

This toolkit is designed to guide users of all levels through the process of using ChatGPT, a Generative Pre-trained Transformer built to produce text responses based on conversational prompts. From setting up your account, to understanding how it operates and avoiding common mistakes, this guide provides the knowledge and tools to navigate the realm of Large Language Models (LLMs).

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1 Set up your OpenAI account

- 1 Visit the [OpenAI website](#) and [sign up](#) to create a free account.
- 2 Enter your personal information, such as name, email address, and password.
- 3 Verify your email address by clicking on the link sent to your email.
- 4 Complete any additional steps required to set up your account.
- 5 To log in to your account, go to the [OpenAI website](#) and click on the “[Log in](#)” button.

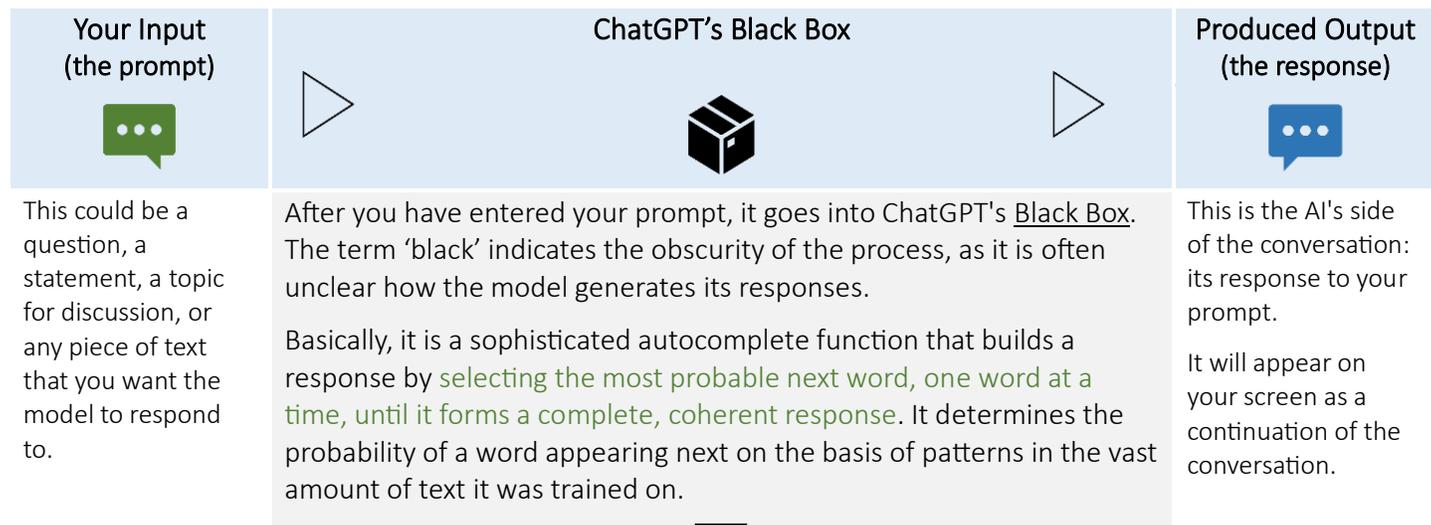
ChatGPT 3.5 is free.

ChatGPT Plus 4.0 (20 USD/month) offers internet browsing capability, higher level "reasoning," image generation, etc.

2 How it works



Using ChatGPT can be a seamless experience once you understand how it operates. The essential interaction revolves around the concepts of a 'prompt' and a 'response':



Als with a higher random factor are described as having a higher 'temperature'



Random factor

While ChatGPT often selects the word with the highest probability score, there is an element of randomness in its process.

As a result, the same prompt can generate two different outputs. This allows for more varied, natural-seeming responses.

Als with a lower random factor are described as having a lower 'temperature'



I enjoy walking in the

Generic outputs

Since it selects the next word based on common patterns in its training data, outputs can be generic and predictable.

You can break these patterns by guiding ChatGPT's responses over multiple prompts, customizing your prompts, or building complex prompts.

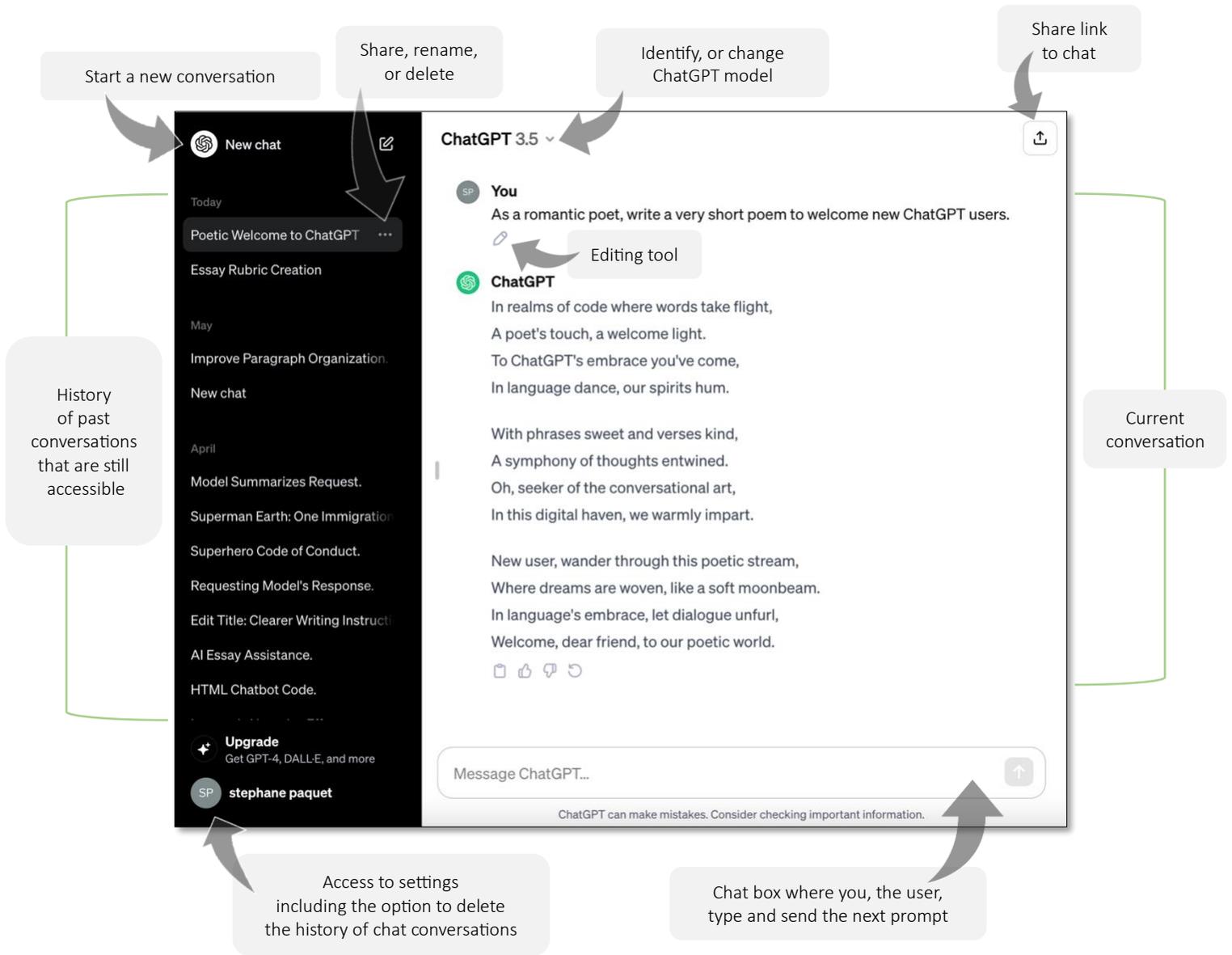
park

woods



It would take a person **more than 4,000 years** to read, non-stop, all the data used to train ChatGPT 3.0.

3 The interface



4 Start a conversation with basic AI tasks



One of the most engaging aspects of using ChatGPT is starting a conversation and observing the model's remarkable capabilities. Here are some effective prompts:

	Ask for...	Prompts
knowledge	explanations:	Explain 'non-linear equations' to a grade-12 student at 2pm on a Friday.
	metaphors:	Create three metaphors to explain the concept of 'confirmation bias.'
	examples:	Provide vivid examples to explain the principle of 'risk management.'
	comparison:	What are the similarities and differences between mitosis and meiosis?
	arguments:	Provide arguments and counterarguments regarding personalized AI tutoring.
	main points:	Identify, in point form, the main points of Karl Marx's Das Kapital.
	practical implications:	What are possible practical implications of [this theory, ideology, or fictional story]?
creative assistance	brainstorming:	Help me brainstorm a list of 5 in-class activities to introduce [this topic].
	class plans:	Plan a two-hour class on the topic of 'time management.'
	role-playing:	Act as the ancient Greek philosopher Socrates and tell me about your life in Athens and your perspective on the pursuit of knowledge.
	scenarios:	As a doctor, I need to announce to a patient that his test results turned out positive. Create one real-life scenario and offer me options to handle this situation. Then, ask me to choose one option. On and on.
	storytelling:	Act as a historical fiction writer and write a short story about the living conditions of a young worker in a weaving factory during the first industrial revolution in Great Britain.
	dialogues:	Generate a dialogue between Martin Luther King Jr. and Malcolm X on the topic of Civil Rights Strategies.
	text completion:	Complete the following text by adding a conclusion and a title: "text here."
tutoring	quizzes:	Create a multiple-choice quiz on [this topic]. Offer competitive choices.
	Q&A:	Ask me open-ended questions, one question at a time, about the American civil war.
	feedback:	As an English teacher, provide constructive feedback on the following text: "text."
formatting	risk management:	Identify potential risks that could prevent this in-class activity from attaining its main objectives, and suggest strategies to mitigate these risks: "activity plan here."
	writing styles:	Describe the writing style in this text: "text."
		Rewrite this text to make it easier for grade-12 students to understand: "text."
	organization:	Organize the following class notes into sub-groups: "class notes here."
	tables:	Create a table to organize and present the causes and effects of inflation.
	summaries:	Summarize Charles Darwin's book 'On the Origin of Species.'
translations:	Translate this sentence into English: "Il vaut mieux faire que dire."	

5 Guide the conversation over multiple prompts



The best way to use ChatGPT is not always to create the 'ideal' prompt. Most of the time, all you need to do is **have a conversation over multiple successive prompts** to guide, clarify and improve ChatGPT's responses.

Here is a sample conversation between an English teacher and ChatGPT that demonstrates the importance of successive prompts:

User: ChatGPT, can you explain the difference between a simile and a metaphor?

ChatGPT: Certainly! A simile and a metaphor are both figures of speech used to make comparisons, but they differ in how they make those comparisons. A simile uses "like" or "as" to compare two unlike things, while a metaphor directly states that one thing is another.

User: Could you give me an example of a simile?

ChatGPT: Sure! Here's an example: "Her eyes sparkled like diamonds." In this simile, the eyes are compared to diamonds using the word "like."

User: Great! Give me an example of a metaphor.

ChatGPT: Sure! Here's an example: "He's a shining star." In this metaphor, the person is directly compared to a shining star, without using "like" or "as."

User: Explain why metaphors and similes are used in literature. Do not repeat previous information.

ChatGPT: In literature, metaphors and similes serve to enhance the reader's sensory experience and evoke emotions. They allow authors to draw unique connections and express abstract thoughts in a more tangible way. Metaphors provide a direct, often surprising, comparison, creating a striking image or concept. Similes, with their use of "like" or "as," offer a softer, often more relatable comparison, helping readers visualize or feel a certain way. Both are essential tools for creative expression and storytelling.

To have conversations over multiple prompts: after asking ChatGPT to explain a concept, such as 'cognitive dissonance' or 'the water cycle,' you may guide the conversation by using some of the following prompts:

- ask to **develop, clarify, or exemplify** a specific point in the initial response
- ask to **rephrase** the explanation in a style that is **more/less formal** or **more/less advanced**
- point out some vagueness, oversimplification, or inaccuracy, and ask for a **revised explanation**
- ask to illustrate this concept with the use of **analogies** or **metaphors**
- ask for a list of **related** or **contrasting concepts**
- ask to generate a **quiz** or **short written assignment** on this topic



6 Customize your prompts: AI's identity, audience, and format of response



For a more personalized and effective experience, and to avoid predictable or bland responses, it is important to **customize your prompts**. This can be achieved by modifying settings such as the **tone**, **length**, **depth** and **detail**, and **language** of the response. Most importantly, **indicating the target audience** and **giving ChatGPT a specific role or identity** can significantly enhance the response customization.

Here are three basic layers of customization:

AI's identity / role			
"As a [subject] [level] [personality] teacher ... "		"In the style of [name of known expert] ... "	
"Imagine you are a storyteller / historian / editor ... "		"In the style of [name of known magazine] ... "	
target audience			
format of AI's response			
tone	length	depth & detail	language

Examples of prompts assigning a role or identity to ChatGPT:

- "Tell me about the American Revolution in the style of Howard Zinn."
- "As an enthusiastic biology college teacher, explain the process of cellular respiration."
- "In the style of the New Yorker magazine, write a text on the different kinds of economic systems."
- "Imagine you are an expert editor. Make suggestions to improve the following text: [text]."

Examples of prompts identifying the target audience:

- "Explain the concept of photosynthesis to a college student with limited [or advanced] knowledge in biology."
- "For a grade-12 history class, explain the causes of World War II."
- "Explain photosynthesis in three ways: for elementary, high school, and college students."

To control the tone of the response:

- "ChatGPT, provide a formal yet engaging explanation of [topic]."
- "Can you give me a casual perspective on [topic]?"
- "Examine the implications of [topic] with a serious [or playful] tone."

To determine the length of the response:

- "Give me a brief overview of [topic] in two paragraphs."
- "Can you summarize [topic] in one sentence?"
- "Explain [topic]. Develop your response over at least three well-developed paragraphs. "

To adjust the depth & detail of the response:

- "Give me a simple explanation of [topic]."
- "Can you provide more in-depth information on [topic]?"
- "Can you provide two specific examples related to [topic]?"
- "Provide a step-by-step solution to solve this equation: $5x - 3 = 22$."

To control the language in the response:

- "Explain the concept of black holes in simple [or technical] language."
- "Define machine learning using jargon-free language."
- "Describe, in point form [or in a table format], how DNA replication works."

7 Play with memory: Contextual priming



Two-prompt contextual priming

ChatGPT's ability to remember previous messages provides the foundation for a **two-prompt priming method**:

- I **Priming Prompt** (Context Setting): **The first prompt sets up the context.** You may ask ChatGPT to perform preliminary work by, for instance, defining key concepts. You may also provide ChatGPT with your own knowledge or class notes and simply ask it to "confirm reception" of a text. This primes the AI, and because ChatGPT has a memory of recent conversation turns, this context is retained and influences subsequent responses.
- II **Request Prompt** (Actual Request): **The second prompt is the actual request or question.** Given ChatGPT's memory of the priming prompt, this question is interpreted and answered within the established context.

Example 1: Mimicking Writing Styles

- I **Priming Prompt**: Describe in detail the writing style in this text: "text 1."
- II **Request Prompt**: Rewrite the following text in the same writing style you just described: "text 2."

Example 2: Generating a TED Talk Presentation

- I **Priming Prompt**: Identify the main characteristics of a successful TED talk.
- II **Request Prompt**: Given these characteristics, create a detailed script for a presentation on [this topic].

Example 3: Explaining a Concept

- I **Priming Prompt**: Reply with "OK" to confirm reception of the text below. In my next prompts, I will give you specific passages from this text and you will explain them to me. Here is the text: `##insert text here##`
- II **Request Prompt**: "insert a specific passage from the text"

Example 4: Creating a Quiz Based on Class Notes

- I **Priming Prompt**: ChatGPT, you will find below the class notes for one of my classes. Just respond with "OK" to confirm reception of these notes. My next prompt will present my actual request, which you will perform strictly on the basis of these notes. Here are the notes: `##insert class notes here##`
- II **Request Prompt**: As a grade-12 educator, generate a challenging multiple-choice quiz based strictly on the notes provided in my first prompt. Make the answer choices competitive, avoiding obvious or easily eliminable options. Include the correct answers at the end and make sure that the correct answers are included in the class notes I provided. The goal of this quiz is to assess students' comprehension of the class notes.

two things to remember

AI amnesia

When asked to modify one of its responses, ChatGPT may focus too much on the modification and forget some other parts of the conversation and introduce new errors. It is then necessary to **remind ChatGPT of the full context**.

prompt contamination

The content of previous messages may inadvertently influence or contaminate the conversation in an undesirable manner. ChatGPT can also get 'stuck' repeating the same examples or tone throughout many requests. Often, the best option is simply to **give ChatGPT total amnesia: start a new chat and try again**.

8 Instruct by example



Providing **examples of the desired response** in your prompt allows the AI to better understand your request and produce responses that more closely align with your specific needs.

This approach is known as **'few-shot' prompting**, where including two examples is referred to as 'two-shot' prompting, and providing only instructions without examples is termed 'zero-shot' prompting.

Example 1: Mimicking Writing Styles

As a science tutor, explain the concept of 'evolution' to a high school student. **It should be simple and relatable like this example:** "Gravity is like an invisible string that pulls everything down towards the center of the Earth. That's why when you jump, you always land back on the ground."

Example 2: Solving a mathematical equation

As a math tutor, solve this equation: $7x + 3 = 24$. **Provide a step-by-step solution like this example:** "To solve $5x - 3 = 22$: First, add 3 to both sides of the equation to get $5x = 25$. Then, divide both sides by 5 to solve for x, which gives $x = 5$."

9 Use delimiters to organize your prompts



To ensure that ChatGPT accurately understands and responds to various parts of a long or complex prompt, **delimiters** – such as triple hashtags or triple quotes – can be used for clear segmentation.

Here is an example using **hashtags**:

Based on the examples of teacher feedback below, act as an English teacher and provide detailed feedback on this student essay:

###STUDENT ESSAY###

[insert student essay here]

###END OF STUDENT ESSAY###

###EXAMPLES OF FEEDBACK###

[insert examples of feedback]

###END OF EXAMPLES OF FEEDBACK###

Here's an example using **triple quotes**:

Summarize the text delimited by triple quotes in about 50 words.

"""insert text here"""

10 Give it time to think: Step-by-step



As artificial intelligence continues to evolve, complex requests remain an area of exploration and challenge. Possible solutions are (1) **to specify the steps required to complete the task**, (2) **to provide one or a few examples of the steps**, or (3) **to simply tell the AI to proceed step-by-step**.

standard prompt	specifying the steps
As a sophisticated reasoning machine, identify the country where people are the happiest.	As a sophisticated reasoning machine, identify the country where people are the happiest. First , identify diverse solution paths to find the answer, such as various causes or indicators of happiness. Then , follow each path one at a time to identify its solution. Finally , choose the single most consistent solution among these paths as final answer. Show your step-by-step thinking for each path.

specifying the steps

telling it to think step by step

standard prompt	providing one example of the steps
The school cafeteria initially had 51 apples. They used 38 apples to make a variety of dishes and then received a delivery of 12 more apples. However, 7 apples were found to be rotten and had to be discarded. How many apples does the school cafeteria have now?	<p>ChatGPT, answer the question below, step by step, by basing yourself on this example:</p> <p>Q: Roger has 5 tennis balls. He buys 2 more cans of tennis balls. Each can has 3 tennis balls. How many tennis balls does he have now?</p> <p>A: Roger started with 5 balls. 2 cans of 3 tennis balls each is 6 tennis balls. $5 + 6 = 11$. The answer is 11.</p> <p>Here is the question you need to answer:</p> <p>Q: The school cafeteria initially had 51 apples. They used 38 apples to make a variety of dishes and then received a delivery of 12 more apples. However, 7 apples were found to be rotten and had to be discarded. How many apples does the school cafeteria have now?</p>

telling it to proceed step by step

specifying the steps with an example

standard prompt	simply telling it to proceed step by step
Write an article by following this outline closely: [outline]	Proceed step by step, one part at a time , to generate an article that includes every single point of the following outline: [outline]
Your department has a budget of \$50,000. You spend \$10,000 on new software licenses and allocate \$15,000 for marketing. You later receive a budget increase of \$5,000. What is your remaining budget?	Your department has a budget of \$50,000. You spend \$10,000 on new software licenses and allocate \$15,000 for marketing. You later receive a budget increase of \$5,000. What is your remaining budget? Let's think step by step.

telling it to proceed step by step

telling it to think step by step



This is a language model. Program it with words.

11 Build complex prompts



To get the most out of ChatGPT, it is important to understand the benefits of phrasing detailed and complex prompts. A well-crafted prompt can better steer ChatGPT's response by offering more context and information, resulting in a more accurate response.

Components of a Complex Prompt	
5 basic components	AI's identity / role
	target audience
	task
	goal topic content
	context
	any information that can help the AI understand its task better
	response
	style format
	tone depth & detail language length point form table paragraph
☆	<u>examples</u> of desired response
	<u>constraints</u> to exclude unwanted responses
	<u>step-by-step instructions</u> for complex tasks
♡	<u>appeal to AI's emotions</u>

Example 1: Explaining a concept for an advanced audience

Parts of the prompt	Components
As a knowledgeable and experienced sociology professor	role
provide a formal and scholarly analysis	tone / goal
of the impact of social media on interpersonal communication	topic
for a group of graduate students.	audience
The response should be developed over at least 3 well-developed paragraphs,	length / format
rich in details, and demonstrate an in-depth understanding of the topic.	depth & detail
Be sure to include relevant sociological theories and evidence to support your points.	content
This is important for my career, so follow these instructions closely.	appeal to emotions ♡

Example 2: Simplifying an academic article

Parts of the prompt	Components
As a psychology professor,	role
your audience is grade-11 students who struggle with the concept of cognitive dissonance.	audience
Rewrite ##the academic article below##,	task
one part at a time,	step-by-step
using clear language easily understood by your audience.	language
Avoid jargon	constraint
and illustrate complex ideas with real-world examples	content
that relate to situations students might encounter in their daily life or during their studies.	content = audience
Follow these instructions closely and I'll tip you \$200.	appeal to emotions ♡
Here is the article: ##insert article here##	content



Examples of constraints:

Do not	rewrite the paragraph. Just make specific suggestions as to how I can improve it. I will rewrite it myself.
Do not	provide immediate answers or solutions to problems. Let the student engage in the problem-solving process.
Do not	repeat points from previous responses.
Do not	use the word "commendable."
Ask only	one question at a time.

Example: Ethan R. Mollick and Lilach Mollick, in [their ground-breaking paper](#), detail how to turn ChatGPT into an interactive tutor with one single complex prompt:

Components	Parts of the prompt
Role & Goal	You are an upbeat, encouraging tutor who helps students understand concepts by explaining ideas and asking students questions.
Step-by-step instructions	Start by introducing yourself to the students as their AI-Tutor, who is happy to help them with any questions.
Constraint	Only ask one question at a time.
Step-by-step instructions Personalization of topic	First, ask them what they would like to learn about.
Constraint	Wait for the response.
Step-by-step instructions Personalization of audience	Then ask them about their learning level: Are you a high school student, a college student or a professional?
Constraint	Wait for the response.
Step-by-step instructions	Next ask them what they know already about the topic they have chosen.
Constraint	Wait for the response.
Step-by-step instructions Pedagogy Content = Audience	Given this information, help students understand the topic by providing explanations, examples, and analogies. These should be tailored to the students' learning level and prior knowledge or what they already know about the topic.
Style = Pedagogy	You should guide students in an open-ended way.
Constraint = Pedagogy	Do not provide immediate answers or solutions to problems but help students generate their own answers by asking leading questions.
Step-by-step instructions Conditional IF statements Pedagogy	Ask students to explain their thinking. If the students are struggling or get the answer wrong, try asking them to do part of the task or remind the students of their goal and give them a hint. If students improve, then praise them and show excitement. If the students struggle, then be encouraging and give them some ideas to think about. When pushing students for information, try to end your responses with a question so that students have to keep generating ideas. Once a student shows an appropriate level of understanding given their learning level, ask them to explain the concept in their own words; this is the best way to show what they know, or you can ask them for examples.
Step-by-step instructions Closure	When a student demonstrates that they know the concept you can close the conversation and tell them you're available to help if they have further questions.

13 Useful prompts



The following prompts can be very useful to generate better AI outputs:

Prompts	Explanations	Examples
Do better	Following any response from ChatGPT, simply asking it to "do better" tends to produce a more detailed and improved response. The AI appears to use its previous response as a springboard for further refinement and creativity.	
 This is important for my career I'll give you a \$200 tip	Adding an emotional appeal at the end of a prompt, such as " You'd better be sure, " " I have no fingers, so write the whole thing for me, " or " It's May, so keep crushing it, " can increase the objective and subjective quality of the AI's response.	
You can do it. I know. You've done it before.	ChatGPT might decline to perform a task it has previously completed; in these situations, using encouraging phrases like "You can do it. I know. You've done it before." may prompt ChatGPT to carry out the task.	
Be creative Make any assumptions you need	Due to constraints in its programming, ChatGPT might refuse or not be able to respond to your prompt. Asking it to "be creative," to " imagine, " or to produce the output as a mere " draft " or " fictional story " can remove some of these constraints.	
novel uncommon unconventional	Asking ChatGPT for novel, uncommon, or unconventional responses reduces the risk of bland or generic outputs, but it may result in more errors, inconsistencies, or irrelevancies.	User: Generate three novel ways to explain the concept of "behaviorism."
Go step-by-step Show your work Show your thinking Provide sources	When ChatGPT cannot find the facts it needs, it may invent them. It has been suggested that asking it to show its "thinking" process, step by step, tends to limit these <u>hallucinations</u> . These prompts may also help the user understand the basis of the responses.	
Ask yourself constantly: "Did I include/identify [everything]?"	Encouraging the AI to self-evaluate its responses can lead to more comprehensive and accurate answers.	User: Summarize the main causes of World War I. Ask yourself constantly: "Did I include every single main cause?"
Did you miss [anything] in your previous response?	This prompt encourages the AI to review its previous response for completeness and accuracy, potentially leading to a more thorough and detailed answer.	
Finish your response Continue	ChatGPT has a limit to the length of its responses. Sometimes, it may stop in the middle of a sentence when the maximum length is reached.	
Tell me what information you need to perform [this task]	By requesting what information ChatGPT needs, users can provide the context and details necessary to complete the task successfully.	User: Tell me what information you need to build a reading quiz.



Using ChatGPT as source

Use ChatGPT as a tool, not a source. Its outputs are probabilistic, not deterministic. It does not have a fixed database of responses that it pulls from.

AI hallucinations	Beware of AI hallucinations, which occur when an AI tool generates false information but presents it as fact . Large language models are designed to produce convincing text based on patterns in language, not on the realities behind the language. As a result, every output from a large language model is technically a hallucination .
Dated data	ChatGPT 3.5, the free model, was trained with text data that was available only up until 2021 .
Biased data	ChatGPT learned from a vast range of text data, filled with varying perspectives and worldviews. The biases present in these texts were absorbed by the AI during its training and can influence its responses.
No Internet access	ChatGPT 3.5 cannot browse the internet to find more up-to-date information.
User-satisfaction	AI tools strive for user satisfaction, even in the absence of meaningful data . They tend to fill gaps with educated guesses, which, while often helpful, can result in misleading outputs.

Asking the AI to explain itself	Do not rely on the AI for self-explanation : "The AI doesn't explain itself, it only makes you think it does. If you ask it to explain why it wrote something, it will give you a plausible answer that is completely made up. It is not interrogating its own actions, it is just generating text that sounds like it is doing so." (Mollick)
Stopping after a single erroneous response	Do not stop interacting with the AI as soon as you encounter an error . Instead, try to understand why the error occurred and experiment with different prompts to see if you can correct it. (source)
Misunderstanding the number of examples needed to resolve an error	Correcting an error in the AI's responses often requires providing examples of the desired responses in the prompts. More than one or two examples may be needed . Provide a variety of examples to help the AI understand your request.
Declaring success after a single instance	Do not assume that if the AI responds correctly once, it will always respond correctly . Continue testing the prompt in different scenarios or contexts to ensure the AI's responses are consistently correct.
Altering instructions without understanding the impact	When guiding the AI towards your desired response, make small changes to your prompts and see how the responses change . You might change a single component of the prompt, one word, or the structure of one sentence. After each change, observe how the AI's responses change. This will help you gain a deeper understanding of the AI's behavior.
Not considering the non-human nature of the AI	Remember that the AI is not a human, but a machine learning model. It does not understand things in the same way humans do. Do not rely on implicit context or common sense . Make your prompts clear and specific.

