Introduction to Artificial Intelligence (AI) content creation tools and university study: Student Guide

This guide provides an introduction to Artificial Intelligence (AI) content creation tools, e.g., ChatGPT for students. It is intended to help you to understand these tools, and the positive and negative impact they may have on your studies, so that you can make informed decisions about whether or not to use them.

What is an AI content creation tool?

Artificial intelligence (AI) content creation tools cover a range of skills e.g., writing, art / design, computer coding. They create content based on questions that the user inputs to the tool. Interacting with it feels like talking to another person. Previous AI tools felt a bit robotic and content they created could clearly be identified as not produced by a human, developments in technology now mean that the content appears much closer to what a human might produce, at least at first glance.

There is a wide range of AI content creation tools, you may have heard of some of them e.g., ChatGPT, OpenArt, Dalle-2, Hugging Face. You have probably already used some of these tools without even realising, e.g., Microsoft Editor.

How do AI content creation tools work?

AI *writing* tools work by simulating natural conversation and writing content by predicting the next word in a sequence based on their immense database. They can develop well-structured paragraphs or papers based on this method. These tools continue to learn from user responses and other available data e.g. from the internet.

AI *visual* content creation tools such as OpenArt, Dalle-2, Hugging Face, work in a similar way but based on image/shape recognition combined with natural language processing.

Why is this a current issue?

Whilst AI content creation tools have been available for some time, awareness of these tools, particularly ChatGPT, has risen considerably since the end of 2022 as more people have begun using them and the media have become interested in their use. Part of the current issue is about how these tools can be used positively e.g. to support learning, or negatively e.g. to cheat.

AI content creation tools are available for free – that's a good deal, isn't it?

Before using any free tool you should read the terms and conditions carefully. It is rare for a tool or app to be completely free. Most tools / apps that are free make money in other ways e.g. advertising,

taking your personal data and using or selling it. Some AI content creation tools e.g., ChatGPT, have made the tool temporarily available for free as part of their research and development process. Once they have harvested enough data or finished their research they may remove the free access.

Think carefully and critically about the risks, benefits and ethics before you make use of any technology, including AI content creation tools.

Are there any risks with using AI content creation tools?

AI writing tools work on language prediction model, they cannot think for themselves. This means that the tool might write a very plausible answer with correct spelling and grammar and present it as a 'fact', but it may be untrue. Likewise AI writing tools can create computer code, but they are not always correct. Relying on an AI content creation tool risks using or perpetuating untrue or misleading information. As with other kinds of information from the internet (e.g. Wikipedia) it is essential to think carefully about where the information has come from and the extent to which it can be relied upon.

If you use an AI content creation tool as part of your academic work, you need to be very careful that you do not breach the [Student Discipline Policy](#) by submitting work that is not your own.

Are there any ethical issues with using AI content creation tools?

There are several ethical issues with AI content creation tools, these include:

- Due to bias in its training and the way it was trained, ChatGPT and other AI tools do not always provide ethical, unbiased answers and can provide answers which perpetuate bias and discrimination, e.g. cultural, racial, gender.
- Because of these biases in the data AI tools can provide answers which perpetuate racism, sexism, ableism, and other harmful forms of discrimination.
- Media reports suggest that the labour practices of the companies that create these tools are sometimes problematic, relying on low paid or unpaid labour to provide human checking of content in the dataset. It is also worth bearing in mind that when you use the free version of these tools you are providing unpaid labour to the company which will utilise your questions and responses to further train the tool and respond to others.

Can I use AI content creation tools in my assessments?

Your assessments are required to be solely your own work, or in the case of group work, solely the work of your group. They are a means for you to demonstrate what you have learned. Submitting work which is not your own is plagiarism i.e. cheating. If you were to use an AI content tool to draft / write your assessment, then the assessment would not be your own work. You would be cheating yourself of valuable learning opportunities if you did this and would not be demonstrating a true representation of your knowledge.

The Heriot-Watt [Student Discipline Policy](#) clearly states that submitting work which is not your own is academic misconduct and a form of cheating. The penalties imposed for academic misconduct reflect the seriousness of this conduct. Being found to have committed academic misconduct has potentially severe consequences for your studies and future employment.

If you do use an AI content creation tool to develop your assessment, you should ensure that you identify which parts of the assessment were created in this way. Acknowledging your sources is a key aspect of good academic practice and protecting academic integrity.

If you are under pressure with an assessment and are thinking about using an AI tool to do it for you, there are other means of support including:

- your Course Leader / Course Team,
- Personal Tutor,
- Effective Learning Team,
- Liaison Librarians, and
- Wellbeing Team.

They can discuss your circumstances and advise you on how best to move forward with your studies without reverting to academic misconduct that may impact on your future studies and employability.

Can I use AI content creation tools to support my learning?
There is potential for AI content creation tools to support learning. For example, you might use them:

- as a starting point for research in the same way that you might use a search engine (although bear in mind that, as with other information found on the internet, the answers provided by the AI tool may be untrue),
- to develop your questions about a topic, refining your questions to focus more on the topic and developing your critical thinking in the process.

If you choose to use such a tool:

- Remember to check that you are comfortable with the terms and conditions before you do so (e.g., are you happy that your personal data might be shared or sold to others?).
- Be aware that the tool may give you answers which are incorrect, illogical and / or biased. You will need to use other sources and your own understanding of a topic to confirm the accuracy of any information provided.
- Ensure that you clearly identify any work in an assessment which is not your own work e.g. if you ask questions of an AI tool and use the answers, then this would not be wholly your own work and should be identified and referenced appropriately. At present there is not a standard format for referencing an AI tool. Until this is available, it is suggested that you provide a copy of your AI conversation as an appendix and reference it as a personal communication following the referencing system used in your course.

What is Heriot-Watt University's position on using AI content creation tools?

At Heriot-Watt University we wish to make the most of opportunities for innovation in learning and teaching whilst balancing this with managing any challenges that the technology presents. We are reviewing the developments in AI content creation tools and will continue to explore how best to harness these tools positively, ethically and safely for learning and teaching. The University is also exploring technologies which can identify AI generated content and will take responsible decisions on how to ensure assessment security and integrity as appropriate. We will keep students and staff updated and supported on developments as they happen.

The University does not currently have a licence for any AI content creation tools and does not encourage their use at this time.

What's the future of AI content creation tools?

At present the future of AI content creation tools is not completely clear. They are likely to continue developing and may well become part of recognised software packages such as those used in universities. They may also be tools which universities purchase and provide to students. We will continue to closely monitor developments in this area and keep staff and students updated where appropriate.

Where can I find more information?

Skills hub provides a wide range of support to help you develop key academic skills including:

- Academic integrity and plagiarism
- Citing and referencing
- Critical thinking
- Artificial intelligence guidance
- LTA Student Guide: Making the most of assessment and feedback

Heriot-Watt University Student Discipline policy and procedures

Heriot-Watt University plagiarism guidance

V1 Published: February 2023