Institute of Cognitive Science

How to responsibly use ChatGPT and other AI tools to support your learning

A Student Guide

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Large Language Models such as OpenAI's ChatGPT and other AI tools have recently become powerful enough to become a useful resource for academic teaching and learning even for teaching staff and students who have no background in programming. At the same time, their broad availability and applicability, also in the context of academic coursework, requires a common code of conduct, a set of usage guidelines, that enables us to sensibly use AI tools to improve academic teaching and learning, rather than to replace it. The guidelines at hand are based on the recommendations provided by Gimpel et al. (2023), and also took some inspiration from Spannagel (2023).

Guideline 1: Respect the law and university regulations

In case you plan on making use of AI-based tools, in all contexts, make sure that this usage complies with the local laws. For example, uploading a published academic article or book or copying text from published work into the prompt of web-based AI tools may involve a violation of copyright laws.

Moreover, certain ways of using AI-based tools in the context of courses or thesis projects may violate regulations of the university, the examination regulations of your course of studies, or rules set up by the lecturer(s) of the particular course in question. So, familiarize yourself with those regulations, and talk to the lecturer(s) or thesis advisor(s) about the details regarding the usage rules in the course or project.

Guideline 2: AI tools can be used to support your learning process, but not to replace it

AI tools can be a great resource to assist you in the learning process, and may be used for various purposes unless this is in conflict with Guideline 1. Here are a few options:

- You may use AI tools to aid you in the writing process (e.g., generate potential essay headlines or suggestions for structuring your text as an inspiration for your essay or project report, generate suggestions for paraphrasing a particular statement, proofreading your essay).
- You may use AI tools as a learning partner (e.g., create mind maps or flashcards, self-test knowledge, and to explain concepts).
- You may iterate and converse with AI tools (e.g., ask about earlier statements or a clarification about specific terms).
- You may summarize material with AI tools to get an overview of what might be useful to learn ore about (e.g., learning material, paper, videos).
- You may boost your coding with AI tools (e.g., help with syntax, debugging, code explanation, code examples).

The guiding idea always has to be that your usage of AI tools helps your learning process. You are a student at the University to learn and improve your knowledge and academic skills. AI tools may be used to improve your learning, to make it faster or to enrich it, but never to replace your learning process.

Especially in the case of writing essays or reports, it is usually not acceptable to just copy sentences or even passages generated by AI tools into your text without marking them as such. There are of course cases where you may copy the output of an AI tool into your text in order to further discuss its contents or implications, just like you would usually quote a sentence or passage from another author's book or journal article and then further discuss the claims made. Also, if you use AI tools for spellchecking or checking for grammatical mistakes, this is perfectly fine unless it conflicts with Guideline 1.

The guiding idea always has to be that *you* are the author of the text, the text needs to reflect *your* line of thought, and *you* have to be able and willing to defend the claims made in the essay or report you hand in. AI tools can produce sometimes quite impressive texts, but they cannot be authors or co-authors with all rights and liabilities that come with being an author. It is *your* work that is to be evaluated by your lecturer(s) or thesis advisors, not the work of an AI tool.

Guideline 3: Do not trust AI tools

AI tools such as Large Language Models (LLMs) are usually trained to generate well-written text, rather than true statements. LLMs that are trained with texts written by humans that have all kinds of biases and include false claims, the AI tool will very likely reproduce such biases and false claims. It might also just make up all kinds of false claims that, for an ignorant reader not familiar with the topic, might sound absolutely fine. Also, when sources are referred to, those proclaimed sources might not exist at all; or, if they do exist, they might not make the claims they are supposed to make.

So, when using AI tools in your learning or writing process, always use trustworthy sources such as scientific books or journal articles to check whether the statements produced by AI tools are indeed correct. Since the output of an AI tool does not satisfy scientific standards of reliability, is also not to be considered a citable source.

Guideline 4: Be transparent about your use of AI tools

When you use AI tools in your project or in writing your project report or essay, always transparently indicate which AI tool was used for which purpose. To do that, add a section to your report or essay in which you report all uses of AI tools in the process. Here are a few examples:

- I used AI tool *W* to provide inspiration for potential research questions for my essay.
- I used AI tool *X* to make suggestions for potential introductory paragraphs on the topic of my essay, and then combined some of the ideas to write my own version after checking the statements made using the reliable sources indicated in that paragraph.
- I used AI tool *Y* to make suggestions for shortening section 2 of my project report.
- I used AI tool *Z* to help debugging the Python code for the data analysis discussed in the Methods section of my project report.

Guideline 5: Hand In a declaration of authorship

With your essay or project report, always hand in a *signed* declaration of authorship (see the last page of this document).

Summary

Before and when using AI tools, please consider the following:

- Review and follow the guidelines in the university's or the course's rules and regulations for generative AI, large language models, and other AI tools, as well as general rules for citing and quoting your sources and good scientific practice.
- Understand the capabilities and limitations of AI tools.
- Determine whether the assignment involves steps in which using AI tools is sensible to support your learning or writing process. If you are unsure, ask your lecturer or thesis advisor.
- Always check the output of AI tools for correctness and consistency. Never trust the output of an AI tool.
- Never just copy text generated by an AI tool into your writings without clearly indicating it as such. Just like copying text from another author without proper indication, this is a form of plagiarism.
- Always transparently document your use of AI tools, and hand in a declaration of authorship (see the last page of this document).

References

Gimpel, H., Hall, K., Decker, S., Eymann, T., Lämmermann, L., Mädche, A., Röglinger, M., Ruiner, C., Schoch, M., Schoop, M., Urbach, N., Vandirk, S. (2023): Unlocking the Power of Generative AI Models and Systems such as GPT-4 and ChatGPT for Higher Education: A Guide for Students and Lecturers. University of Hohenheim. Retrieved October 14, 2023, from https://digital.uni-hohenheim.de/fileadmin/einrichtungen/digital/Generative_AI_and_ChatGPT_in_Higher_Education.pdf

Spannagel, C. (2023). Rules for Tools (v2.2). PH Heidelberg. Retrieved February 9, 2024, from https://csp.uber.space/phhd/rulesfortools.pdf

Eigenständigkeitserklärung / Declaration of Authorship

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Name, Vorname (Druckbuchstaben)/ Full Name (block letters)

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Matrikelnummer / student number

Die Inhalte der hier vorgelegten Leistung geben meinen eigenen Wissensstand, mein eigenes Verständnis und meine eigene Auffassung zum bearbeiteten Thema wieder. Falls KI-Tools eingesetzt wurden, habe ich deren Einsatzweise und -zweck transparent angegeben. Darüber hinaus habe ich alle meine Quellen akademischen Standards entsprechend ausgewiesen. Ich bin bereit und fähig, die hier erläuterten Inhalte zu erklären und die entwickelten Standpunkte zu vertreten. Die vorliegende Leistung wurde weder zum Teil noch vollständig für einen anderen Kurs an dieser oder einer anderen Universität eingereicht.

The content of this coursework represents my own knowledge, my own understanding and my own perspective on the topic. In case artificial intelligence tools were used, their way and purpose of usage has been made transparent. Moreover, I have cited all my sources in accordance with academic standards. I am ready and able to explain and defend the positions developed in this coursework. This coursework has not been submitted, either in part or whole, for another course at this or any other university.

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