



## University of Ljubljana's recommendations on using artificial intelligence

The University of Ljubljana encourages and promotes constructive and **responsible use** of artificial intelligence methods and tools. However, it also **draws attention to the dangers and pitfalls** of using these tools in research, art and society in general. We seek to encourage and develop an ethical, creative and safe use of artificial intelligence tools. We understand that artificial intelligence is not always generated separately from the socioeconomic and cultural environment, and, in this respect, **is not always a neutral technology**. It provides an **opportunity for social development and the development of research**, but it also raises the fundamental issues of ethics in academic work, academic integrity, and standards in science and research. The academic environment should certainly not avoid using new tools resulting from technological development, but we advocate their responsible use, which can lead to advances in society as a whole.

AI tools change with the development of technology itself. AI is generally understood as the capability of a machine to carry out tasks that humans perform using their intelligence; for this, the machine uses processes analogous to human thinking, learning, planning, deduction and creativity. By using machine and/or human input data, AI is acquiring the **capability of influencing the environment. By producing results in the form of forecasts, recommendations or decisions for a specific set of objectives**, it is actively entering the socio-political, economic, cultural and scholarly environment. By allowing us to find new answers and solutions in various areas or to find answers more easily and perhaps even obtain more precise answers to our questions (e.g., in medicine), AI has enormous potential to provide benefits to both individuals and society as a whole. At the same time, the use of AI raises a variety of issues related to the ways of applying social power, as well as the usefulness (and correctness) of answers provided by AI tools (such as the importance of the objectivity or subjectivity of an answer in treating a patient). This shows the need to establish a suitable legal and ethical framework that must be based on the inclusion of the widest possible network of stakeholders and the public.

The University of Ljubljana is already **using** machine learning methods and AI. **We recommend our staff and students consider the following when using AI:**

1. **Students and teachers** can use AI as a tool to support learning and acquiring new knowledge and skills because it can often facilitate study (e.g., editing and improving texts, computer programming, translation, data analyses and interpretation, producing summaries and draft texts, generating search summaries, graphs, figures, visualisations, etc.). However, they should be aware that the **information obtained in this way may not always be correct** or accurate; it may be misleading, discriminatory, tied to predominant views, stereotypical, and so on. Consequently, it is vital that the use of these tools is transparent and responsible, and that the **accuracy** of the information generated is **checked at all times**, because AI is also known to generate fabricated information (a

phenomenon known as an “artificial hallucination”), especially when it comes to highly specialised expertise. The **end user bears the responsibility** for the ultimate accuracy, potential bias and other aspects of all the results, projects or other works produced with AI tools and techniques.

2. **Inappropriate use** of AI comprises the following:
  - Direct copying of a text that was largely created using AI without citing its use;
  - Using AI and similar tools when they are prohibited by the teacher;
  - Using AI in open book exams, unless explicitly allowed.
3. AI can also be a useful teaching aid for **teachers and researchers**, so think about how you can use it in teaching and do not reject its use; draw your students' attention to using AI with integrity, set clear rules for using machine learning and AI for fulfilling course requirements, and draw the students' attention to the tools' shortcomings, ethical issues and transparent use. Use AI in research transparently and critically, and by being aware of its limitations. Being responsible is key.

The use of AI tools also poses challenges **related to copyright and intellectual property rights, data bias and privacy**. The rapid development of AI demands a rethinking of some of the most basic foundations of democracy, the role of digital technologies in increasing global social and economic inequalities and the environmental crisis, and ultimately the limits of human capacity. AI tools can support, improve and facilitate teaching, and they can also support research and art (e.g., research summaries, project planning, language editing, creating multimedia elements, etc.).

Certain **plagiarism checkers** (e.g., Turnitin) can already estimate the probability of AI use in a submitted work, but these estimates are not entirely reliable.

To preserve academic integrity in using these tools or other machine learning methods it is **vital to adhere to the same ethical standards** as with any other type of academic work. **Among other things, this includes:**

- *Properly citing the tools* that have significantly contributed to creating the work, and recognising the role of AI in the research and artistic process;
- *Checking and critically assessing the results* created by AI systems, and understanding their limitations and potential bias;
- *Taking responsibility for the work's content and citing primary research sources* – among other things, this strengthens the importance and role of digital literacy and cultivates critical thinking;
- *Responsibly uploading data, information and documents into AI tools*. Do not upload any personal data, confidential documents, documents for which you do not have the required authorisations or are protected by copyright, and so on.

The **transparency** of the process and results of working in an academic environment, including the use of AI-based tools, is important for maintaining trust in the academic community's work and its authenticity. This requires the proper **citation of references** in using texts that have been largely created by AI. Example of a citation:

Following APA style:

- For example, in-text citation of ChatGPT: (OpenAI, 2023) or OpenAI (2023);
- Full citation in the reference list:  
Company (year of use). *AI name* (version) [descriptor]. URL

An example for ChatGPT:  
OpenAI. (2023). *ChatGPT* (10 Aug. version). [Large language model] <https://chat.openai.com/>

**Transparency of use** can and should be enhanced by:

- Explaining or adding a note on how you have used AI (e.g., generating figures, answering a question, etc.);
- Explaining why you have used AI (e.g., to make a comparison with your own literature review, explain a selected concept, and so on).

By following these principles, the University of Ljubljana staff and students can **use the advantages of AI and at the same time maintain our academic integrity and promote the responsible use** of AI, which can also have a positive impact on the wider community. Most of all, it is vital to bear in mind that the **end user bears the responsibility** for the ultimate accuracy, potential bias and other aspects of the results, projects or other works produced with AI tools and techniques.

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