

How to Direct GenAI (by Celine Rich-Darley, SBS)

1.	Clarity and Specificity:	Be clear and specific about what you're asking. Vague or ambiguous prompts can lead to equally vague responses. The more specific the prompt, the more targeted and useful the response will be.
2.	Contextual Information:	Provide relevant context. If your question or task requires background information, include it in the prompt. This helps the model understand the full scope of what you're asking.
3.	Concision:	While context is important, it's also good to be concise. Overloading a prompt with too much information can be counterproductive. Aim for a balance.
4.	Sequential Prompts:	If you're working on a complex task, break it down into smaller, sequential prompts. This step-by-step approach can be more effective than a single, complex prompt.
5.	Positive Framing:	Frame your prompts positively, especially when seeking solutions or ideas. Positive framing often leads to more constructive and creative responses.
6.	Open-Ended vs. Closed-Ended:	Decide whether your prompt should be open-ended (inviting a range of responses) or closed-ended (looking for a specific answer). Use open-ended prompts for brainstorming and creative tasks, and closed-ended prompts for specific queries. Don't use leading questions or you will get misleading answers. The models are always trying to agree with you to be helpful.
7.	Anticipate Misinterpretations:	Be aware of how your prompt might be misinterpreted and try to phrase it in away the minimises potential confusion. Be clear about what you want.
8.	Iterative Approach:	Treat the process as iterative. Based on the responses you get, refine your prompts to get closer to the desired outcome. Chain of thought where the model is prompted to solve complex problems through a series of logical steps.
9.	Ethical Considerations:	Avoid prompts that could lead to harmful, biased, or inappropriate content. Beware of false positives, especially when dealing with non-English names and words or output from search engines. Always check.
10.	Leveraging Examples:	If applicable, include examples in your prompt to guide the model's response.
11.	Understanding Model Limitations:	Including the model's training data cut-off, lack of access to real-time information (if applicable), and areas where it might not provide accurate or reliable responses.
12.	Be Firm:	Tell it to do better and try again. Don't take no for an answer.

AI Tools

ChatGPT (<https://chatgpt.com> – if the link won't open, copy and paste it into your browser)

Tasks preface:

When trying out the below exercises, see how ChatGPT performs when you give it a persona and when you don't e.g. in one prompt, tell it that it's an expert in a relevant field and who its audience is, and compare its answer when you don't give a persona.

Example persona (adapt to suit your needs):

“During this conversation, please take on the role of an expert in **[fill in research field or topic of interest]**. You have extensive experience, have published several peer-reviewed papers, and presented findings at international conferences. You are known for breaking down complex concepts and providing clear, concise, and actionable insights.

My level of knowledge in **[fill in field/topic]** is **[fill in your level of knowledge]**. I want you to use specific examples and references from reputable sources to match my knowledge level. The primary purpose of your guidance is to assist in **[fill in purpose e.g. data analysis, literature reviews etc.]**.”

Example Tasks

1. Try giving ChatGPT written material you're familiar with and prompt it to summarise. How well does it do? Did it miss anything out? Did it hallucinate? Here are some links to publicly-accessible journal articles if you'd prefer to use content from those:
 - a) [Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease](#)
 - b) [The study of gesture in cognitive linguistics: How it could inform and inspire other research in cognitive science](#)
2. Ask ChatGPT to find scholarly articles or important authors on a particular topic, especially one that's relevant to your field. Does it miss out important articles or authors?
3. Upload a paper and ask ChatGPT to generate a citation for it in different styles. Were the citations malformed or missing any information? Did you test it with different models by selecting them from the drop-down, model library near the left-hand column at the top of the screen?

Elicit (<https://elicit.com/>)

Example Tasks

1. Experiment with using sorts and filters. Once you've entered a prompt into Elicit and received a response, you'll find sorts and filters above the columns for "Paper" and "Abstract".
2. Add columns. Under "Manage columns", create custom columns for searching papers for the data you're interested in. AI will check each paper and tell you if your data was found or not.
3. Open a paper from the list of papers that Elicit has given you. Check if the abstract/introduction within that paper matches the abstract summary given by Elicit. Are there discrepancies?

Perplexity (<https://www.perplexity.ai/>)**Tasks preface:**

When trying out the below exercises, experiment with different search models, and see how Perplexity's sources differ when toggling between "Web", "Academic", and "Social" modes. You can attach a file to go with your prompt via the paperclip icon.

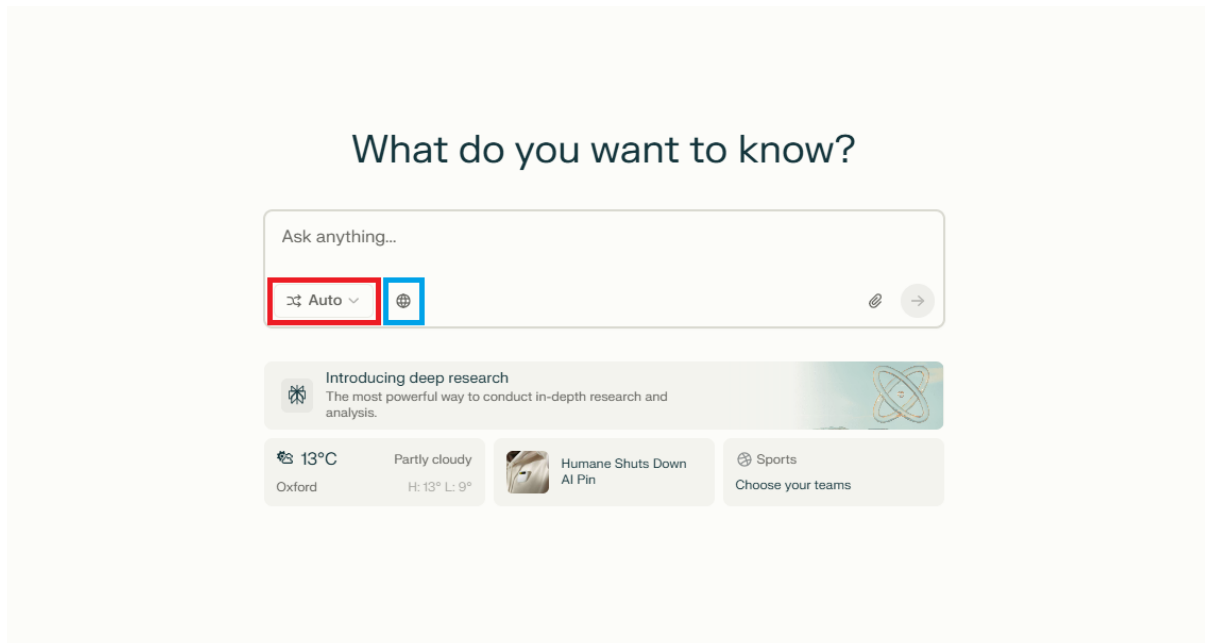


Figure 1: A screenshot of Perplexity's start screen, where users can switch between search models (highlighted in red) and set sources for search (highlighted in blue)

Also, look for any signs of hallucinations. Typical signs are:

- **Excessive hedging:** when unsure of its answer, GenAI tends to use language that avoids outright incorrect claims. This may appear as excessive use of “possibly”, “it could be argued”, “some studies suggest”, or “it may be the case” etc.
- **Inconsistent information:**
First statement in GenAI's response: “The majority of patients with schizophrenia respond well to antipsychotic medication.”

Later statement in the same response: “Studies suggest that most patients with schizophrenia have minimal improvement with antipsychotic treatment.”
- **Overly detailed facts with no sources:**
“A study conducted in 1998 by Dr John Smith at Harvard University showed that patients with schizophrenia had a 45% improvement in cognitive function after taking Drug X.”
- **Non-existent citations:** double-check the veracity of any references Perplexity provides

ROBOT Checklist:

N.B. You'll be unlikely to find information on all of the below questions in such a short time. It may be best to only consider some questions.

- **Reliability**
 - How reliable is the information about the tool?
 - Is the developer's contact information available?
 - When was the tool released/updated?
 - Are there privacy policies?
 - Are you happy with how your data will be used?
- **Objective**
 - What is the goal/objective of the tool? e.g. inform or persuade users, add to developer datasets, find financial backing
 - How transparent is the developer about their purpose?
- **Bias**
 - Is there information about how the tool has been built or the data that underpins it?
 - Are there ethical issues associated with this?
 - Are biases or ethical issues acknowledged by the developer?
- **Owner**
 - Who is the owner or developer of the tool? Are they the same? How credible are they?
 - Who is responsible for the tool? e.g. government, private company, research group
 - Who can access the tool?
- **Type**
 - Which subtype of AI is it?
 - Is the technology applied or theoretical?
 - What kind of information system does it rely on?
 - Does it rely on human intervention?

Example Tasks

Beginner

1. Look at what information is provided on Perplexity's website compared to Elicit's. What differences can you see between the two? Are there some areas of the ROBOT checklist that are barely covered by each developer?
2. Choose a broad research topic. See if Perplexity can identify recent trends or emerging areas in this field. If you can, compare its findings with Elicit.
3. Check how well Perplexity analyses and summarises a paper or other written information. How does it do? Did it miss anything out? Did it hallucinate?

Intermediate

4. Use Perplexity to gather a list of relevant articles and other resources on a topic of your choosing. Compare its results with those from traditional databases (e.g. PubMed, JSTOR). How many unique sources did Perplexity provide compared to traditional databases? Were there any notable differences in the quality of sources retrieved?