



Generative AI guidance for postgraduate researchers

Contents:

Guidance for postgraduate researchers	1
Can I use Generative Artificial Intelligence at Leeds?	1
Introduction to Generative AI for PGRs	2
What is Generative AI (Gen AI)?	2
Gen AI tools	3
How does Generative AI work?	6
Key strengths and weaknesses of Generative AI	7
Key Strengths	7
Key Weaknesses	8
Use of Generative AI in PGR assessments	10
Introduction	10
Your responsibility as a postgraduate researcher	10
Assessment criteria for research degrees	11
Originality	11
Independent critical ability	11
Spoken and written communication skills	12
Categories of use of Gen AI in Assessment	13
Data Restrictions and Security	14
Ethical considerations and ethics review	15
Recording your interactions with Gen AI	16
GREEN category: AI can be used	17
AMBER category: AI tools may be used in an assistive role	19
Developing code	20
Literature review	21
Proof-reading advice for PGRs	22
RED category: AI tools cannot be used	23
Acknowledging the use of and referencing Generative AI	24
Publication and other research activities	25
Further Advice for PGRs and supervisors	26
Generative AI Quick Checklist	27

Guidance for postgraduate researchers

This guidance is for Postgraduate Researchers (PGRs) at the University of Leeds. It applies to the research component¹ of any postgraduate research degree at the University of Leeds. If your research degree programme includes assessment for any taught modules you will also need to read and follow the [guidance for taught students](#) for any work you submit for taught assessments. For PGRs engaged in teaching you will need follow the taught guidance for any teaching-related activities.

Can I use Generative Artificial Intelligence at Leeds?

Welcome to the University of Leeds' latest information and guidance on using Artificial Intelligence (AI) in your research degree studies. The guidance is intended to ensure that our use of Generative AI (Gen AI) across Leeds is effective, ethical and transparent.

This guidance has been adapted for PGRs from the guidance that was co-produced by University of Leeds academic staff, professional services staff and students from different disciplines for taught students. It is in line with the advice given at comparable universities, particularly UCL (from whom the taught guidance was adopted with thanks) and with the Russell Group Principles on use of AI in education. The guidance for PGRs has been aligned, where appropriate, to that for taught students but has been developed to cover the specific expectations for assessment at PGR level.

If your research degree programme will be accredited by an external, professional body you will also need to make sure you comply with any guidance on the use of Gen AI issued by the professional body, in addition to the guidance given here by the University of Leeds.

This guidance will be reviewed as necessary as AI discourse and capabilities develop. We will notify you of any major changes to the guidance. Please check the Doctoral College website regularly to see the latest advice and get in touch with the Doctoral College at doctoralcollege@leeds.ac.uk if you have feedback or AI@leeds.ac.uk with ideas for future advice we should include.

¹ Thesis submission, transfer submission, First Formal Progress Report and Annual Progress Reviews.

Introduction to Generative AI for PGRs

This section introduces Generative AI (Gen AI) and highlights the basics of how it works, along with its strengths and weaknesses.

Generative AI has the potential to transform education and learning and to develop new forms of creativity. At the same time, it is full of biases, inaccuracies, and other issues. We need to hedge our moments to explore its full potential while recognising its flaws and issues.

Prof. Jeff Grabill, Deputy Vice-Chancellor: Student Education

Generative AI is at the same time an important topic for research and a tool for carrying research, It is vital that we engage with it with intellectual rigour, fully aware of its potential and its risks. We will work with you in taking an ethical approach to Gen AI which enriches your research as well as having positive impact on those you engage with.

Prof. Luke Windsor, Dean of the Leeds Doctoral College

What is Generative AI (Gen AI)?

Gen AI is an Artificial Intelligence (AI) technology that automatically generates content in response to written prompts. Some can also respond to visual or audio prompts. The generated content includes texts, software code, images, videos and music. Gen AI is usually trained using data from webpages, social media conversations, survey data, private datasets and other online content. It generates its outputs by identifying and repeating common patterns (for example, which words typically follow which words, or which pixels of images should come after which pixels). This is usually done by ingesting large datasets and statistically analysing the distribution of words or pixels or other elements in the data.

There are many other types of AI applications, that do not involve Gen AI, that are having an impact on teaching and learning. These will be explored in more detail as the guidance further develops.

Remember:

- While Gen AI is often accurate, even in complex conversations, it is not reliable and can make simple mistakes.
- Gen AI can simulate intelligent conversation, but it doesn't possess true consciousness or human-like thinking.
- Though Gen AI responses might seem insightful, it doesn't genuinely understand, comprehend or critically assess topics as humans do.

This means that while many of us will be using Gen AI in creative ways in our work, we always need to verify that its outputs are accurate and appropriate for our needs.

Gen AI tools

The following section provides guidance about the University's recommended tool, Copilot, and gives some examples of other Gen AI tools.

Make sure you read the section on data security on page 14 of this document, and the information available on the Gen AI website: [data restrictions and security](#)

Microsoft Copilot

If you think you need to use a Gen AI tool, the University **strongly recommends using Copilot** (instead of Chat GPT, Clause etc) which is available with a full Microsoft licence. It is very important to be careful about the information you provide to generative AI tools; using Copilot minimises data protection and privacy risks.

Log in with your University login details to ensure you are working within the Enterprise version, which means the information you provide to Copilot is not stored or used except to answer your prompts.

You can find more information about Copilot at the following:

- University GenAI website [guidance on GenAI tools](#), including Copilot
- [Introduction to Microsoft Copilot from IT Services](#). It explains how to access Copilot and how it can help with tasks.

Copilot should be used unless there is a good reason why it can't be.

Using other tools

Please note that the University of Leeds is not endorsing any of the tools in these lists. You should not use any of them unless you can ensure that doing so complies fully with all relevant University policies, including data protection and intellectual property, as well as relevant legislation eg GDPR and The Copyright, Design and Patents Act.

If you believe that you will need to use a Gen AI tool other than Copilot please discuss with your Supervisors in the first instance. You must:

- carefully consider the information you plan to share with the Gen AI tool
- read the guidance on Data Restrictions and Security later in this document
- undertake due diligence on the tool you plan to use.

Before using any Gen AI tool, PGRs and supervisors should consult:

- The University Gen AI website [guidance on Gen AI tools](#) including the use of Copilot
- The [Data Restrictions and Security](#) guidance on use of AI in research

- The [Guidance to Staff on the use of Artificial Intelligence](#) which includes guidance on data sharing with AI tools
- The key information on [IT Security Considerations](#).

Any use of Copilot, or other Gen AI tool, must remain within the traffic-light categories outlined later in the document.

Text Gen AI

In response to a human-written prompt, text Gen AI generates text that usually appears as if a human has written it.

Yet, just like human-written texts, text Gen AI outputs can be superficial, inaccurate, untrustworthy and full of errors.

Despite appearances, text Gen AI does not understand either the prompt written by the human or the text that it generates. You may have encountered this if you have ever tried to have a conversation with a text Gen AI tool and seen it contradicting itself. You may also have seen a text Gen AI tool choosing words that are not quite right for the context or intended meaning of the output. It is just providing the words that would statistically be most likely to appear in a response to the prompt you provided.

Every time that we use a text Gen AI tool, we need to consider its output from a critical perspective.

Examples of text Gen AI tools

There are many tools that provide text Gen AI functionality. The following list provide examples of some of the most popular ones. **Please note that the University of Leeds is not endorsing any of the tools in this list:**

- [ChatGPT](#) (OpenAI)
- [Claude](#) (Anthropic)
- [Gemini](#) (formerly Bard) (Google)
- [Hugging Chat](#) (HuggingFace)
- [Llama](#) (Meta)

Examples of other Gen AI tools built on top of Gen AI tools

There are many tools that provide additional Gen AI functionality. The following list provides examples of some of the most popular ones. **Please note that the University of Leeds is not endorsing any of the tools in this list.**

- CoPilot (Microsoft)
- [ChatPDF](#) (summarises and answers questions about submitted PDF documents)
- [Elicit](#) (aims to automate parts of researchers' workflows, identifying relevant papers and summarising key information)
- [WebChatGPT](#) (Google Chrome extension that gives ChatGPT Internet access, to enable more accurate and up-to-date conversations)

Image, video, music Gen AI

Like Text Gen AI, image, video or music Gen AI can generate outputs based on human-written prompts. Some can also respond to visual or audio prompts.

Again, the appearance of image, video and music Gen AI outputs might appear novel. However, usually, they are only complex combinations of the millions of images, videos or music that they have ingested during their training.

Gen AI uses earlier works in its outputs and this creates substantial challenges in copyright, intellectual property and the ownership of content. You may have heard of the 2023 Writers Guild of America (WGA) strike in Hollywood on this topic, or the issues with a song created by AI mimicking the work of Drake and The Weeknd, which highlight deep issues with ethics and ownership when it comes to AI generated works.

Examples of image, video and music Gen AI tools

There are many tools that provide image, video or music Gen AI functionality. The following list provide examples of some of the most popular ones. **Please note that the University of Leeds is not endorsing any of the tools in this list**

- [Boomy](#) (Music Gen AI tool)
- [DALL•E](#) (OpenAI's image Gen AI tool)
- [DreamStudio](#) (Stable Diffusion's image Gen AI tool)
- [Midjourney](#) (Image Gen AI tool)
- [Runway](#) (Video Gen AI tool)
- [Voicemod](#) (Music Gen AI tool).

How does Generative AI work?

Both text and image Gen AI are based on a set of AI techniques that have been available to researchers for several years and have been built one on top of another. While it isn't necessary to understand exactly what each of the terms below means and exactly how the technologies work, it is helpful to have a basic understanding of their definitions and how they form a hierarchy of specificity. The following flow chart should provide a quick understanding of ChatGPT (and other text Gen AI) and that they are types of the following:

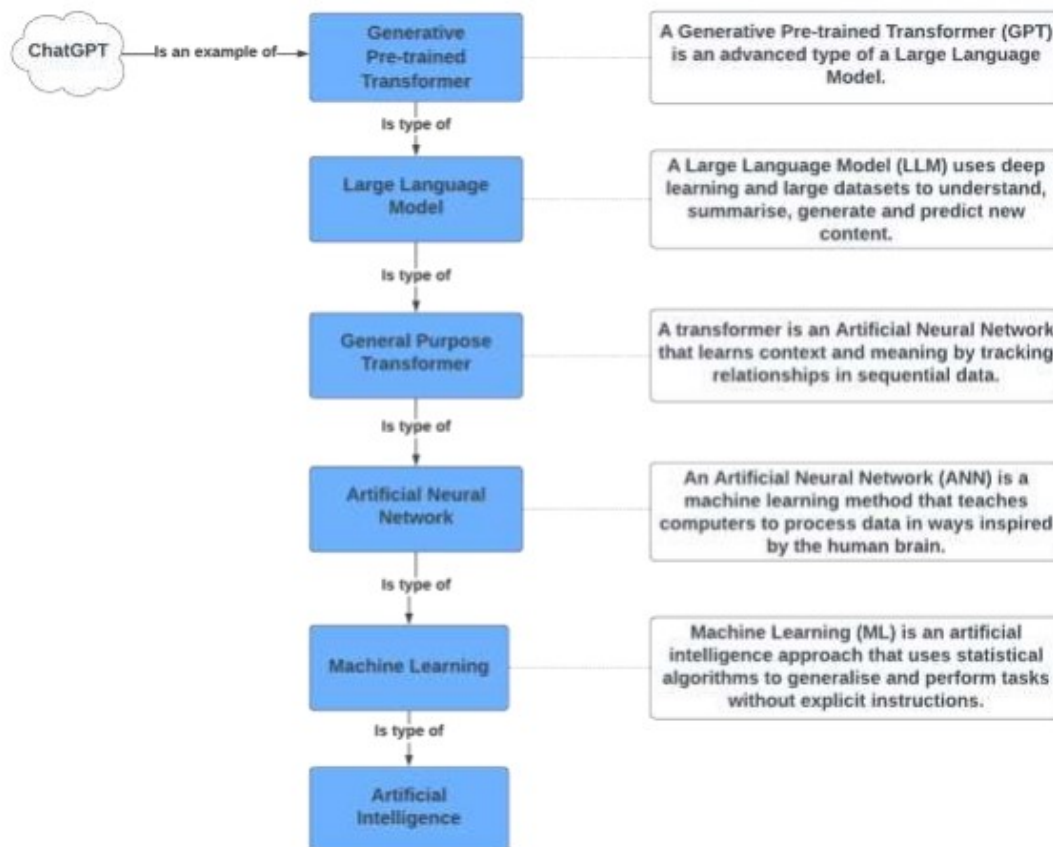


Image 1 – a flow chart highlighting the hierarchy of technologies used for a tool like ChatGPT.

Text description of image: ChatGPT is an example of a Generative Pre-trained Transformer (GPT), which is an advanced type of a large language model. A large language model uses deep learning and large datasets to understand, summarise, generate and predict new content. Large language models are a type of general purpose transformer. A transformer is an artificial neural network that learns context and meaning by tracking relationships in sequential data. An artificial neural network is a machine learning method that teaches computers to process data in ways inspired by the human brain. Machine learning is a type of artificial intelligence that uses statistical algorithms to generalise and perform tasks without explicit instructions.

Key strengths and weaknesses of Generative AI

To understand the strengths and weaknesses of Gen AI, it is important to understand what is involved in training it. The training process involves the tool being provided with and processing huge amounts of data scraped from the internet and elsewhere. Processing this data involves identifying patterns, such as which words typically go together (eg “Happy” is often followed by “Birthday”). This leads to several strengths and weaknesses, with the key ones described below.

Key Strengths

Diverse outputs

Gen AI can produce diverse and seemingly original outputs. It can create content and outputs through capturing nuances in language, based on the patterns which may not have otherwise been seen before in the data they were trained on. This helps open different perspectives and can give ideas on how to explore topics from a varied set of viewpoints.

Levelling the playing field

Gen AI can process and interpret human language in a conversational style, allowing it to generate contextually relevant responses to user prompts. It can also reformulate text to simplify or summarise it, which can help people start to understand more complex ideas. In addition, Gen AI can process and generate text in multiple languages. If used appropriately, Gen AI can be a great leveller for those who do not speak English as their first language or may not have the same literacy or language skills as others.

Organisational productivity

Gen AI can be fine-tuned for various tasks and domains, making them widely applicable (eg, chatbots, content generation and language translation). This can help boost organisational productivity, eg through answering questions in a human-like style, in reducing effort on tedious and monotonous tasks, in providing accessible summaries of complex topics, in doing automatic translations and transcriptions, etc. Personalisation Gen AI models can remember previous interactions, which results in more coherent and relevant conversation experiences for users. You can also ask some models to remember the style in which you write, in which you want your data to be presented and even ask it to test your knowledge against any piece of content. Gen AI can generate responses quickly, allowing for rapid interactions and real-time applications.

Industry applications

It is anticipated that most industry and workplaces will be using a form of Generative AI in the future to enhance and optimise their work. As Gen AI integrates into our daily learning and work tools (such as Copilot and Microsoft Office, or the AI content generator in Grammarly, etc), it is important to develop your skills in using Gen AI effectively and ethically.

Key Weaknesses

Lack of trust and authenticity

Gen AI can generate information that appears factual but is often inaccurate. This is often called AI hallucinations. It is important to note that while Gen AI models appear to understand the content that they use and generate, they do not understand it. The data that they use for training have lots of inaccuracies and biases in them already. In addition, Gen AI can be used to create fake news, misinformation and 'deep fakes' easily. This could lead users to have misplaced trust in the Gen AI output.

Copyright and ownership

Gen AI output imitates or summarises existing content – mostly without the permission of the original content owners – but can give the appearance of creativity and originality. This generates challenges and issues of copyright, ownership, intellectual property and lack of authoritative legislation in this rapidly evolving area. It is important to keep this in mind when using Gen AI tools.

You should not copy and paste any copyrighted text, or other sensitive or personal data, into an AI tool for it to use, as this data could be added into the AI tool's training dataset and could then be used illegally or unethically. Please see the 'Data Restrictions and Security' section later in this document.

Carbon footprint

Training Gen AI requires huge amounts of power and indirectly generates huge amounts of carbon, with important consequences for climate change. For example, it is estimated that the training of GPT4 consumed between 51,772 and 62,318 megawatt hours of electricity and generated between 1,035 and 14,994 metric tons of carbon dioxide emissions, depending on the global location of the training. As an example, a 3000-mile roundtrip via air (such as London to Boston) emits 1 metric ton of carbon dioxide.

Feedback loop

The output of Gen AI is flooding the internet. This poses an interesting risk for future GPT models. These models themselves will be trained on online content that earlier

GPT models have created (including all its biases and errors). This self-referential loop compounds the mistakes in data, might contaminate the training data and lead to the concept of model collapse. A model collapse occurs where the models quickly forget most of the original data that they learnt from.

Ethical, social and human costs

After the Gen AI model is trained, it is often checked and refined in a process known as Reinforcement Learning from Human Feedback (RLHF). In RLHF, Gen AI responses are reviewed and validated by human reviewers. These human reviewers ensure that the Gen AI responses are appropriate, accurate and align with the intended purpose. In the development of ChatGPT, the RLHF reviewers mostly were workers in global south countries such as Kenya. Workers were paid less than \$3 per hour to review the outputs of ChatGPT and identify any objectionable or toxic materials. This work has had a massive negative impact on many of those who were involved, including issues of exploitation and trauma. Gen AI also tends to output standard answers that replicate the values and biases of the creators of the data used to train the models. This may constrain the development of plural opinions and further marginalise already marginalised voices.

It is important to reflect that Generative AI can help us achieve great things, but that it also comes at an ethical, social, environmental and human cost. Thus, it is important to consider these factors in our approach and support ethical frameworks around the use of generative and other forms of AI. It is also very important to always check if the content produced is accurate and not an AI hallucination.

Use of Generative AI in PGR assessments

Introduction

The University of Leeds uses a three-tiered traffic light system of Gen AI use. Staff and PGRs should be aware of the categories and discuss in supervision meetings whether any activity a PGR wishes to use Gen AI tools for falls wholly or partially within each. These discussions should be recorded in the GRAD supervision meeting notes.

The University also has [guidance to staff on the use of AI](#) and the [AI for researchers guidance](#) which are designed to help colleagues think through issues related to the outputs of AI tools and how to approach research, teaching and assessment. Supervisors may find it helpful to consult these pages in addition to this guidance for PGRs.

As a postgraduate researcher, you should always make sure that the [Research integrity](#) and [Academic Integrity](#) principles are followed in any work that you do, and, always ask your supervisors about appropriate use of Gen AI. You should ensure that the use of Gen AI tools as agreed with your supervisors is documented in your supervision meeting records in GRAD and is acknowledged in any work that you submit throughout your research degree studies.

Your responsibility as a postgraduate researcher

The fundamental principle is that responsibility for all aspects of the work you submit for assessment remains with you as the author of your thesis. Equally, any work you submit during your research degree candidature will be expected to maintain the same high standards of academic and research integrity. The guidance on the use of Gen AI tools for PGRs will apply to the following:

- your thesis submission
- your transfer report as part of the transfer process
- work submitted for your first formal progress report
- work submitted for your annual progress review
- drafts of work submitted to your supervisors for review and comment.

Where we talk about 'work' this could include text, data, results, computer code, artworks, performances or any work contributing to the practice element in a practice-based PhD, or other material you generated during your research degree studies.

As a PGR, it is likely that you will be preparing work for public dissemination through publication or conferences. Further guidance on this is given in the 'Publication and other research activities' section below.

Assessment criteria for research degrees

If you are a doctoral researcher, the criteria for award (and learning outcomes) for your programme will expect you to be able to demonstrate:

- **Originality:** your ability to discover, interpret and communicate new knowledge through original research and/or scholarship.
- **Independent Critical ability:** your ability to critically present and defend your findings and place your work in the context of other research in the discipline.
- **Publishable quality:** that you have created work of publishable quality which would satisfy peer review in appropriate journals or in other form as appropriate to the field of research.
- **Spoken and written communication skills:** your ability to present and defend your research through your written thesis and your viva examination.

Different assessment criteria will apply to Master of Philosophy and Masters by Research.

Originality

Remember that for doctoral level study your examiners will be looking for evidence of your novel contribution to your field of research. **This novelty needs to come from you and your research approach.**

Gen AI output imitates or summarises existing content. Whilst this may give the appearance of originality it will limit opportunities for you to be able to demonstrate innovation and creativity, and may compromise the novelty expected for the award of your degree.

Independent critical ability

As you engage with work by other researchers, you will be expected to demonstrate your understanding of the work you have read and how it relates to your own research, presenting that in your own words and following expected practices of citations and references.

Despite potentially being an excellent learning tool for basic knowledge, at PGR level you should not be referencing content from Gen AI in your thesis. The lack of transparency as to the sources used by Gen AI tools make it hard or impossible to correctly cite the primary sources.

Gen AI tools can create content that is not peer reviewed or academically rigorous, often without any academic sources underpinning that content. It can contain references to academic sources that do not exist or are of dubious quality.

Instead, you should be directly engaging with, and citing, appropriate academic outputs for your discipline eg peer-reviewed journals, textbooks or other scholarly works to place your work in context or to support your arguments.

As part of the assessment of your thesis you will be expected to have engaged with, and critically evaluated, the existing scholarship in your discipline. Additionally, the content from Gen AI poses a risk as to the impact of your thesis as it may limit your fundamental knowledge, particularly in very specialised research areas where novelty is involved, and there may be no or very limited science in the public domain where the Gen AI is searching.

Spoken and written communication skills

Whatever your research degree programme, all research degrees are assessed through the examination of your written thesis and your performance in an oral examination or viva.

The thesis submitted must be your own work and your own writing. Where you have worked with others, or where you are presenting the work of others you must fully acknowledge this.

During the viva examination, your examiners will be looking for evidence that the work you submitted for examination reaches the University standards for the degree, that the work submitted is your own, and that you understand and have intellectual ownership of the work you have submitted.

This means that for research degree programmes there are some activities where the use of Gen AI tools would not be appropriate and are not permitted.

Categories of use of Gen AI in Assessment

There is a three-tier traffic light categorisation for using Gen AI during a research degree candidature: green, amber and red. The three categories are not defined rigidly; rather they are a tool for ensuring that staff and PGRs have a shared understanding of whether generative AI tools can be used and, if they can, how much and where in the research and assessment processes. Your supervisors will be able to provide you with support and guidance in the use of Gen AI as relevant to your particular research topic.

As a general principle, you can use Gen AI to help your research process but cannot use AI to generate, write or falsify work. You may use Gen AI in ways that support your research process, enhance your ability to achieve your programme learning outcomes and to prepare you to succeed in your future careers.

Using Gen AI to write your thesis, transfer report or other work, falsify work or breach guidelines for the research assessment and examination processes will undermine all these benefits and damage your learning and may lead to disqualification. This is explained further in the PGR Academic Misconduct procedure.

It is recognised that there may be some individual and specific areas of research where the nature of the project means that development or use of Gen AI tools will be integral to the research question being asked. In these cases use of Gen AI tool will be fundamental to both the research process and the assessment. This is outlined further in the 'Green category' section below.

Regardless of the category, you should always take a critical approach to the use of any output from a generative AI tool, as these tools can generate superficial, inaccurate and unhelpful outputs. Gen AI tools can create content that is not peer reviewed or academically rigorous, often without any academic sources underpinning that content or contain references to academic sources that do not exist or of dubious quality. Therefore, you should always analyse and verify the information Gen AI tools provide, rather than accepting it at face value. As a reminder, please review the 'Strengths and weaknesses' section above to understand more on why this is vital for your success.

Data Restrictions and Security

It is very important to be careful about the information you provide to generative AI tools. You should never provide any Gen AI tool sensitive or personal data in any prompt or content.

The University **strongly recommends using Copilot** (instead of Chat GPT, Clause etc) which is available with a full Microsoft licence to minimise data protection and privacy risks.

Make sure you read the Gen AI tools section on page 3 of this document, for the guidance on using Copilot and what you must do if you believe that you will need to use a Gen AI tool other than Copilot. You should also consult the Gen AI website [guidance on Gen AI tools](#).

You must carefully consider the information you plan to share with the Gen AI tool and undertake due diligence on any tool you plan to use. We cannot advise on the safe use of individual AI tools and it is your responsibility to complete any due diligence process.

You must ensure that sharing of content with Gen AI tools is consistent with guidelines for the handling of material in any contractual agreements with individual sponsors, any ethics review, and relevant University guidelines on the sharing, safeguarding and management of material. How you will store or can share your work should be considered and documented as part of your Data Management Plan.

Before using any Gen AI tool, PGRs and supervisors must consult:

- The Gen AI website [guidance on Gen AI tools](#), including Copilot
- The [Data Restrictions and Security](#) guidance on use of AI in research pages
- The [Guidance to Staff on the use of Artificial Intelligence](#) which includes more detailed guidance on data sharing with AI tools
- The key information on [IT Security Considerations](#).

Whenever possible, you should always save copies of your inputs and the outputs that the Gen AI tool has produced for you. You may be asked to provide this information as part of your assessment or in any academic misconduct process. See below for more advice on keeping records of interactions with Gen AI tools.

Ethical considerations and ethics review

If you are engaged in the development or use of AI in any type of research you should ensure that the AI usage is ethical (see the 'Ethical, social and human costs' section above) and conforms to the University of Leeds regulations, including where appropriate and necessary by engaging with the ethics review processes and obtaining authorisation from a faculty research ethics committee.

If you will be using Gen AI for tasks such as data analysis you will need to consider any steps needed to adhere to your ethics application (informing the research participants, anonymisation etc).

There may also be situations where an ethics application will need to be amended as the research study progresses to take account of changes in the use of Gen AI. You will be responsible for taking any steps need to secure an amendment to any earlier ethics review, if there have been any changes to the methodology or the usage of AI.

Please see the University guidance on AI use in research, including:

- [Ethics review](#)
- [Data restrictions and security](#)
- 'Copyright and ownership' section above in this document.

As a postgraduate researcher, you will be expected to understand the wider ethical, legal and societal factors involved in responsible research and innovation.

The learning outcomes for your programme will expect you to demonstrate that you have assessed, analysed and engaged with the ethical context and implications of your research. It is therefore essential for the assessment of your research degree that you have considered how you are using AI, and that any AI usage conforms with the University guidance on AI in research.

Recording your interactions with Gen AI

Keeping records of your research process is an expected principle of good research practice. This applies to your interactions with Gen AI tools in the same way as it would for other record keeping eg lab books which evidence the experimental process and results obtained; or keeping drafts of work and annotations/feedback from your Supervisors.

Whenever possible, you should always save copies of your original inputs and the outputs that the Gen AI tool has produced for you. You must declare the use of any Gen AI tool in the work you submit for assessment. See the 'Acknowledging the use of and referencing Generative AI' section below.

In some cases it may not be practical to keep a record of every iteration of your inputs/outputs eg where the tool is being used to assist with coding and where the prompt may need refining multiple times. In these cases, discuss with your supervisors how best to document your interactions. This might include:

- sufficiently detailed notes that record the kinds of interactions that took place, the results it produced and how you used them, but not necessarily a record of every single input/output iteration
- a few exemplars/recordings (copies of inputs/outputs) that can help illustrate the approach you took
- a more detailed acknowledgment in your thesis to explain how you used GenAI tools so your approach is open and transparent to your examiners.

You must take final responsibility for the work you submit. As part of the examination you should be prepared to explain and justify the ways in which you have used GenAI tools to support your research process. You may be asked to provide this information as part of your assessment or in any academic misconduct process.

The records you keep will not only help you when it comes to the writing of your thesis and your viva, but you are also protecting yourself in the event of any challenges about whether the work is your own.

GREEN category: AI can be used

GREEN CATEGORY

Under this category, you can use Gen AI as a primary tool during the research process

It is recognised that there may be some individual and specific areas of research where the nature of the project means that development or use of Gen AI tools will be integral to the research question being asked. In these cases use of Gen AI tool will be fundamental to both the research process and the assessment. Where this is the case, Gen AI tools may legitimately extend beyond the red and amber categories outlined below.

In these cases, your particular research question will require you to demonstrate your ability to use Gen AI tools effectively and critically to tackle complex problems, make informed judgments and generate creative solutions. Here, the use of Gen AI and critical appraisal of its output will explicitly form part of the research, and your thesis submission and oral examination will provide an opportunity to demonstrate effective and responsible use of Gen AI. Your supervisors should support and guide you in the use of Gen AI. Use of Gen assistance tools in developing work must be clearly acknowledged in your thesis.

If you are engaged in the development or use of AI in any type of research you should ensure that the AI usage is ethical and conforms to the University of Leeds regulations, including where appropriate and necessary by engaging with the ethics review processes and obtaining authorisation from a faculty research ethics committee. Please see the 'Ethical considerations and ethics review' section above for further guidance.

It is expected that supervisors will advise PGRs accordingly about the use of Gen AI tools in these contexts and raise awareness of the limitations of using such tools. This should be recorded in the GRAD supervision meeting records section.

PGRs and supervisors should be mindful of the risks associated with copyright and ownership (see 'Key weaknesses' section) where the Gen AI tools will imitate or summarise existing content, mostly without the permission or acknowledgement of the original content owner.

To minimise data protection and privacy risks, all PGRs should use Microsoft Copilot, which is available with a full Microsoft licence. Please see the 'Data Restrictions and Security' and 'Gen AI tools' sections above for more guidance.

Guidance for supervisors in supporting PGRs is available on the [Generative AI website](#).

Green category examples

Where your particular research topic requires you to develop or demonstrate your use of AI², Gen AI may be used in the following ways (in consultation with your supervisors):

- during your viva if you need to demonstrate to your examiners the tool you have developed/work with during your research process
- comparing content (AI generated and human generated)
- creating content in particular styles
- researching and seeking answers
- analysing content
- creating artwork (images, audio and videos)
- translating content.

Wherever possible, always save copies of your original input and the outputs that the Gen AI tool has produced for you. You may be asked to provide this information as part of your assessment or in any academic misconduct process.

You must declare the use of any Gen AI tool in the work you submit for assessment. See the 'Acknowledging the use of and referencing Generative AI' section below.

² If your particular research topic does not require you to develop or demonstrate your use of AI then use of Gen AI tools for the activities listed would NOT be acceptable

AMBER category: AI tools may be used in an assistive role

AMBER CATEGORY

Under this category, you are permitted to use AI tools in an assistive capacity for specific defined activities as part of your research process.

In these situations, the use of Gen AI is not in itself a learning outcome for the programme of study, but there may still be parts of the research process where use of Gen AI is appropriate.

Gen AI tools may be used to enhance and support the development of specific skills in specific ways, agreed in discussion with your supervisors. For instance, you might use Gen AI for tasks such as data analysis, pattern recognition, or generating insights.

Whichever way you use Gen AI, you should always take a critical approach to the use of any output, as these tools can generate superficial, inaccurate and unhelpful outputs. Therefore, you should always analyse and verify the information Gen AI tools provide, rather than accepting it at face value. As a reminder, please review the 'Assessment criteria for research degrees' section above to understand more on why this is vital for your success.

If you will be using Gen AI tools in these ways you should ensure that this conforms to the University of Leeds regulations, including where appropriate and necessary by engaging with the ethics review processes and obtaining authorisation from a faculty research ethics committee. Please see the 'Ethical considerations and ethics review' section above for further guidance.

To minimise data protection and privacy risks, all staff and students should use Microsoft Copilot, which is available with a full Microsoft licence. Please see the 'Data Security and Restrictions' and 'Gen AI tools' sections above.

It is anticipated that your supervisors will be able to provide support and guidance to you in the use of Gen AI and to ensure equity of experience. You should ask your supervisors about appropriate use of Gen AI tools for your particular discipline/research area and ensure that this is documented in your supervision meeting records in GRAD.

Amber category examples

Examples of where Gen AI might be used in an assistive category include:

- to help you identify and correct issues with spelling, grammar and punctuation, formatting and presentation before you submit work for assessment, in accordance with the PGR proof-reading policy and guidance
- to help you prepare for your transfer or final viva by generating mock questions that you might be asked
- for data analysis, pattern recognition, or generating insights
- to support a particular process such as testing and debugging code or translating
- organising your references
- project planning
- to support your literature review process, for example, supporting the development of database search strategies, constructing a search strategy and search terms, literature mapping and finding papers relevant to your topic
- summarising papers to help you check your understanding – but the summary must not then be re-used in your thesis
- analysing content
- creating artwork or any work contributing to the practice element in a practice-based PhD (images, audio and videos)
- developing code (see additional guidance below)
- Researching and seeking answers.

Developing code

PGRs and supervisors should be aware that some Gen AI tools will take code from other sources (such as GitHub and Zenodo) without referencing the authors of the original codes/ algorithms, even though many of these have opensource IP statements that often request acknowledgement of original authorship.

Bear in mind the assessment criteria for the award of your degree, and the expectations for novelty, critical ability and engagement with ethical context and implications of your research. In some cases, you might be expected to have intellectual ownership of your code. You will certainly be expected to take responsibility for its accuracy.

PGRs and supervisors should therefore carefully consider the use of Gen AI tools in the development of code and be mindful of the risks associated with copyright and ownership and the expectations for the ethical and responsible use of AI. Any use of Gen AI tools in this way must be clearly acknowledged in the thesis.

Literature review

Please bear in mind that whilst Gen AI tools can be used to support your literature review process it is essential that you critically evaluate the results returned. There may be gaps in the literature analysed or points which are oversimplified or summarised incorrectly. As part of the assessment of your thesis you will be expected to have engaged with, and critically evaluated, the existing scholarship in your discipline. You will be expected to present this in your own words in your thesis to demonstrate your understanding of its relation to your research, to place your work in context and to support your arguments.

It is also important to note that your supervisors are also learning how the use of Gen AI can support and enhance your research development. Thus, an open discussion on this topic is encouraged at an early stage.

Support guidance and case studies are also being created to support your supervisors in line with the development of Gen AI. There is also [supervisor guidance](#) on the Generative AI website.

Proof-reading advice for PGRs

The [PGR proof reading policy and guidance](#) is available, which clearly outlines the acceptable support that you can receive with third-party proof-reading of your work. You can make use of Gen AI tools for the purposes of proof-reading work you have created and written yourself during your studies. This use of Gen AI tools for the purposes of proof-reading your own work will be within certain limits.

Gen AI tools may be used to proof-read the thesis before submission for examination or as part of any corrections to the thesis after the viva, in accordance with the [PGR proof-reading policy and guidance](#). Gen AI tools may also be used for proof-reading of work at earlier stages in the candidature. This includes work submitted as part of the transfer process³. It would be acceptable to use a tool to help you identify and correct issues with spelling, grammar and punctuation, formatting and presentation. Using a tool to re-write the original text or write/generate new text or material would not be acceptable. The principles outlined here would apply to grammar-checking software, some of which are powered by AI.

Use of Gen AI tools for the purposes of proof-reading must be declared in any work you submit. If you are in any doubt you should consult with your supervisor or Director of PGR Studies in advance of using any such tools.

You are permitted to use the spelling, grammar, punctuation checking offered by packages such as Microsoft Word (or similar function offered by other packages). It is expected that you will be using this type of functionality for all written work throughout your candidature, and are not required to declare this in your transfer or thesis submission.

To minimise data protection and privacy risks you should use Microsoft Copilot. Please see the 'Data Restrictions and Security' and 'Gen AI tools' sections above for more detailed advice.

³ Third-party (not AI tools) proof-reading is permitted at thesis level only. Use of AI tools for checks for spelling, grammar, punctuation etc is permitted at thesis and transfer.

RED category: AI tools cannot be used

RED CATEGORY

Under this category, you must not use Gen AI tools for the activities described. The purpose and format of the PGR assessment process makes it inappropriate or impractical for AI tools to be used in this way.

For research degree programmes there are some activities where the use of Gen AI tools would not be appropriate and are not permitted. Please see the Red category examples below. Any breach of this position would be considered an academic integrity offence and would be investigated under the [PGR academic misconduct procedures](#).

Any work contributing to the practice element in a practice-based PhD would come under the red category examples below, unless the specific nature of the research project required used of Gen AI tools (such as an exhibition looking at difference between human-generated and AI-generated content). Where the specific nature of the research project required used of Gen AI tools the guidance in the green category examples above should be followed.

The process for identifying and agreeing support and reasonable adjustments for PGR assessments can be found in the [guidance on support and reasonable adjustments for PGR assessments](#). We are currently working on what it means to provide reasonable adjustments outside of the guidance given. Separate conversations will need take place between the PGR, Graduate School and Disability Services.

Red category examples

Examples of assessments where Gen AI is not allowed, unless covered by the green category examples above, could include:

- generating new text for any work you are submitting
- taking text you have written yourself and using Gen AI to re-write this. This would include any substantive changes to your original text, for example adding, condensing or re-writing any your sentences or sections of work.
- paraphrasing work from other authors that you want to use as part of your work
- translating work you have written in another language into English, which you then submit as your own writing
- help you to answer questions during your transfer or thesis viva
- alter the substance of any ideas and arguments put forward within the work.

Acknowledging the use of and referencing Generative AI

Gen AI is evolving rapidly and there is not yet consensus on how to acknowledge and reference it. In all cases, you are required to acknowledge truthfully what elements of any of the work you are submitting are your own work or ideas and what has come from other sources – including Gen AI. You should make clear in any work you submit for assessment where you have used Gen AI.

The use of Gen AI must be acknowledged on the declarations section of your thesis. If it is suspected that you have used a Gen AI tool to help you with the proof-reading of your work or produce part of your work, but you have not acknowledged this use, this could be investigated under the Academic Misconduct procedure.

The minimum requirement to include in acknowledgement:

- Name and version of the generative AI system used eg CoPilot
- Publisher (company that made the AI system) eg Microsoft
- URL of the AI system <https://m365.cloud.microsoft/chat>
- Brief description (single sentence) of context in which the tool was used.

For example:

“I acknowledge the use of CoPilot <https://m365.cloud.microsoft/chat> to proofread my final draft.”

Similar acknowledgement must be included in any work you submit for assessment as part of the transfer process, first formal progress report or annual progress review.

Further requirements may be stipulated by your school or your supervisors for any drafts of work submitted to them as part of your regular supervisory meetings.

If you will be publishing any work as part of your research degree studies (eg for conferences, publications, presentations) that has used Gen AI tools, this should be carried out in accordance with the University’s guidance on use of AI in research on the [Generative AI website](#), the guidelines and regulations on the use of Gen AI supplied by the research funder, conference organiser or publisher, as well as those provided to PGRs here. You must ensure that Gen AI usage for any part of the research process is declared in accordance with publisher requirements.

We are currently working on developing the referencing guidance further in collaboration with the sector and encourage you to keep checking the Library’s Referencing pages and the official guide for your school’s referencing style for more information.

Publication and other research activities

As a PGR, it is likely that you will be preparing work for public dissemination through publication or conferences. Supervisors should consult the guidance on the [Generative AI website](#) when supporting PGRs in these activities.

The presentation of other work (eg for conferences, publications, presentations) that has used Gen AI tools should be carried out in accordance with the guidance on the [Generative AI website](#), the guidelines and regulations on the use of AI supplied by the research funder, conference organiser or publisher, as well as those provided to PGRs here. This will be of particular relevance where work from any publications will be included in your thesis submitted for examination.

Any work you will be publishing during your studies which you are then planning to submit as part of your thesis for examination must always conform to the guidelines set out in this document for the use of Gen AI tools by PGRs. If there is any conflict between external and these University regulations for PGRs then the expectation is that the University regulations will always be followed, however please also email AI@leeds.ac.uk for guidance.

If your research degree studies are affiliated with external accreditation by professional body you will also need to make sure you are aware of and comply with any guidance on the use of Gen AI issued by the professional body, in addition to the University of Leeds guidance here.

Further Advice for PGRs and supervisors

- Guidance for supervisors in supporting PGRs is available on the staff guidance on the use of AI in research on the [Generative AI website](#).
- [Guidance for researchers on the use of Artificial Intelligence](#) – includes more detailed guidance for supervisors, including on data sharing with AI tools.
- [PGR proof reading policy and guidance](#) – sets out the acceptable support from a third-party proofreader.
- [Guidance on Gen AI for taught assessments](#) – sets out the acceptable use of GenAI tools for any taught assessments you are required to complete as part of your programme of study. If you are involved in any teaching you should familiarise yourself with this guidance.
- [Guide to the thesis examination process](#) – sets out the requirements for the thesis examination process including the declarations required on the title page for any AI Gen tools.
- The [PGR Academic Integrity Essentials tutorial](#) covers the essentials of what you will need to know about academic integrity, to support you with good academic practice during your research degree at Leeds. Topics include academic integrity definitions, note-taking, referencing, citations, avoiding plagiarism and advice and support.
- The [PGR Academic Integrity – Advanced](#) tutorial covers re-use of work in theses, collaboration at PGR level and PGR viva examination conduct and practice. It includes guidance on third party proof-reading and use of AI tools.

Generative AI Quick Checklist

If you are deciding on whether and how to use Gen AI tools, you may find the quick checklist below helpful. Please note that this checklist is not exhaustive and provides a framework for ensuring good academic practice is followed when using Gen AI tools.

- I have spoken to my supervisors about how I would like to use Gen AI tools in my research process and this has been agreed and documented in the supervision meeting records in GRAD.
- I have reviewed the Academic Integrity principles to help me avoid unintentional plagiarism, and I have completed the [PGR Academic Integrity Essentials tutorial](#) and [PGR Academic Integrity Advanced tutorial](#).
- Where I am also submitting work for assessment as part of any taught modules, I have read and will follow the Gen AI Guidance for taught students.
- I have considered how the Gen AI tool will use the data I input (including checking the terms and conditions and privacy policy) and have chosen an appropriate Gen AI tool for my task.
- I have reviewed the PGR Proof-reading policy and guidance and have ensured that the work I submit follows these principles.
- I have understood the [risks and limitations of using Gen AI](#), including a recognition of issues of bias, sensitivity, accuracy, appropriate content and ethical issues.
- I have checked and critically reviewed any quotations, citations, or outputs that the Gen AI tool has generated.
- I have not submitted any [Personally Identifiable Information \(PII\)](#) to a Gen AI tool.
- I have checked that sharing of content with Gen AI tools is consistent with guidelines for the handling of material in any contractual agreements with individual sponsors (if relevant) and accrediting bodies.
- I have considered whether my use of Gen AI tools conforms to the University of Leeds ethics review regulations, including where necessary by engaging with the ethics review processes and I have received a positive response to my ethical review application.
- I have checked that sharing of content with Gen AI tools is consistent with my ethics review approval (if relevant).
- I have ensured that no part of the work I am submitting paraphrases Gen AI outputs without acknowledgement.
- I have ensured that my research and the work that I submit remains my own work.
- I have appropriately referenced the use of Gen AI tools in my work.
- I have saved copies of Gen AI outputs and inputs used during the research process and in preparing work for submission. These copies may be asked to be provided as part of any misconduct process.
- I have sought help from my supervisors when I was unsure about use of Gen AI or needed further guidance.