

AI Essential Q&As

Q_1: Can you tell me when to use Perplexity AI? I heard it is more like Google Scholar

Perplexity is great for when you need a quick answer to a specific question or when you want to explore a new topic. However, it does not work in the same way as search engines ([Google Scholar](#)) or citation databases such as Scopus, Web of Science. Compared to the latter, the scope of Perplexity is limited (it uses PubMed, Semantic Scholar and NIH) and is more of an exploratory tool. Ideally, it should be used as an extension of a traditional search strategy, or as a first step in exploring a topic. However, it should not be the only source of information.

Q_2: Which AI tools for academia would you recommend at the moment? Which ones do you find the best?

Currently, there are various tools available, with different strengths and weaknesses. It depends on which task you are planning to use the tool for (refining language, brainstorming, searching for literature). ChatGPT is strong in generating ideas; however, in searching for literature it tends to hallucinate. In this regard, we recommend using specific tools designed for the task at hand (Scite.ai, Research Rabbit).

For better orientation in AI tools take a look at the following NTK research guides: [AI tools for research](#)
[Tools for support writing](#)

Q_3: It is a bit unclear for me when to cite, when to just acknowledge. For instance, when using AI for refining an already written text, is it necessary to cite it as well?

If you are using the tool merely to proofread the text, it is not necessary to cite it, but it is recommended that you acknowledge the use of the tool. When it comes to acknowledging or citing your use of AI, it is essential to know and follow the particular guidelines of your university/department or your publisher. For concrete examples of AI policies, check out this [Newcastle University](#) guide or this [Taylor & Francis](#) AI Policy. Ultimately, it is important to know and follow the guidelines of your university/faculty or publisher.

The rule of the thumb is to cite anything generated by AI from scratch (image, paragraph), i.e., without having been drafted or rewritten by the user.

Q_4: How reliable is Scite_ tool? Does the assistant also produce hallucinations?

Scite.ai can be considered as one of the more reliable AI tools on the market (as of April 2025). Its advantage is that it shows specific parts of the article used to generate the output. That makes it much easier to double-check the AI generated answer, in comparison with other tools. However, it is still a tool with AI under the hood and therefore might hallucinate; being cautious is highly recommended. AI tools should be used as assistants and not as the only source of truth.

Q_5: Say, for example, that I use ChatGPT to analyze some numerical data and visualize it into a graph, to save my time analyzing it myself by building my own code. But how can we check if the AI's data analysis is true and not hallucinations? Or is it not recommended to do this?

First, it is important to consider what type of data you are planning to upload and which specific AI tool you are planning to use. It is not recommended to upload data that is considered sensitive or original, unless you are completely sure that the data is secure and will not be misused. Prior knowledge of coding is also

required to check the validity of the code. The analysis can also be influenced by the data itself (size, type, missing data, messy data) and by the prompt.

One of the tools specifically designed for data analysis is [Julius](#), which could be helpful in this respect.

Q_6: How good is AI at summarizing a research paper without leaving out key information?

The accuracy of the tool depends on both its capabilities and the quality of the prompt. In principle, the more general the prompt you use, the more general the answer you will get. If you are trying to complete a task that requires accuracy, it is recommended that you make the prompt as specific as possible to minimize the space for the tool to skip important information (see Q_7).

Also keep in mind that AI tools do not replace human critical reading, but rather provide an initial summary of the paper (objective, concepts, methods). At the end of the day, the paper should be read in the traditional way to really understand it.

Q_7: Can you share your prompt for summarizing a paper?

The following instructions have been created by Ilya Shabanov (2023) to design one's own GPT. It is customized to serve as a single prompt if you do not have access to the paid version of ChatGPT. If you do, you can follow [Ilyya's tutorial](#) to create your own "research assistant" with a bounded knowledge base to your research problem.

"Give me an executive summary of the paper that is tailored to my research using clear headings, concise language, and scientific jargon. Use markdown format and headings. Structure your executive summary using these highlighted headings. Always be critical and double-check your answer.

Use assertive language and skip explanations. Use bullet points wherever necessary. Use markdown to highlight headers and important words. The resulting document should be an assessment that can be read quickly by an expert. Make sure not to miss key facts or especially anything that is relevant to [the research questions mentioned above].

Description section:

- 1 - What is the main research questions this paper tries to answer, point out if it is novel or if the findings are surprising.
- 2 - Describe the data the paper is using: sample, location, and time. [bulletpoints]
- 3 - Describe the methods the paper is using. What exact type of statistical modeling is employed? [bulletpoints]
- 4 - Critically point out the findings of the paper. Identify the aim of the paper and the hypothesis or idea presented there.
- 5 - Compare the results to the open questions described above. These are the areas that this paper is making a contribution to the most. Name the main questions it tries to answer. Do not mention questions this paper has no relation to.

Question Section: [relevant only for own GPT]

- 6 - Is this paper relevant to me and why?
- 7 - How does this paper contribute to my dissertation project?
- 8 - What are the main weaknesses of this paper?
- 9 - What are the issues the authors failed to address?
- 10 - Should I read the paper?"

Remember that all prompts require tinkering and should be refined to suit your discipline/task! All AI output should be checked for factual accuracy (including bibliographic citations).

Shabanov, I. (2023). Tutorial: Building your own custom ChatGPT for academics. The Effortless Academic. Retrieved April 4, 2025, from <https://effortlessacademic.com/tutorial-building-your-own-custom-chatgpt-for-academics/>

The prompt was tested on the paid version of ChatGPT (April 2025); in the free version, the accuracy of the output may vary. [NotebookLM](#) can be used as an alternative to the free version of ChatGPT.