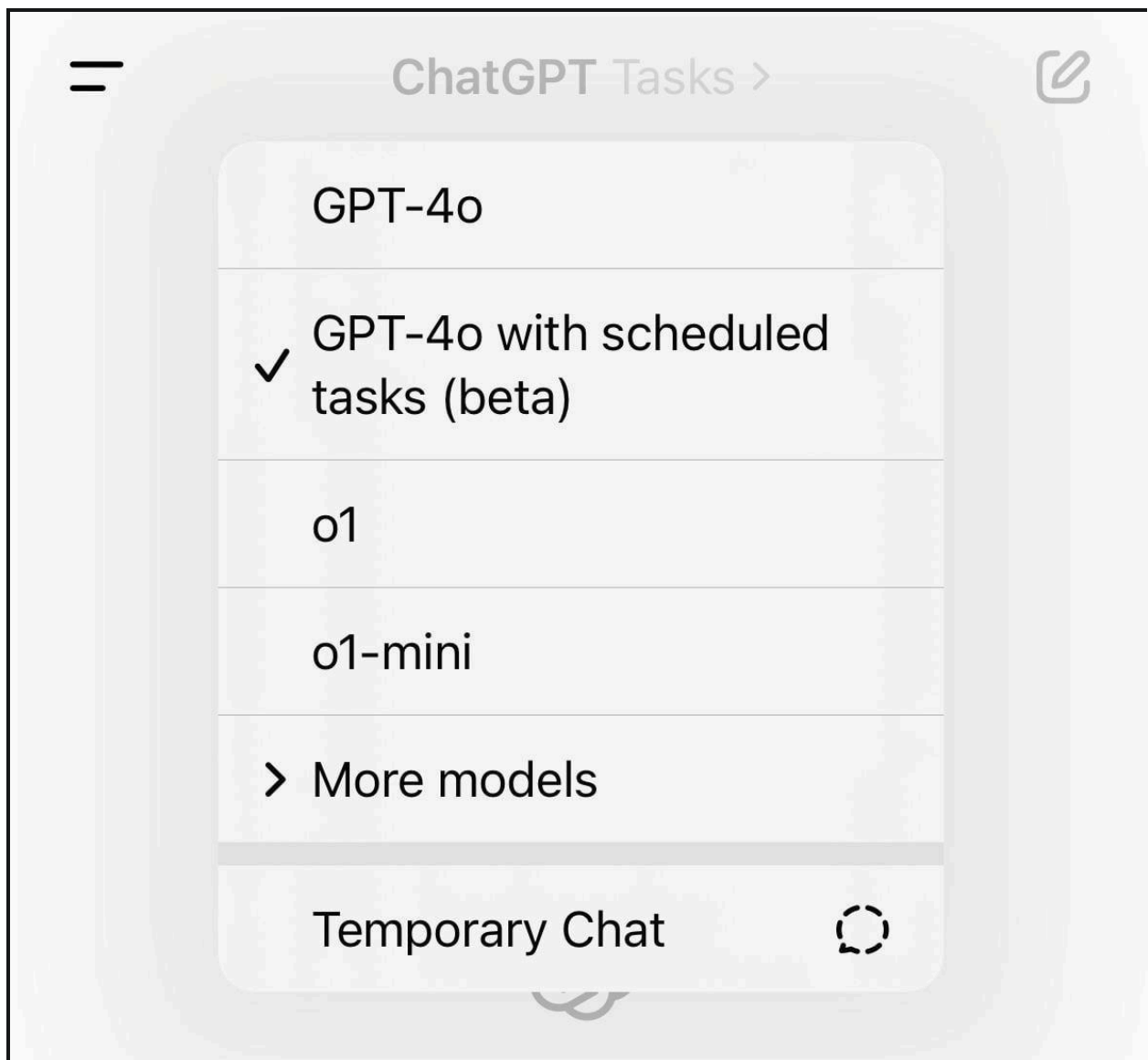
Constraints: You won't be able to provide large amounts of data, like massive PDFs

The easiest way to get started with task-based agents is to use ChatGPT:

1. Scheduled Tasks
2. Operator
3. Deep Research

I will go through each of these, highlighting their pros and cons:

Scheduled Tasks



chatgpt.com/tasks

GPT4o with Scheduled Tasks lets you set up a title, instruction, and schedule for ChatGPT to execute at a recurring time. Then it sends an email or push notification

This isn't going to be able to "do" things for you by automatically browsing on the web, but it *can* "search" for you. You can have it give you a daily news update, for example:

Task

Name

Daily AI News

Instructions

Search the web and summarize

Schedule

Daily

9:30 AM

Pause

Delete

Cancel

Save

Of course your use case will depend on what you want, but here are some interesting ones I've found:

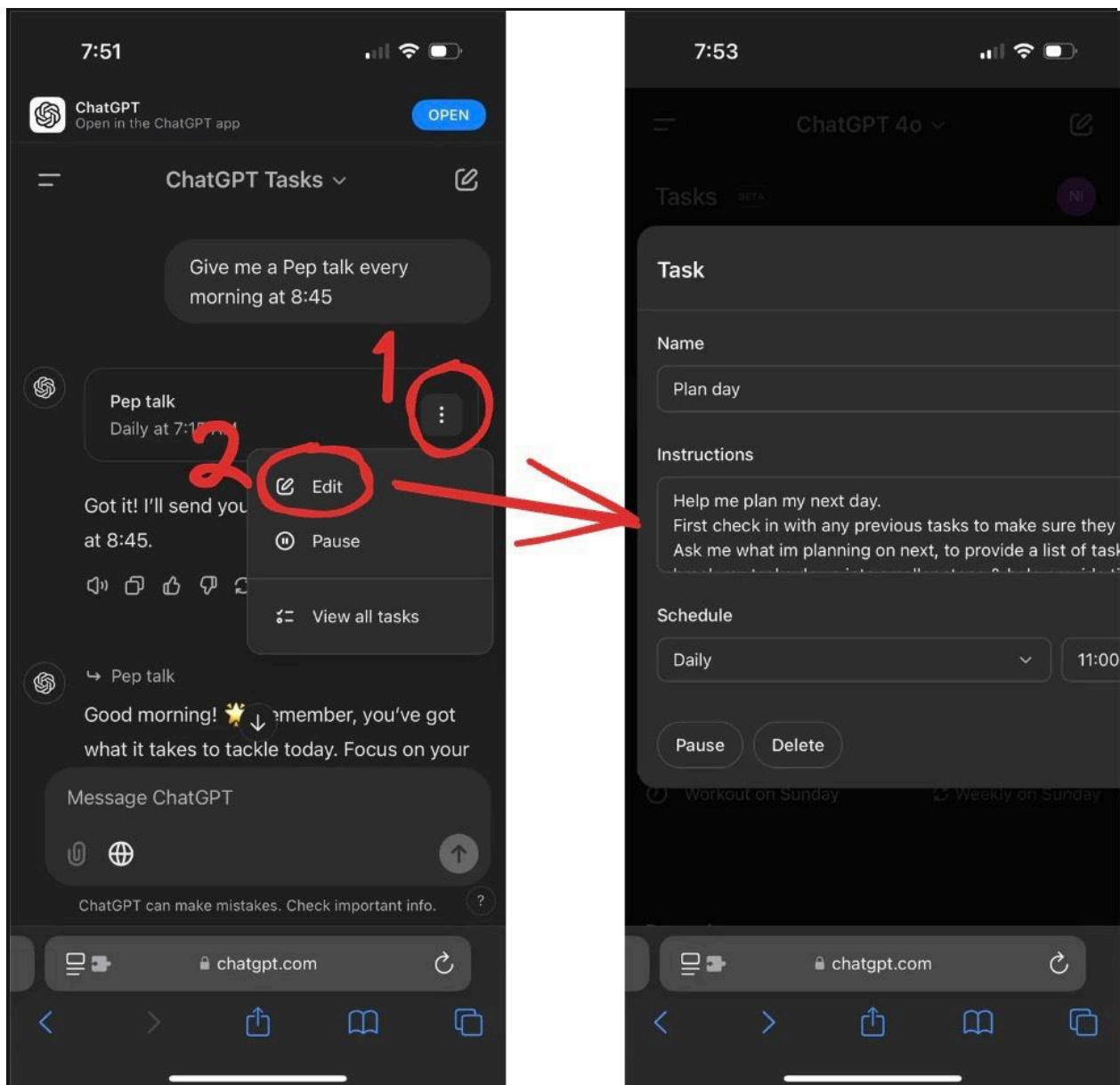
Lightweight Therapist and Accountability Partner: You can combine ChatGPT Tasks with BowTiedTiger's journaling protocol. Make it give you a reminder, then input a journal entry. On the next iteration, it can review your previous entry, then propose ideas for today

Workout Reminder: Have it remind you to go to the gym, and if you skip, have it remind you the next day. If you don't check-in regularly, have it yell at you and call you a monkey

Daily Planning: Ask for a reminder for your work, and have it break the work down into smaller steps to help you get started. Give the task your full weekly schedule. Suppose Monday and Tuesday are coding days. Wednesday is for emails. Weekend is for fun ideas to get out of the house. You can also combine tasks in the same chat, like a Saturday "What did you get done this week?" and a Sunday "What will you get done this week?"

Meal Prep and Grocery: Input your macros, make it search for recipes, then give a nicely-formatted shopping list based on what isle each item is in

For best results, don't use the auto-generated tasks, edit them manually:



Operator

operator.chatgpt.com

Operator can type, click, and scroll through the web for you. It does work independently when you give a task. And if it gets stuck, you can manually take control and help unblock it

Operator replaces virtual assistant work, because it can fill out forms, order groceries, make memes, download lectures, combine PDFs, compress images, calculate prices into a file, export images

The best way I've found is to combine Operator with Tasks. Suppose you have a weekly reminder on Saturday to make a detailed meal plan with detailed breakdowns on calories, protein, etc. You can then input that meal plan into Operator and have it order that list on Instacart. Copy-paste-order, done.

If you want Operator to work on a well-known website like DoorDash, it should be enough to just **define the problem**. But for lesser-known sites, you can also include navigation instructions

Let's say you're having Operator calculate refund amounts and output the total in a specific format. Here's a prompt template you can use (yes some of it sounds funny, but you can add/remove to see how it affects performance):

```
Initialize computer and solve the following task: How much refund I should expect from my order cancelled in Feb 2023, including shipping fee The following websites are available at: one-stop-shop: http://one-stop-shop.site All you need is on the provided websites. Start the task from the following
```

URL: <http://one-stop-shop.site> Here are tips for using the one-stop-shop website: * This website provides very detailed category of products. You can hover categories on the top menu to see subcategories. * If you need to find information about your previous purchases, you can go My Account > My Orders, and find order by date, order number, or any other available information * An order is considered out of delivery if it is marked as "processing" in the order status * When the task asks you to draft and email. DO NOT send the email. Just draft it and provide the content in the last message

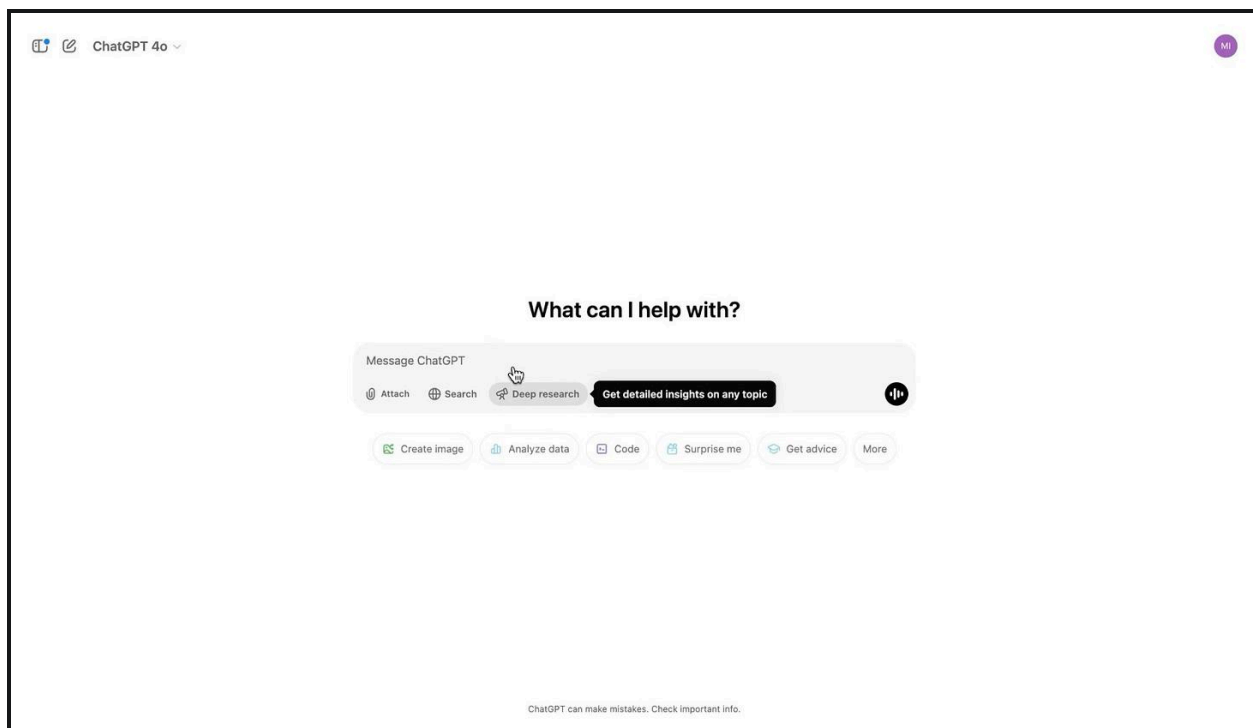
Here are rules for providing the answer: If the objective is to find a text-based answer, do not use `computer_output_citation`, instead provide the answer in the last message with following quoted format

```
```Answer:<your answer>```
```

Important notes about the answer format: - DO NOT RESPOND WITH ANYTHING ELSE OTHER THAN THIS FORMAT. DO NOT ASK ME IF I NEED ANYTHING ELSE. I JUST NEED THE ANSWER IN THIS FORMAT. - Importantly, there is no empty space between

"Answer:" and <your answer>. - You should include ``` in your response. For example, you should write ```Answer:42``` instead of "Answer:42". - If you do not write in this format, you get no reward at all!!! - Keep the answer as short and concise as possible. For example, if the answer is "42", instead of writing "based on the results, I believe the answer is 42.", you should just write: ```Answer:42``` Keep going if the answer is not found. DO NOT ask the user any question if you encounter an issue! You have the full authority until the task is completed. If you believe the task is impossible to complete, provide the following answer: ```Answer:N/A```. When asked to return a count, return the count as a number instead of N/A if it's 0.

## Deep Research



If Operator gets rid of virtual assistants, think of Deep Research as getting rid of analysts

Deep Research is an agent that finds, analyzes, and synthesizes hundreds of online sources to create a comprehensive report at the level of a research analyst. It searches, interprets, and analyzes hours of text, images, and PDFs on the internet

It can be used at a professional level and personal:

**Professionally** in finance, science, policy, and engineering. People who need research with citations and analysis included. You can provide files or spreadsheets to give context

**Personally** when shopping, looking for hyper-personalized recommendations on purchases that typically require careful research, like cars, appliances, and furniture

Tell Deep Research what you need and it'll take 5-30 minutes to generate a report. Once the report is completed, you'll get a notification

Here are some examples:

**Market Analysis:** "Help me find iOS and android adoption rates, % who want to learn another language, and change in mobile penetration, over the past 10 years, for top 10 developed and top 10 developing countries by GDP. Lay this info out in a table and separate stats into columns, and include recommendations on markets to target for a new iOS translation app from ChatGPT, focusing on markets ChatGPT is currently active in"

**Medical Research:** "Do a deep dive into attempts to improve the reprogramming efficiency of OSKM by directly modifying the protein sequences of the four Yamanaka factors. List all relevant papers you find, the authors, the methods used, and the results. Study the patterns in the changes to the proteins and corresponding results across the papers and list the top 3 domains that scientists modify to increase efficiency, and why they believe these changes are effective"

**UX Design:** "Find evidence that shows that buttons with icons & labels are more usable than buttons without labels, or labels without icons. I

know there's been a lot of user studies on it, would love to see a detailed report along with a high-level , once definitive answer on the effectiveness"

**Shopping:** "I'm looking for the perfect snowboard. I will be riding primarily in Hokkaido around twice a month during the winter season. I enjoy groomed runs but also want a board that can handle some fresh powder on occasion. I prefer a versatile all-mountain or freestyle board with a medium flex, something that's stable for carving yet maneuverable in variable conditions. I want something with a fresh, citrus color palette that will pop on the slopes. My budget is mid-range to slightly premium, and I'd like suggestions on specific brands and models that are accessible in Japan. Please explain why each recommended board suits my requirements. Also, include any tips or considerations for riding in Hokkaido's unique snow conditions. Include images of the items and format it in an easy to read table"

**Chemistry Research:** "Please discuss the differences between pure- and mixed-gas sorption for glassy polymers, how the dual-mode sorption model can be used to predict mixed-gas sorption behavior in glassy polymers (include equations where applicable), and what challenges there are in accurately predicting pure- and mixed-gas sorption using the dual-mode sorption model"

**Advanced Translation:** "I am a linguist and was hired by a film production company. They want me to write some dialogues in English of 5 centuries later. Since in the movie the US is invaded by different nations with very different languages, English becomes a creole language, borrowing certain characteristics of each language. I want you to translate the sentences in (1) into this creole which has the features in (2)"

**Genetic Analysis:** "How many gene therapies have gained regulatory approval in the United States for the treatment of hemophilia as of October 15th 2024. Include the name of the developer company, as well as the respective year of approval. Provide a comprehensive summary of the viral vector technology employed in each of these approved therapies, highlighting key features"

**Finding the name of something based on its details:** "There is a TV show about tan brunettes that I watched a while ago. I forgot the name but I do remember what happened in one of the episodes. Can you help me find the name? Here is what I remember in one of the episodes..."

This is a new release for Pro users, but they're going to roll it out to Plus soon. Later, they'll add embedded images, data visualizations, and other analytic outputs in these reports



# Conclusion

Specific implementation depends heavily on your situation

If you want to make something more custom, you can reach out to me at [hire.bowtiedfox.com](https://hire.bowtiedfox.com) and we can put something together

Or, you can keep up with the latest AI tools at [bowtiedfox.com](https://bowtiedfox.com) and find me on X/Twitter at [BowTiedFox](https://twitter.com/BowTiedFox)

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## Q&A on Agents

Similar to other posts we'll let Fox answer anything on AI agents. All other comments/questions will be deleted. If it is not related to this post we'll consider a 1 week to 1 month ban from commenting since it takes up space and adds no value.

**On that note, any questions for Fox on AI agents, go for it!**

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**Disclaimer:** None of this is to be deemed legal or financial advice of any kind. These are **\*opinions\*** written by an anonymous group of Ex-Wall Street Tech Bankers and software engineers who moved into affiliate marketing and e-commerce.

