

Guidance and advice for staff on the use of Generative Artificial Intelligence (AI)

1. Definitions

1.1 What does this guide cover?

This guide covers what Generative AI is, what some of the benefits and challenges are of using it, and understanding data, legal and ethical implications. It also lists some of the available Generative AI solutions, how to access them and provides links to further resources and training.

1.2 What does this guide not cover?

This guide does not cover any learning & teaching specific guidance for staff – these elements (including elements like ethics and assessments) can be found on the [University's learning & teaching guidance](#) located on Moodle which is specifically around AI within the Learning and Teaching context.

1.3 What is Generative AI?

Generative AI refers to advanced artificial intelligence systems designed to create new content, including text, images, music and more, by learning from vast datasets. These systems use machine learning, especially deep learning techniques, to understand patterns, styles and structures of human-made content. Unlike traditional AI, which focuses on analysis and prediction, Generative AI excels in producing novel outputs, often requiring minimal human input. It has applications across various fields, such as art, entertainment, design and automation, offering innovative solutions and enhancing creativity. However, it also presents ethical and operational challenges, including concerns over copyright, authenticity and the potential for misuse.

1.4 What is GPT?

GPT (Generative Pre-trained Transformer) is a transformative AI technology, designed to generate text that mimics human writing. You have probably heard of the first and most well-known GPT model: ChatGPT. It is a cornerstone of Generative AI, trained on extensive internet text to perform tasks like writing, answering queries and translation. Its architecture excels in processing data sequences, making each GPT iteration more adept at producing coherent, contextually relevant responses.

There are differing versions of Open AI's GPT that you may see when looking into Generative AI, they essentially mark the evolution of this technology, with each new version bringing improvements in understanding, context awareness and output quality. Starting from GPT-1, each subsequent version (GPT-2 up to GPT-4 Turbo and beyond) has been significantly larger and more capable, offering more sophisticated responses and a broader understanding of language.

But GPT is only one of several Large Language Models (LLMs) available, each similar in the foundational technology but each different around their design intentions, ethical considerations and how they are setup to interact with users or applications. Alongside GPT, other popular LLMs are Google Gemini (developed by Google DeepMind) and Claude (developed by Anthropic) which has the Sonnet (standard, equivalent to GPT-3) and Opus (more advanced like GPT-4) LLMs. There are others too, with lots of [information available online](#) comparing the different offerings.

1.5 What can they do and how they can be helpful?

Generative AI offers transformative benefits for both the workplace and educational environments, fostering creativity, efficiency, and innovation. For staff, incorporating Generative AI into daily tasks and learning processes can significantly enhance personal productivity. Some of the benefits are outlined below:

- **Automated Administrative Tasks:** Generative AI can automate routine tasks such as scheduling, email correspondence, and document management.
- **Research Capabilities:** It aids in data analysis, literature reviews, and hypothesis generation, accelerating the pace of research and discovery (notwithstanding ethical issues associated with research usage around sensitive information).
- **Creative Content Generation:** For marketing and communications, Generative AI can produce innovative designs, write compelling content, and create engaging multimedia materials.
- **Personalised Learning Materials:** Facilitates the creation of customised learning resources to address diverse student needs and learning styles.

2. Guidance

2.1 All staff

The University does not wish to stop university staff in utilising Generative AI technologies as part of their work. However, it is crucial that any work produced with the aid of AI is not misrepresented as the individual's sole original creation. Generative AI can be considered a valuable supplementary tool in the creation of such work, enhancing both creativity and efficiency.

The global academic and professional communities continue to explore and identify a several applications for these emerging technologies, emphasising the importance of adhering to ethical standards in their use.

Please read this guidance document so that you can fully understand both the positives and negatives of using Generative AI, so that you can make informed decisions about its potential use cases.

2.2 Academics and staff engaged in and supporting learning & teaching and research.

Please utilise the [University's existing guidance](#), located on our Moodle page, which is specifically around AI within the Learning and Teaching context.

The University will be running training for staff and students on the above, with further information on these sessions to be shared in 2024.

2.3 How secure are generative AIs to use?

When using Generative AIs, you should treat the information given to the AI as if you were posting it on a public site (e.g., a social network or a public blog). When using AI, you should not share personally identifiable information, company or client information, copyrighted material or any data covered by external sharing restrictions that is not generally available to the public. There are currently no clear assurances of privacy or confidentiality.

Some providers are now starting to incorporate data management in their solutions, where you can better control how your conversations and data are recorded. However, the University **strongly advises** you not to share personal, confidential, copyrighted, or restricted information. For more information, please see section 3 within this guide.

2.4 How reliable are generative AIs?

While these AIs are powerful tools that can provide significant benefits, they must be used with caution, and their outputs must always be checked carefully.

Because of their impressive capabilities at having natural conversations with human users, and at confidently solving certain types of problems, such systems may appear to be "intelligent" in a human-like sense. However, it is important to be aware that they lack any common-sense understanding of the world, intent, motivation, agency, or the abilities of critical and moral judgement we would associate with human intelligence.

You should be aware that, currently, Generative AI systems produce responses based on statistical patterns extracted from huge amounts of data or training they were given, and their developers cannot ensure the responses these systems give are correct. This means that they may provide false information or even fabricate inaccurate responses. The data used for their training may be biased, incomplete, potentially unverified, or not continually refreshed, creating risks of answers that are biased, outdated, inappropriate or lacking context.

Some providers of Generative AI systems are putting certain safeguards in place to avoid misleading, harmful, abusive, or inappropriate responses are generated, but there is currently little transparency around how this is done, and they certainly provide no explicit guarantees about it.

It is important to understand that the technology landscape around these technologies is rapidly changing, and it is hard to predict whether or when some of these problems may be addressed in future AI systems.

In summary, whilst there are significant benefits, we must also be aware of the negatives. AI output is fallible, and its outputs should be treated as such. There are also significant questions being raised around the ethics of AI and the environmental impact linked to the energy outputs to generate large language models.

2.5 What are some of the solutions out there and how do I get access?

There are several Generative AI solutions that cover a variety of tools and platforms, and that list continues to grow. Not only are there multiple options, but each solution can have several free and paid for versions.

We have summarised what we feel are the most relevant ones below, but please be aware this list is continually evolving (costs accurate at time of writing), and that staff would need to undertake their own due diligence on these solutions.

Solution	Usage	Free Version	Paid version
CoPilot (Microsoft)	Chat, Search, Images	Copilot – free Available as an app for your phone or your desktop, or on the Microsoft Edge browser. Provides basic ChatGPT-3.5 chat functionality. Commercial data protection (when signing in with your university account).	Copilot for Microsoft 365 Cost is £30 per person, per month. As per the free version but with additional functionality: - Integrates with Office 365 applications. - Provides enhanced ChatGPT-4 chat functionality. - Enterprise grade-security, privacy, and compliance (when signing in with your university account).
Chat-GPT (OpenAI)	Chat, Coding, Images	Available as an app for your phone or on your desktop. Provides basic ChatGPT-3.5 chat functionality. Character limit of 4,096.	Cost is \$20 per person per month. As per the free version but with additional functionality: - Provides enhanced ChatGPT-4 chat functionality. - Ability to withdraw consent from data inputted to be used to develop the LLM. - Increased response times during busy period.

			• Priority access to new features. • Character limit of 25,000. • Access to DALL.E 3 (image creation software from OpenAI).
Google Gemini		Free 1.0 Pro model version, utilising internet source data through google.	Gemini Advanced 1.0 Ultra Cost is £18.99 per person per month but also get access to Google One AI subscription (2TB of cloud storage) Additional functionality: • Provides enhanced functionality. • Gemini in Gmail, Google Docs and more
Talk to Claude (Anthropic)	Chat, Coding, Images	Claude 3 Sonnet LLM Easy sign-up process	Claude Pro Cost is £18 per user per month. • Priority access during busy periods • Access to Claude 3 Opus LLM • Early access to new features • 5x usage limits compared to free
Perplexity	Search	AI-powered search engine and chatbot that utilises advanced technologies such as natural language processing (NLP) and machine learning to provide accurate and comprehensive answers to user queries. Designed to search the web in real-time and offer up-to-date information on various topics. 300 searches per day	Costs \$20 per person per month • Enhanced search capabilities • Upgraded AI models (GPT-4 & Claude 3) • 600 searches per day • Unlimited file uploads
Stability AI	Images	Non-commercial – free • Full suite of core models. • Early access to new models. • Non-commercial usage.	Professional cost \$20 per person per month. As free but with: • Commercial usage license. • Discord community.
Adobe Firefly	Images	Free using UWTSD credentials. • Use generative AI and simple text prompts to create images and text effects.	n/a
GitHub CoPilot	Coding	Free license • 500mb storage • Unlimited data transfers out (within actions) • 1GB data transfers out (outside of actions)	Team license - \$4 per person per month • 2GB storage • Unlimited data transfers out (within actions) • 10GB data transfers out (outside of actions)
Grammarly	Writing	Free account • Writing checks. • Understand writing tone.	Premium – costs £10 per person per month. As free version but with: • Adjustments to writing tone.

		• Generate text with 100 AI prompts.	• Rewriting of full sentences. • Catching accidental plagiarism. • Generating text with 1,000 AI prompts
Gamma	Content (Presentations)	Free account • Generate up to 10 cards. • PDF export (gamma branded). • PPT export (gamma branded).	“Plus” account – costs £6 per person per month. As free version but with: • Export without gamma branding. • Priority support.

Please note: The University is currently exploring the licensing models for these and other solutions to review whether there is a business case for investment to be made for certain solutions. For the time being though there are no plans to purchase any of the paid versions for staff.

2.6 How do I get Started?

Having read this guidance document so that you have a basic understanding of generative AI, an effective way to learn about this is to try out some of the free generative AI solutions that are available. Because they use natural text as the way to interact, they require no specific training to get started. Simply start typing your request or question and the AI will answer back.

To start off with, we would recommend exploring the [AI Learning Community Moodle site](#) and the “Starting with AI” section. You can utilise the resources there as a good starting point.

For a more focused approach to boost your productivity, you can use your university LinkedIn Learning access resources such as [this course](#). There are also other specific examples on LinkedIn Learning for you to explore.

2.7 Next Steps

The University is in the process of setting up an “AI In Learning and Teaching” consultation group and we currently have the Moodle site shared previously to share information on the use of Generative AI.

As also noted, we are exploring how we might obtain licenses for the use of some Generative AI tools at the University.

Be aware that many new AI systems are becoming available, as well as specialist AI systems for imaging, picture generation, media content production, software development and an increased number of other tasks. Each had its own strengths, weaknesses, risks, and benefits.

3. Data- Guidance on the processing of data using Generative Artificial Intelligence

Generative Artificial Intelligence stores and learns from data inputted, however AI systems must comply with data protection law, processing personal data fairly and lawfully. It is not currently always possible to delete data from a Large Language Model (LLM) neural net. Therefore, currently, these systems may not be compliant with relevant law like the UK GDPR and the Data Protection Act 2018. The ICO has produced [this guidance](#) for businesses in the public, private and third sectors.

To ensure the privacy of individuals, personal and special category (sensitive) data should not be entered into Generative AI tools. Any data entered should not allow an individual to be identified or be personally identifiable, as release into Generative AI tools is considered to be a release to the public domain.

The main information security risk to the University in using generative AI cloud services is in relation to a loss of confidentiality.

3.1 Compliance with Applicable Laws and Ethical Usage:

All AI usage within the University must adhere to local, national, and international laws and regulations, including data protection, intellectual property, and ethical standards. AI should be used ethically, ensuring fairness, transparency, and accountability in its applications. Discriminatory, harmful, or unethical use of AI is strictly prohibited.

3.2 Data Restrictions and the use of AI

Certain types of data must **never** be put into any AI software. These include:

- Usernames and passwords.
- Personally identifiable information or other sensitive or confidential material.
- Any data that is not fully consistent with University's policies on Data Protection, Data Processing, GDPR/Data Protection Act 2018, Academic Integrity, Attribution and Ethics.
- Any data related to University Intellectual Property.
- Any data that is protected by Copyright, unless explicit permission for its use with AI tools has been obtained.
- Any data, whose responses might result in reputational damage to The University of Wales Trinity Saint David.
- Any non-personally identifiable information data from third parties where the individual has not explicitly consented for their data to be used with AI, except for data that is clearly already in the public domain.
- Any non-personally identifiable information data from third parties where the explicit use of the data with AI has not been authorised by the third party.

4. Legal perspective:

The use of Generative AI raises several legal issues to which staff should be alert to. These include (but are not limited to):

- Inputs: There are potential issues around the extent to which data can be used as inputs for Generative AI. The UK Government is calling on the Intellectual Property Office to provide more guidance, particularly around the use of publicly available content. Laws which protect the ownership of databases and contractual requirements which restrict use on datasets should be considered.
- Intellectual Property: IP rights need to be respected. If the output infringes the intellectual property of a third party, that party may take legal action against the person who makes the output available. Systems like ChatGPT and Co-pilot do not verify if the output infringes the rights of third parties and if the output is identical or substantially similar to copyrighted work, this may result in a claim for infringement of copyright. Legal responsibility for copyright infringement is likely to lie with the user, not the Generative AI tool.
- Reliability: Currently, AI products carry broad disclaimers which set out that outputs cannot be relied on. Some training models are also not up to date and only access historical data. Users should also be aware that discriminatory outcomes that result from the use of AI may contravene the protections set out in the Equality Act 2010.
- AI systems are also required by data protection law to process personal data fairly and lawfully. It is not currently always possible to delete data from an LLM neural net. Therefore, these systems may not be compliant with relevant laws like the UK GDPR and the Data Protection Act. Staff should not input any sensitive or confidential data into any Generative AI tool – please see the Data section within this guidance.