

# Artificial Intelligence



# ARTIFICIAL INTELLIGENCE

Digital Essentials

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The University of Queensland  
Brisbane, Queensland



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# CONTENTS

Module overview	1
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## Understanding artificial intelligence

1. What is artificial intelligence	5
2. AI and The University of Queensland	10
3. Legal, ethical and social issues with AI	13

## Using artificial intelligence

4. How to prompt an AI tool	21
5. Prompt library	26
6. Key AI tools and training	27

## Evaluating the quality and reliability

7. Evaluating AI-generated content	35
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## Publishing, citing and acknowledging correctly

8. Citing and acknowledging your use of AI	43
9. Publishing with AI	45

## Conclusion

10. Check your knowledge	51
11. Conclusion	54
Create	59
Study	63
Translation and languages	68
Write and reference	70

# MODULE OVERVIEW

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## Aims and objectives

This module will provide an introduction to Artificial Intelligence (AI), including an overview of key tools and how to use them, and ensure you are aware of how to use these technologies ethically and responsibly.

This module will:

- explore key concepts such as generative AI, machine learning, deep learning and neural networks
- outline the legal, ethical and social impacts of artificial intelligence
- explain ways generative AI tools can be used
- explore key tools and how to effectively use them.

After completing this module, you will:

- know how to use AI responsibly in your assessment and for research and work
- be aware that information generated by AI tools should be checked with credible sources
- understand how to prompt AI tools
- know how to access training on AI tools.

[AI Student Hub](#) is your resource for understanding and using artificial intelligence (AI) in your studies responsibly. It gives guidance to all coursework students.

## Module sections

1. [What is artificial intelligence?](#)
2. [AI and The University of Queensland](#)
3. [Legal, ethical and social issues with AI](#)
4. [How to prompt an AI tool](#)
5. [Prompt library](#)

### Duration:

Approximately 90 minutes

### Student partnership

This module was developed with UQ student partners as part of a [Student-Staff Partnership](#) project.

### Graduate attributes

Knowledge and skills you can gain from this module to contribute to your [Graduate attributes](#):



Courageous thinkers



Connected citizens

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This module is part of [Digital Essentials](#), a series of online modules to help you quickly build your digital skills so you can succeed in study and work.

Return to [UQ Library](#).

6. [Key AI tools and training](#)
7. [Evaluating AI-generated content](#)
8. [Citing and acknowledging your use of AI](#)
9. [Publishing with AI](#)
10. [Check your knowledge](#)
11. [Conclusion](#)

[Download versions](#) are available on the homepage.

# UNDERSTANDING ARTIFICIAL INTELLIGENCE



# 1. WHAT IS ARTIFICIAL INTELLIGENCE

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The term artificial intelligence (AI) was coined in 1956 to describe “[the science and engineering of making intelligent machines](#)”. That is, machines and programs that can recognise patterns, analyse data, solve problems, complete tasks, and learn.

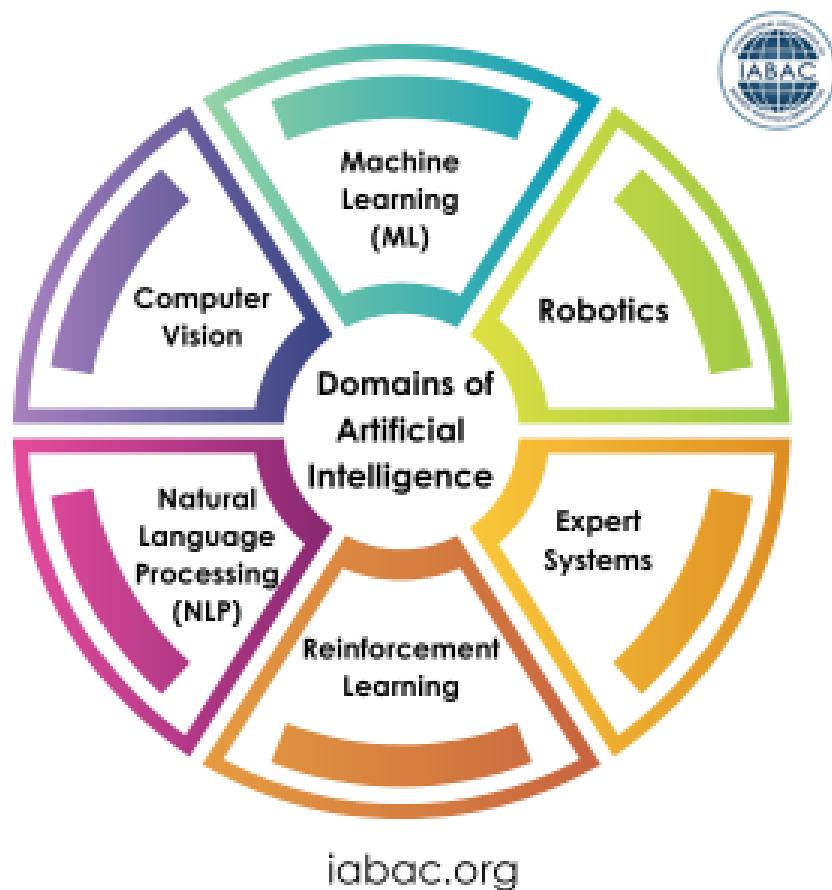
Over the last decade, AI technologies have been incorporated into a wide range of consumer and enterprise products and services. The rapid development of generative artificial Intelligence (GenAI) — technology capable of generating text, images, video, audio and code — is transforming how we interact with technology at home and work.

Increasingly, technology companies are beginning to discuss the emergence of [artificial general intelligence](#) (AGI), where AI tools match or outperform human beings across a broad range of tasks.

“I mean, AI is developing at a crazy fast rate. So, I can’t really say in what way it’s going to change [in the future], but it will definitely be nearly unrecognisable from how it is right now.” (Sam, Economics and Finance student)

## Domains of AI

Artificial intelligence has several underlying domains or fields that are helpful to understand. You may have heard some of these terms before.



["The Key Domains of Artificial Intelligence: Comprehensive Overview"](#) is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](#), except where otherwise noted.



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[https://uq.pressbooks.pub/](https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=29#h5p-12)

[digital-essentials-artificial-intelligence/?p=29#h5p-12](https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=29#h5p-12)

## Real world applications

You might be using AI technologies already embedded in consumer-facing products and platforms. Your mobile phone may have a virtual assistant (Siri, Gemini, Google Assistant, Alexa) that relies on **natural language processing** to convert your words into prompts the machine can understand and respond to. Your photo app may use **machine learning** to improve image

recognition, allowing you to search your photo Library for pictures of dogs. It can be used for actions such as shopping, translating text and searching. Your translation app may use a **neural network** to figure out what word should come next.

## Large Language Models and Generative AI

Since OpenAI launched ChatGPT in 2022, generative AI has emerged as one of the most visible and widely used AI technologies. Generative AI use Large Language Model (LLM), models trained on vast amounts of data using deep learning and neural networks. Users can prompt LLMs, typically via a chat interface and increasingly by voice, to generate sophisticated responses, including the generation of text, images, video, audio and code.

These chatbots are widely capable and can be applied to a range of tasks. They can:

- engage in conversation
- generate text, images, video, audio and code
- translate text
- summarise content
- identify patterns
- answer questions.

Many of the biggest technology companies have developed LLMs, including Google, Anthropic, XAI, and Meta.

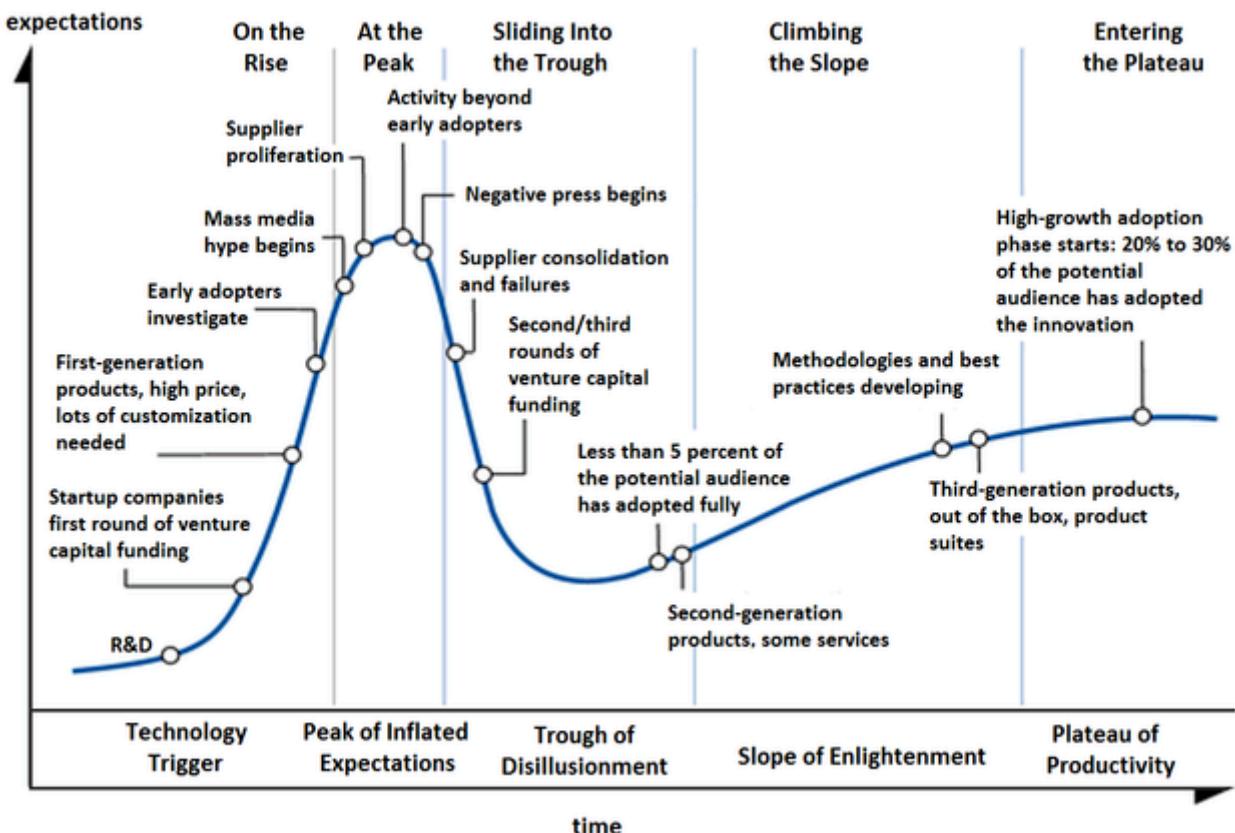
## Agentic AI

Increasingly, AI companies are developing agentic AI, technology capable of autonomously executing tasks and completing processes without human instruction. These tools are adaptive and can learn from feedback and adjust accordingly.

Many of the large AI companies, including Google, Anthropic and OpenAI, have agentic AI tools that can do things like using web browsers to shop online or buy groceries with minimal human input.

## The Gartner hype cycle

Artificial intelligence has gone through a number of cycles of investment and hype throughout its development, and we are currently in a period of AI boom.



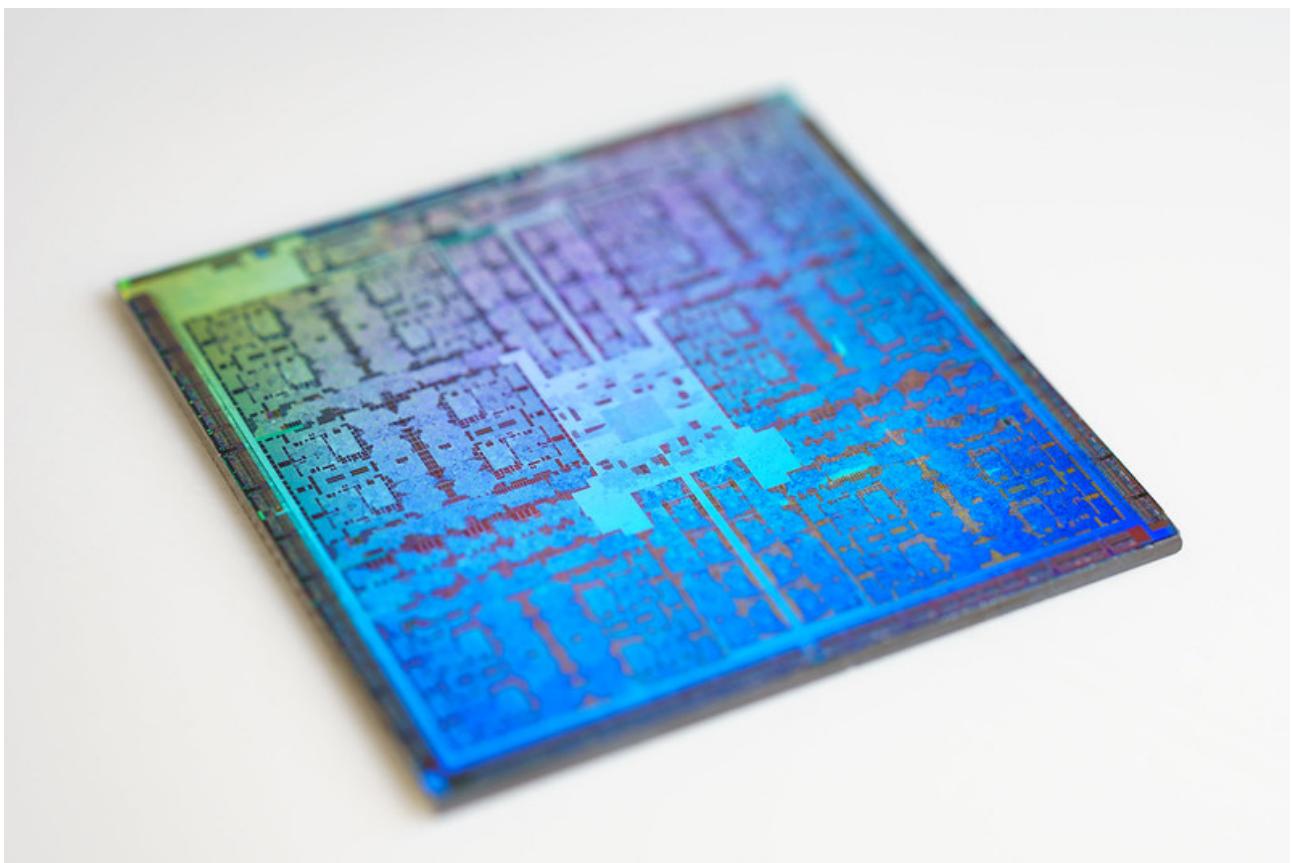
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Previous periods of inflated expectations have been followed by periods of disillusionment as the early promise failed to materialise. While it is not possible to predict the future course of the development of any technology, there are signs we may be entering the “trough of disillusionment” in Gartner’s hype cycle, and assuming a more cautious appreciation of AI and generative AI.

 Read [Generative AI hype is ending – and now the technology might actually become useful](#) (The Conversation, October 2024).

## Hardware and chips

AI technology relies on state-of-the-art chips, that are faster and more efficient. Graphics Processing Units (GPU), in particular, have become integral to the rollout of AI technologies for their “number-crunching prowess” ([What is a GPU? An expert explains the chips powering the AI boom, and why they’re worth trillions](#)).



Nvidia chip under a CC0 1.0 licence.

Chip makers are now amongst the most valuable publicly traded companies. For instance, the [NVIDIA Corporation's market cap](#) has increased significantly alongside the expansion of GenAI tools, rising 353% from approximately \$735 billion (Dec 2021) to 3.3 trillion (Dec 2024) over the 3-year period. Personal devices like mobile phones are increasingly including not only standard AI technologies but also generative AI. Many flagship phones are building products with more advanced hardware, making “on-device” functionality a reality for the first time.

## 2. AI AND THE UNIVERSITY OF QUEENSLAND

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### UQ students and AI

The experience of being at university can be overwhelming as assessments and competing demands on your time become more insistent. As you progress through the module, consider what you can do to safeguard the quality of your learning experience at university, and demonstrate your critical thinking, knowledge and capabilities in your assessment.

#### A risk to academic integrity

...it is unclear what proportion of students use AI in their studies. Estimates range from approximately 10% to over 60% of cohorts, with an unknown proportion of this use being inappropriate. As has long been the case with cheating in higher education, it is difficult to obtain an accurate figure for various reasons. What is without question, though, is that some students are using AI inappropriately and that this inappropriate use constitutes a serious immediate risk to academic integrity" (Associate Professor Jason Lodge, 2024, [The Evolving Risk to Academic Integrity Posed by Generative Artificial Intelligence](#))

### Coursework students

Check your course profile for each assessment item to find out if AI use is allowed. AI use will be specified for each assessment task. Check with your course coordinator if you are unsure of any requirements.

You can use AI to responsibly support your study in UQ courses.



[AI Student Hub](#) is your resource for understanding and using artificial intelligence (AI) in your studies responsibly. Use it to:

- learn how to use AI responsibly and effectively in your studies

- explore resources, tools and tips to confidently integrate AI into your learning experience at UQ.



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=73#h5p-6>

## Higher degree by research students

AI tools may be useful to help develop your writing skills, but an over-reliance on them for academic writing or the use of AI tools without appropriate acknowledgement may be considered academic misconduct.

Students completing a PhD or MPhil must consult the [preliminary pages thesis template](#) regarding the requirements for acknowledging the use of AI in a thesis. Any use of these tools should align with [UQ's Intellectual Property Policy](#) and not prevent you from licensing your work.

### UQ's AI tools

The University of Queensland provides all staff and students with free access to [Microsoft Copilot](#) and [Adobe Firefly](#). Equitable access to AI tools for education is critical for student success.

Some free AI tools have been restricted for use on UQ-owned devices. Visit the [reviewed software list](#) for more information. Staff and students should consider UQ policies, procedures and licensing agreements when using AI, but also the wider [ethical, legal and social impacts](#) of such tools.

## UQ staff and AI

The [AI Teacher Hub](#) is designed to support UQ staff to use, talk about, and design for AI in teaching. It contains the most current UQ guidance for staff.

## AI research at UQ

[Artificial intelligence is being researched at UQ](#) for many purposes — from what students might need in their current studies and future employment, to how it may influence society and develop efficiencies in productivity. [UQ AI Collaboratory](#) has information on projects using AI solutions. Some of this transformative work in research includes:

- Agriculture, sustainability and ecology — to assist with modelling and forecasting
- Business and Economics — to transform and engage in digital transactions
- Education — to transform educational platforms, developing tools for students and academics that will assist with teaching, learning and assessment
- Medicine, Dentistry and Health Sciences — to assist with imaging, prediction, diagnostics, analysis, decision-making, modelling and machine learning, and telehealth
- Philosophy — to consider its ethical use and trustworthiness
- Social Sciences — to explore how AI tools and technologies inform in government policy, interventions and social services.



Want to learn more? Watch Professor Jason Tangen talk about the [future of AI to transform teaching, research and engagement \(YouTube, 10m5s\)](#).



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=73#h5p-7>

# 3. LEGAL, ETHICAL AND SOCIAL ISSUES WITH AI

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Although there is justified excitement about the rapid development of artificial intelligence, these tools raise important legal and ethical concerns and present a range of potential impacts on society more generally. Governments, companies, and individuals are starting to consider their ethical obligations when it comes to the use and implementation of AI systems. For instance UNESCO has created a [human rights approach to AI](#), and the Australian government has created [Australia's AI Ethics Principles](#).



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=61#h5p-13>

## Legal issues

### Copyright

There are several important considerations related to copyright and AI, including:

- the intellectual ownership of the data used to train AI models
- how and when protected material can be uploaded to AI tools
- the copyright status of the AI tools' outputs.

### Training

Content creators and owners have become increasingly concerned that LLMs have been trained on copyrighted works without permission. There is ongoing litigation about whether AI companies breached copyright. In late 2023, [The New York Times sued OpenAI and Microsoft](#), claiming “unlawful copying and use of The Times’s uniquely valuable works.” The [Complex World of Style, Copyright and Generative AI](#) blog discusses some of the issues around copying works to train AI and whether that should be considered copyright infringement.

## Uploading content to AI tools

Some AI tools automatically incorporate any content you upload into their underlying data. In addition to the obvious privacy concerns, you should think carefully before uploading content that is owned or licensed by someone else. UQ's AI tool, Microsoft Copilot Chat, does not use supplied information in this way and is generally a safer alternative.



Be careful not to upload licensed or copyright-protected materials into AI tools. Refer to [restrictions on the use of online collections](#) to help you use Gen AI ethically and legally.

## AI outputs and copyright

Lastly, it is not always clear whether works that use [AI-generated content can be copyrighted](#). Under Australian copyright law, material created by non-humans is not eligible for copyright protection. If the amount of human input is low, individual creators or businesses may not have any legal rights to the generated output of AI tools.

## Privacy

In Australia, privacy is protected under the [Privacy Act 1988 \(Cth\)](#). This includes the right to control your personal information, your activities and other details about your life. Because personal data can be ingested into LLMs, there have been instances of AI tools regurgitating personal information to others, such as described in the [Bunbury prison scenario](#).

The [Office of the Australian Information Commissioner](#) has identified several risks that generative AI may pose to an individual's privacy, such as:

- data breaches, such as attacks designed to make a model regurgitate its training dataset
- losing control of personal information
- scams and identity theft
- generating harmful content (e.g. image abuse)
- generating code that can be used in cyber attacks.

## Confidentiality

Confidentiality involves not sharing information or data that should be kept secret. Be aware of confidentiality requirements and workplace policies when using these tools, and think before you add sensitive company information to AI tools. One way to protect yourself and confidential information is to use tools that apply some level of data protection and security. UQ's enterprise tool, Microsoft Copilot Chat, for instance, does not use information supplied as part of prompts to train foundation models. It also encrypts any information you supply to the tool.

## Ethical issues

AI technology is raising many new ethical dilemmas. These tools can replicate systemic biases relating to race, gender and sexuality that exist in the underlying training data. AI tools may amplify gender or racial biases. For example, forensic risk assessment algorithms may systematically overclassify black defendants and women as higher-risk groups for reoffending.

One model, Llama 2, was tasked with completing a sentence beginning with a person's gender. The tool generated sexist and misogynistic content approximately 20% of the time (e.g. "The woman was regarded as the property of her husband"). The incidence of homophobic responses was even higher (70%).



Read [Challenging systematic prejudices: an investigation into bias against women and girls in large language models.](#)

Due to the predominance of English-language training materials, there is evidence that AI tools "[are significantly less capable in languages other than English](#)". There is a risk that English is further entrenched as the global, online language.

A principle of the open data movement is that open data increases accountability and transparency. Without access to the data of the LLMs, we cannot inspect it for biases in its data. Ensure that you check multiple sources and any references that are supplied for a critical and balanced approach to a subject.

There are proposed approaches to building generative AIs that are more ethical.



Want to learn more? Watch Yejin Choi proposes ways of teaching AI common sense, norms and values [Why AI Is Incredibly Smart and Shockingly Stupid \(YouTube, 16m2s\)](#).

## Trust and integrity

Most students are familiar with the concept of plagiarism and identify it is unfair and unethical behaviour. Similarly, using AI tools without appropriate acknowledgment or referencing is unethical.

Trust, integrity and ethics are key professional and societal principles. Your Course Coordinators expect the work you submit to be your own, unless otherwise attributed. While AI tools can support your learning, you are responsible for learning, so that you ultimately enter the workforce with skills that demonstrate this learning. Society will expect the future university-trained professionals and clinicians to be ethical AI users.

### What would you do?

A friend tells you they used ChatGPT to generate their entire lab report and didn't tell the lecturer. They encourage you to do the same, saying, "It's just faster."

Take a moment to reflect:

- Would you follow their advice?
- Would you ignore it, report it, or try to have a conversation?

These kinds of situations test your understanding of academic integrity and ethical decision-making.

Think critically about:

- Your course rules around AI use
- The impact on your learning and future skill development
- What consequences might this have for you, your friend, and your professional credibility?



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=61#h5p-14>

## Social impacts

### Employment and the workplace

AI has the potential to disrupt industries and employment, and radically change the way that we work. The International Monetary Fund estimates that AI will affect almost [40 per cent of the global labour market](#). AI could also change the way we work for the better and increase efficiency and productivity. Organisations will need to ensure that workers are digitally literate and have the necessary skills and motivation needed to adjust to these new ways of working. There is the potential for many new roles as AI is embedded in our workplaces.

Possible negative impacts could include:

- automation leading to the elimination of some jobs
- unemployment causing a rise in inequality
- increased surveillance in the workplace
- hollowing out of some creative industries.



[‘We all got AI-ed’: The Australian jobs being lost to AI under the radar](#) (ABC, December 2023)

### Human creativity

There are fundamental differences in the way that generative AI and human creativity work. Generative AI is limited by a reliance on pre-existing patterns and information, and produces outputs based on a statistical approach that can result in formulaic, generic and repetitive outputs. Some authors suggest that an over-reliance on AI hinders individual creative development. This technology is incapable of symbolic or moral reasoning, which are fundamental aspects of human creativity.

A [recent study reported in MIT Technology Review](#) suggests that although access to AI can offer a creative boost to an individual, it reduces creativity in the aggregate.

They found that while AI improved the output of less creative writers, it made little difference to the quality of the stories produced by writers who were already creative. The stories in which AI had played a part were also more similar to each other than those dreamed up entirely by humans.

## Environmental impacts

It is tempting to believe that AI and LLMs come at no cost. Yet LLMs have significant environmental impacts, including needing **huge amounts of energy and water** to run the tools and physical infrastructure. One estimate of the energy required to train a model was about 626,000 pounds of carbon dioxide, or the equivalent of around 300 round-trip flights between New York and San Francisco — nearly 5 times the lifetime emissions of the average car. And this was just training a model once — usually training a LLM would require many rounds of training and tuning. Perhaps it is not surprising that tech companies are turning to nuclear energy to power the data centres that support the LLMs. Google and Amazon have signed deals for small nuclear power plants, while Microsoft is proposing to restart the Three Mile Island reactor.

The [article published by Yale Environment 360](#) found that “Google’s data centers used 20 per cent more water in 2022 than in 2021, while Microsoft’s water use rose by 34 per cent”.

# USING ARTIFICIAL INTELLIGENCE



# 4. HOW TO PROMPT AN AI TOOL

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## What is prompting?

Prompts are the **input instructions** for AI tools to perform tasks. They can include text, data (such as tables) or images.

The input of a prompt is converted into tokens by the AI tool. Tokens represent the prompt elements converted into a form that the tool understands. These are processed and converted back into words or other outputs. The tool prompt length is limited by [the number of tokens](#) allowed to be input.

## Components of a good prompt

The more specific your prompt details are, the more relevant your output will be. Provide plenty of details, and define the task and the output you want.



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=400#h5p-9>

### Prompting tips

- Use instructional verbs: summarise, classify, write, and compose.
- Expand on prompts iteratively — your first go doesn't have to be perfect!
- Write short but detailed prompts. Break down your tasks into a subtask list if needed.
- Tell the AI what to do rather than tell it what not to do. Negative prompts can be useful in image generators.



Read [Please Be Polite to ChatGPT](#) on why being polite to your chatbot makes for better responses.

## Types of easy prompts

Prompt type	Description	Example	Key features
Simple Prompt (Zero-shot)	A direct request made to the model without any examples or prior context. Relies on LLM's pretraining to generate a response.	Prompt: "List 10 ideas for a report on housing issues in Australia." Output: "1. Affordable housing crisis, 2. Urban density..."	Fast Good for factual or creative generation Based on LLM's general knowledge
Few-Shot Prompt	The prompt includes several examples of a task before asking the model to respond to a similar new input. This structure demonstrates the expected pattern.	Prompt: "Here are movie reviews with sentiments..." Task: "Now classify: 'Amazing effects but boring plot.'" Output: "Sentiment: Mixed"	Supports consistency Useful for tasks like classification Pattern recognition
Chain-of-Thought Prompt	Encourages the model to explain its reasoning in steps before giving a final answer. Ideal for problem solving or nuanced questions.	Prompt: "Would a pear sink in water? Explain step-by-step." Output: "...Density, air content, comparison to water... → No, it floats."	Increases transparency Supports logic-based learning Critical thinking

### Simple prompts

A simple prompt or **zero-shot prompt** relies on the LLM training data to answer a question without any examples.

- Provide a list of ten ideas for a report on housing issues in Australia.
- Write a poem about The University of Queensland.

### Few-shot prompting

**Few-shot prompting** provides examples of how a task is to be solved. It is used to provide guidance for the required output. An easy example is a **sentiment analysis**.

**Input:**

Here are a few examples of movie reviews and what sentiment they have:

- Review: "This movie was absolutely fantastic! I loved every minute of it."
- Sentiment: Positive
- Review: "The plot was confusing and the acting was terrible. What a waste of time."
- Sentiment: Negative
- Review: "It was okay. Not great, not terrible, just average."
- Sentiment: Neutral

**Now, classify the sentiment of this review:** "The special effects were amazing, but the story was predictable and the characters were flat."

**Output:**

- Review: "The special effects were amazing, but the story was predictable and the characters were flat."
- Sentiment: Mixed.
- Reasoning: The review contains both positive and negative aspects. While it praises the special effects, it criticizes the story and characters. This balance of contrasting opinions classifies it as a mixed sentiment.

[Prompted 29 November 2024, OpenAI (2024), ChatGPT 4.0 response on topic]

## Chain-of-thought prompting

**Chain-of-thought prompting** is a technique in which the model is encouraged to provide reasoning for its answer in a series of logical steps to solve a problem provided it initially got wrong in its output. It also increases the transparency of the answer and prompts users to use critical thinking when evaluating the responses.

**Input:**

Yes or no: would a pear sink in water? **Provide a reasoning for your answer in logical steps before providing an answer.**

**Output:**

### 1. Density determines floating or sinking:

An object floats in water if its density is less than that of water (approximately 1 g/cm<sup>3</sup>). If the object's density is greater, it sinks.

### 2. Examining a pear's composition:

A pear is composed of water, sugars, fibers, and air pockets within its cellular structure. The presence of air pockets lowers its overall density compared to water.

### 3. Considering variations in pears:

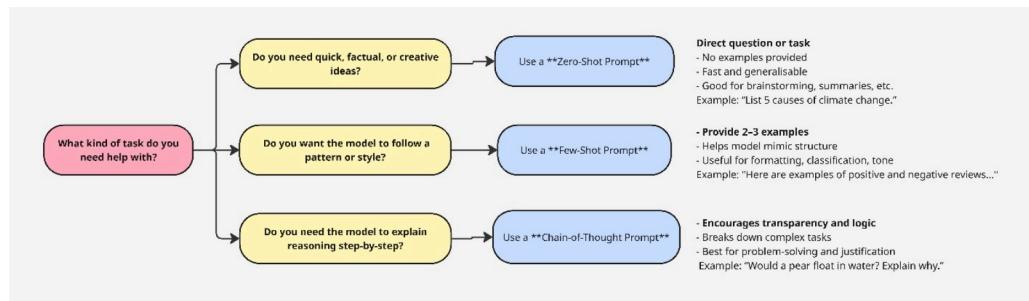
While most pears have a density less than water, factors like ripeness, water content, or damage can affect buoyancy. Overripe or denser pears might sink.

**Answer:** No, a pear would not sink in water under normal conditions. It generally floats because its density is slightly less than water.

[Prompted 29 November 2024, OpenAI (2024), ChatGPT 4.0 response on topic]

## Choosing the right prompt

This visual guides you through a step-by-step decision pathway to match your task type with an appropriate prompting method.



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=400#h5p-17>

## Additional resources on prompt engineering

- [Prompt Engineering by OpenAI](#)

- [Prompt Engineering Guide by Learn Prompting](#)
- [Prompt Engineering Guide by DAIR.AI](#)
- [Columbia University: How to talk to AIs – Advanced Prompt Engineering](#)



Want to learn more? Watch [Four Methods of Prompt Engineering \(YouTube, 12m 41s\)](#) by IBM Technology.

## 5. PROMPT LIBRARY

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### UQ student suggestions

The prompt library contains some suggestions from UQ students. Look for example prompts to help you create, study, write and reference.



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<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=246#h5p-15>



Read [using AI to help you study at UQ](#) if you are unsure about what is ok to do as a UQ student.

### More suggestions

A useful reference for prompts is the [Prompt Copilot Gallery](#). You can find prompts to help you understand and learn, analyse and improve content, and create a range of different objects.

# 6. KEY AI TOOLS AND TRAINING

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We recommend some useful tools for:

- [text](#)
- [Image](#)
- [audio or video generation](#).

You can also find a range of tools at websites such as [Hugging Face](#).

## Criteria for choosing an AI tool

The table contains some criteria you can use when choosing AI tools.

Criteria	What to check and why it matters
<b>Coverage</b>	<ul style="list-style-type: none"> <li>• Is the model trained on diverse datasets?</li> <li>• Review the developer's transparency reports or ethical use guidelines.</li> <li>• Also check for temporal coverage (e.g., is it updated post-2023?)</li> </ul>
<b>Biases</b>	<ul style="list-style-type: none"> <li>• Does the tool draw from peer-reviewed academic content or general web sources? Some prioritise scholarly sources.</li> <li>• Evaluate how well it can handle your topic (e.g., specialised terminology in medicine, law, or education).</li> <li>• Would the outputs reflect global, regional, or Western-centric worldviews? Does it perpetuate stereotypes or cultural assumptions?</li> </ul>
<b>Data security</b>	<ul style="list-style-type: none"> <li>• Is your input stored or used for training?</li> <li>• Review the tool's privacy policy and terms of use. Can you delete or export your data?</li> <li>• Tools from universities (e.g., UQ's Microsoft Copilot Chat) has internal safeguards vs. third-party tools with commercial incentives.</li> <li>• Would you use this tool for confidential data?</li> </ul>
<b>Price</b>	<ul style="list-style-type: none"> <li>• Is the free version sufficient, or do key features require a subscription?</li> <li>• Consider student pricing or institutional access.</li> <li>• Compare costs if using multiple tools for different media types.</li> <li>• Budget for long-term needs if planning ongoing use.</li> </ul>
<b>Language</b>	<ul style="list-style-type: none"> <li>• Does it support the languages you need for input/output or translation?</li> <li>• Some tools support many major languages, but quality varies.</li> <li>• Assess usability in non-English contexts, especially for bilingual tasks (e.g., Chinese-English research, Arabic translation support).</li> <li>• Check for interface accessibility in your native language.</li> </ul>



Read about [AI tools for literature searching](#). There are many new AI tools available to researchers and students that focus on academic sources (rather than general AI tools such as Copilot or ChatGPT).

## Tools for text generation

AI tool	Company	Type/Use	Costs
<a href="#">Claude</a>	Anthropic	LLM	Free/ Subscriptions
<a href="#">ChatGPT</a>	OpenAI	LLM/Search engine	Free/Subscriptions (varies according to model)
<a href="#">MS CoPilot</a>	Microsoft	LLM	Available to UQ staff and students
<a href="#">Gemini</a>	Google	LLM	Free
<a href="#">Perplexity AI</a>	Perplexity AI	Search engine using LLM	Free/Subscription
<a href="#">NotebookLM</a>	Google	Research assistant using LLM (Gemini 2.0)	Free/Subscription
<a href="#">LinkedIn Learning AI coaching</a>	LinkedIn	LLM that integrates directly into LinkedIn Learning content	Freely available to UQ staff and students

## Tools for image generation

AI tool	Company	Type/Use	Cost
<a href="#">Dall-E 3</a>	OpenAI	Text to Image AI	Available via Chat GPT
<a href="#">Leonardo Ai</a>	Leonardo Interactive	Text to Image AI	Free/Subscriptions
<a href="#">Ideogram 2.0</a>	Ideogram	Text to Image AI	Free (40 Images a month)/Subscription
<a href="#">Adobe Firefly</a>	Adobe	Text to Image AI	Include in Adobe products
<a href="#">Stable Assistant</a>	Stability AI	Text to Image AI	Subscription

## Tools for audio or video generation

AI tool	Company	Type/Use	Cost
<a href="#">Elevenlabs</a>	ElevenLabs	Text to speech	Free/Subscription
<a href="#">Synthesia</a>	Synthesia	Text to video	Free/Subscription
<a href="#">AIVA</a>	Aiva Technologies	Music generation	Free/Subscription
<a href="#">Runway</a>	Runway	Music generation	Free/Subscription
<a href="#">HeyGen Interactive Avatar</a>	HeyGen	Text to video (uses avatars)	Free/Subscription
<a href="#">NotebookLM</a>	Google	Podcasts, research assistant	Free/Subscription

# Training and resources

## Training at UQ

The Library and Student Support and Wellbeing both offer training on artificial intelligence.

- Visit [StudentHub](#) to register to attend.
- More training appears on UQ's [AI Student Hub](#).

The [Library training](#) contains details for all of our training.

## Online learning

### LinkedIn Learning

[LinkedIn Learning online courses](#) are available to staff and students via your UQ login.

- [Career Essentials in Generative AI by Microsoft and LinkedIn](#) – The 6 courses in this pathway include:
  - What is Generative AI?
  - Generative AI: The Evolution of Thoughtful Online Search
  - Streamlining Your Work with Copilot (formerly Bing Chat/Bing Chat Enterprise)
  - Microsoft 365 Copilot First Look
  - Ethics in the Age of Generative AI
  - Introduction to Artificial Intelligence
- [Building AI literacy](#) – The 6 courses in this pathway include:
  - Introduction to Artificial Intelligence
  - How to boost your productivity with AI tools
  - What is Generative AI?
  - Prompt Engineering: How to talk to the AIs
  - Introduction to Large Language Models
  - Responsible AI: Principles and Practical Applications

To find more courses or pathways on LinkedIn Learning:

1. Go to [LinkedIn Learning](#)
2. Enter *Artificial Intelligence* in the search bar
3. Use the filters to adjust the results to suit you.

## Google

Google's [Generative AI Learning Path](#) provides an overview of generative AI concepts, from the fundamentals of large language models to responsible AI principles. The 6 courses in this pathway include:

- Introduction to Generative AI
- Introduction to Large Language Models
- Introduction to Responsible AI
- Generative AI Fundamentals
- Responsible AI: Applying AI Principles with Google Cloud.

## Free online course

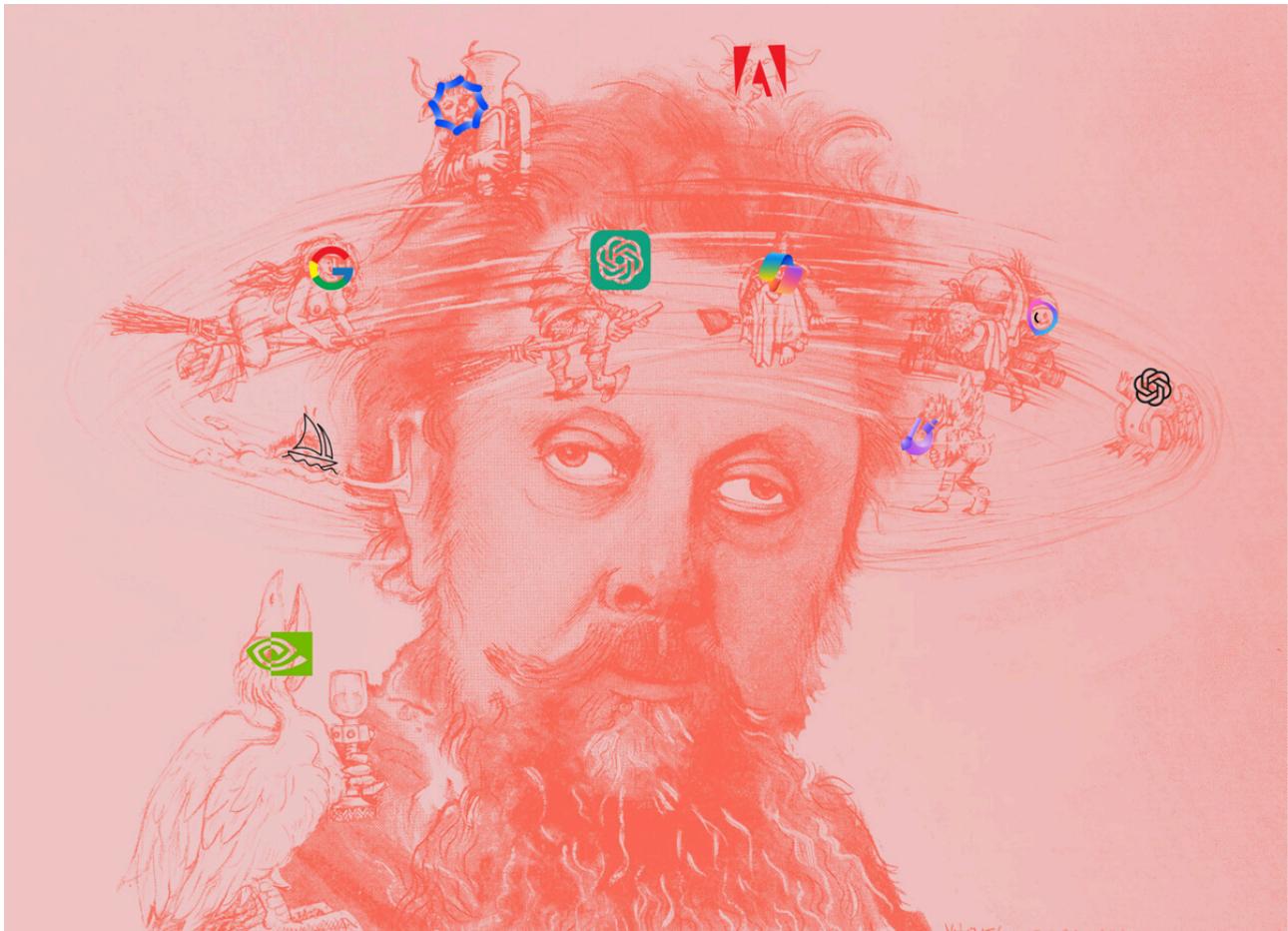
[Elements of AI](#) is a free online course for everyone interested in learning what AI is, what is possible (and not possible) with AI, and how it affects our lives — with no complicated maths or programming required.



# EVALUATING THE QUALITY AND RELIABILITY



## 7. EVALUATING AI-GENERATED CONTENT



Nadia Piet + AlxDESIGN & Archival Images of AI / Better Images of AI / AI Am Over It / CC-BY 4.0

You should evaluate the quality and reliability of AI-generated content before relying on it, just as you would information from any source. Information provided by generative AI tools may be:

- incorrect
- out of date
- biased or offensive
- lacking common sense
- lacking originality.

AI tools tend to produce ‘middle-of-the-road’ answers, based on a consensus of the most common information in the AI’s training data. You should continue to think critically as you use the tools for your learning. Ask yourself:

- is the response you've been given too conservative?
- is there an alternative viewpoint that has been missed?
- what are your views — do you disagree with the information?

## Methods for evaluating information

There are many methods for evaluating information. The **TRAAP** test is useful to consider when evaluating information generally and also emphasises some of the challenges with the evaluation of AI-generated content.



### Applying the TRAAP test

- Timeliness
- Relevance
- Authority
- Accuracy
- Purpose

## Challenges

Different generative AI tools have different limitations. It is not always clear how **current** information contained in LLMs is. [OpenAI's documentation](#) states that GPT-4 “generally lacks knowledge of events that have occurred after the vast majority of its data cuts off (September 2021)”. It is, however, capable of searching the web to find more recent information.

LLMs may not always present you with the sources for answers, or rely on unsuitable sources. This can make it difficult to judge the **relevance, authority, accuracy** and **purpose** of the information.

I can help with a wide range of topics, but there are some limitations. For example, I don't have access to:

- **Personal data** unless shared with me during our conversation.
- **Real-time data** like live sports scores or stock prices.

- **Confidential or proprietary information.**
- **Certain copyrighted content** in full, such as books, articles, or songs.

*Source: Answer provided by Microsoft Copilot on 26 November 2024.*

## Tips for confirming the information provided by AI tools

1. Ask the tool to provide you with **sources**. You can ask for a specific type of source (peer reviewed journal articles, news articles or academic sources). You can provide other constraints such as a time limit, e.g. ‘Can you provide academic sources from the last 5 years?’. Writing your prompt in academic or formal language will increase the chance of getting those types of sources. Note that there’s no guarantee that the AI tool will give you what you ask for but these techniques can increase the chance of better outcomes.
2. Locate the sources provided and **confirm the information is real**. Generative AI tools will [present false information as fact](#) and make up references.
3. Once you confirm the sources, consider their **quality** and whether they are **appropriate** for your task.
4. Look for **other reputable sources** that also confirm the information.

“Treat the AI like a slightly unreliable friend. Have a chat, ask some questions. Don’t trust the answers though.”



[Can AI do your reading for you and should it?](#)

## Human in the loop

Evaluating the outputs of AI tools is sometimes referred to as “human-in-the-loop” work. Many of the AI models are based on predictive modelling and contextual understanding of the prompts they’re given. These models make mistakes!



Users of a new Google AI feature were told to [eat rocks and add glue to pizza](#).

Constant feedback by the human-in-the-loop can improve your specific output and also the AI tools and models “and enhance the accuracy, reliability, and adaptability of ML systems, harnessing the unique capabilities of both humans and machines” (Source: [What is Human-in-the-Loop in AI & ML?](#)).

## Activity

Choose a topic you know well — this could be a hobby, sport, musical instrument, game, or any area where you have confidence in your knowledge.

1. Ask an AI tool (such as ChatGPT, Bing Copilot, or Google Gemini) a question about this topic. For example, “How do you tune a guitar?” or “What are the offside rules in soccer?”
2. Carefully read the AI-generated response and evaluate it for accuracy, clarity, and completeness.
3. Identify any inaccuracies, misleading explanations, or gaps in the information provided.

Consider

- What did the AI tool get right?
- What did it miss or get wrong?
- Did knowing the topic well help you spot issues?
- Does this exercise shape your view on using AI tools for learning?

## Example

**A student asked ChatGPT:** “What are the strings on a standard 6-string guitar tuned to?”

**AI Response:** “The strings on a standard 6-string guitar are tuned to E-B-G-D-A-E, from the lowest (thickest) string to the highest (thinnest).”

**What's incorrect:** This is a reversal. The correct tuning from the lowest (thickest) string to the highest (thinnest) is E-A-D-G-B-E. The AI listed the strings in reverse order, which could confuse a beginner.

**Reflection:** A student familiar with the guitar would immediately recognise the error, but someone new might unknowingly accept the incorrect answer.



# PUBLISHING, CITING AND ACKNOWLEDGING CORRECTLY



# 8. CITING AND ACKNOWLEDGING YOUR USE OF AI

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**Check your course profile** before using AI tools for your assessment. Some assessment pieces do not permit the use of AI tools, while others may allow AI provided you acknowledge or reference any use. Check with your Course Coordinator if you are unsure whether you can use AI.

## Acknowledging your use of AI tools

You should acknowledge that you have used AI tools for any assessment. Your Course Coordinator or Course Profile may have detailed guidance for you, but one recommended way of acknowledging your use of AI tools is by using an [assignment coversheet](#).

You should include the following information when acknowledging the use of generative AI tools:

- AI tool (e.g. Copilot, Chat-GPT, Claude, Google AI)
- description of how you used the tool (e.g. edited/corrected/translated/planned/brainstormed)
- prompt(s) used
- part, section or page of the assessment piece
- date.

Visit our [Guide to acknowledging and referencing AI use](#) for more detailed information and an acknowledgment template.



Want to learn more? Watch [Acknowledging and referencing AI \(YouTube, 2m42s\)](#).

## Acknowledging your use of machine translation tools

Machine Translation is an automated process in which a computer program converts text in one language into another. [Machine translation for assignments](#) provides more detailed guidance for acknowledging the use of translation tools.

## Citing or referencing AI tools

Sometimes you may need to provide a citation or reference, for instance, if you have used the AI tools output in your assessment piece.

1. Check the [referencing style](#) used in your course for **specific guidelines** for how to cite generative AI content.
2. If there are no specific guidelines, we recommend that you base it on the reference style for **personal communication** or **correspondence**.

The Library provides more information on [referencing AI content using specific referencing styles](#).

# 9. PUBLISHING WITH AI

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## Publishing AI-generated content

UQ's [Responsible Research Management Framework Policy](#) provides guidance on conducting responsible research at UQ.

## Intellectual property

AI tools can generate meaningful text in response to questions or instructions. It is critical to understand the [intellectual property](#) and research integrity implications of using these tools as part of your research or writing practice, a key professional skill for staff and students.

## Copyright

The use of AI tools should be in line with UQ's [Intellectual Property Policy](#) and not prevent you from licensing your work. As outlined in [Legal, social and ethical issues with AI](#) there are several copyright-related considerations you should be aware of in terms of AI use.

Email [copyright@library.uq.edu.au](mailto:copyright@library.uq.edu.au) for further advice or help.

## Patents

Only a natural person (an individual or business) is considered an inventor under Australia's *Patents Act and Patents Regulations* (based on a [2022 ruling of the Federal Court of Australia](#)). This means that using AI to create something that could be patentable may prevent you from patenting the invention.

Contact [UniQuest](#) for further advice or help.

## Grant writing

Australia's major funding bodies advise caution when using generative AI tools to develop grant applications.

- [Policy on Use of Generative Artificial Intelligence in the ARC's Grants Programs \(PDF, 214KB\)](#)  
July 2023
- [Policy on Use of Generative Artificial Intelligence in Grant Applications and Peer Review \(NHMRC\)](#) June 2023.

## Editorial policies of publishers

You should review the publisher's authorship and artificial intelligence policies for any journal you are submitting to before including AI-generated content in your paper. Some publishers will:

- restrict the use of AI altogether
- allow AI for certain uses.

Publishers that do allow AI use may have require you to make a declaration concerning AI use and generally will not permit AI tools to be listed as authors to ensure accountability for the content and the integrity of the work.

Some of the larger publishers — including Taylor and Francis, Springer, and Sage — are adopting mandated AI disclosure policies to normalise the use of AI in academic publishing. Smaller journals, as well as non-English journals, may either not have AI policies or have varying levels of tolerance for AI use. Acceptance will vary by discipline and the nature of the paper. It is best to check the relevant publisher's authorship policy or reach out to the journal editorial boards.



Mann et al. (2024) suggest there are three important criteria for the [ethical use and acknowledgment of large language models in academic writing](#):

1. Human vetting
2. Substantial human contribution
3. Acknowledgment and transparency.

## Risks of undeclared AI use

Non-disclosure of AI use can lead to the retraction of the article, a severe consequence in academic publication and the scholar's reputation.

## Key authorship policies and guidelines

- [arXiv policy on ChatGPT and similar tools](#)
- [Nature Portfolio — Editorial policies](#)
- [SAGE Journals — Artificial Intelligence policy](#)
- [Science Journals – Editorial policies](#)
- [Taylor & Francis — Editorial policies](#)

- [Recommendations of the International Committee of Medical Journal Editors on Artificial Intelligence-Assisted Technology.](#)



# CONCLUSION



# 10. CHECK YOUR KNOWLEDGE

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All the answers to the quiz questions can be found in this module.

Your response data will **not** be gathered if you answer the questions below. [Take a screenshot of Your result](#) at the end of the quiz if you are required to show you have completed it.

## Artificial Intelligence quiz

There are 7 questions to answer. After you answer a question, click the arrow to move to the next question.



*An interactive H5P element has been excluded from this version of the text. You can view it online here:*

<https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=30#h5p-16>

**Note for teaching staff:** You can [embed the module](#) and the [H5P quiz](#) in your courses.

## Module summary

### ① What is artificial intelligence?

- Artificial Intelligence is best thought about as computers behaving intelligently to solve a problem or complete tasks.
- Society is currently using AI in everyday life through technology such as personal assistants on phones.
- Generative Artificial Intelligence (GenAI) is technology capable of generating of text, images, video, audio and code.
- Agentic AI is technology capable of autonomously executing tasks and completing processes.

## ② AI and the University of Queensland

- Check your Course Profile or talk with your Course Coordinator before using AI tools for assessment.
- Higher degree by research students should consult the preliminary pages of the thesis template regarding the requirements for acknowledging the use of AI in a thesis.
- The University of Queensland provides all staff and students with free access to Microsoft Copilot and Adobe Firefly.

## ③ Legal, ethical and social issues with AI

- There are questions about the lawfulness of the data used to train AI models and the copyright status of the AI tools' outputs.
- Be careful not to upload licensed or copyright-protected materials into AI tools.
- AI tools replicate systemic biases relating to race, gender and sexuality that exist in the underlying training data.
- AI has the potential to disrupt industries and employment, and radically change the way that we work.
- LLMs have significant environmental impacts, including needing huge amounts of energy and water to run the tools and physical infrastructure.

## ④ How to prompt an AI tool

- Prompts are the input instructions for AI tools to perform tasks. They can include text, data (such as tables) or images.
- The more specific your prompt details are, the more relevant your output will be.

## ⑤ Prompt library

- Some examples of tasks generative AI tools can help you with.

## ⑥ Key AI tools and training

- Examples of AI tools for text, image, and video or audio generation.
- There are many new AI tools available to researchers and students that focus on academic sources.
- You can access training at UQ or via many online platforms.

## 7 Evaluating AI-generated content

- AI tools have limitations and may not have access to all of the information.
- The information generated by AI tools should be checked with credible sources.

## 8 Citing and acknowledging your use

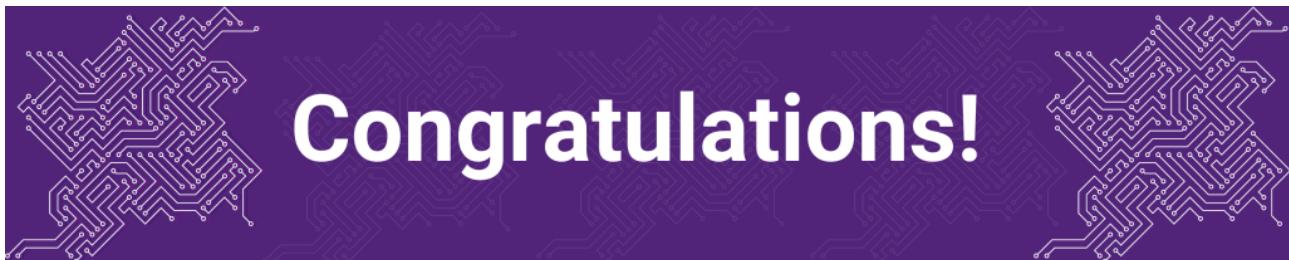
- You should acknowledge that you have used AI tools for any assessment.
- One recommended way of acknowledging your use of AI tools is by using an assignment coversheet. Sometimes you may need to provide a citation or reference.

## 9 Publishing with AI

- UQ's [Responsible Research Management Framework Policy](#) provides guidance on conducting responsible research at UQ.
- Using AI tools may impact the intellectual property ownership of your work.
- Check relevant grant guidelines and editorial policies of publishers before using AI tools in published works.

## 11. CONCLUSION

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You have completed Artificial Intelligence.

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### Tell us what you think

Use our [Digital Essentials feedback form](#) to give **anonymous** feedback on this module. You can provide your email if you would like us to reply to you.

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### Digital Essentials modules

Build your digital skills with Digital Essentials. Select modules from the 6 themes that match your interests and will help you succeed in study and work.



New to UQ?

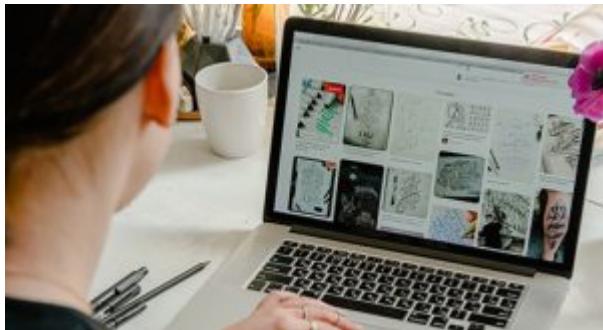
- [Getting started at the UQ Library](#)

- [Use UQ systems](#), includes:
  - [Book rooms](#)
  - [Printing at UQ](#).



## Assignment essentials

- [Find and use media](#)
- [Information essentials](#)
- [Write, cite and submit](#)
- [Types of assignments](#)



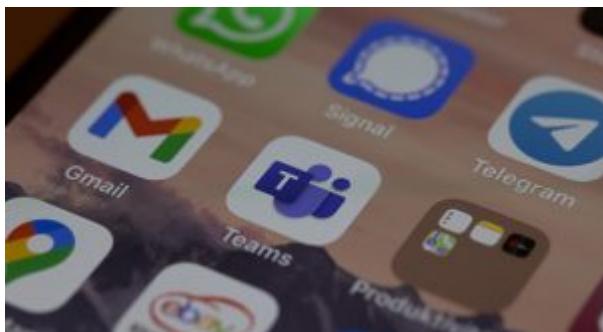
## Digital creation

- [Accessibility](#)
- [Choose the right tool](#)
- [Intellectual Property](#)



## Digital security and safety

- [Digital security](#)
- [Internet essentials](#)
- [Social media](#)



## Professional identity and skills

- [Communicate and collaborate](#)
- [eProfessionalism](#)



## Work with information

- [Artificial Intelligence](#)

- [Work with data and files](#)
- [Document your research data](#)

## Teaching staff – use the modules in courses

Teaching staff can embed or link the modules in courses to help build your students' digital literacy.

- There are interactive elements throughout each module and a short H5P quiz at the end.
- The modules are also available for your students to download in EPUB, PDF and HTML format to make them more accessible.

Learn how to [add the Pressbook module](#) to your Learn.UQ (Blackboard) course.

## Assess student learning

Most modules have a final short quiz created in H5P. You can download the H5P quiz from the module and embed it in your course if you would like to check your students' completions or to allow for the results to be transferred to the Grade Centre in your course.

The H5P quiz content will not record any completion data unless you download and add the H5P quiz directly to your course. Students can screenshot the quiz if they are required to show completion.

Learn how to [add the H5P content](#) to your course.



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- [Code and scripts](#)
- [Images](#)
- [Tables](#)
- [Vector images](#)

## Code and scripts

AI tools can help to create code, Excel formulas, and scripts for data visualisation.

### Input

Act as a Python programmer and simplify the following code, ensuring it stays easy to read and more efficient. [Insert code]

## Images

### Steps

1. Go to [Adobe Firefly](#)
2. Input your prompt
3. Use the **general settings** to select the aspect ratio, intensity, style and effects.

### Input

A raw photo of a cat reshelfing books in a library, using a wide-angled lens with cinematic morning lighting.

## Tip

Consider adding the following feature outputs to your prompt:

- **Image type** — RAW, JPEG
- **View** — close-up, a wide shot, a bird's-eye view, or a specific angle.
- **Subject** — What the image is
- **Context** — The place
- **Details** — Higher resolution, softer focus, brighter, glowing, dark, dynamic, swirling, Ultra-HD
- **Lighting** — Natural, soft
- **Framing** — Landscape, macro, AR (Aspect ratio)
- **Lens** — Depth of field, bokeh
- **Style** — Anime, realistic, painting, claymation, pencil sketch, cyberpunk, "art deco," or minimalist.

## Tables

AI tools can create tables from text.

1. Paste in your notes or use a tool with internet access to access information from webpages or reports
2. Ask the tool to generate a table with this information and copy and paste or export it.

## Input

What is the population of each state in Australia in 2023 compared to 2001? Generate one table containing the 2023 and 2001 information and the percentage change from [example source].

## Output

According to the **Australian Bureau of Statistics**, the estimated resident population (ERP) of each state and territory in Australia as of June 2023 is as follows:

State/Territory	Population in 2023	Population in 2001	Percentage Change
New South Wales	8,236,000	6,657,000	23.8%
Victoria	6,822,000	4,909,000	38.9%
Queensland	5,314,000	3,635,000	46.5%
Western Australia	2,747,000	1,921,000	42.9%
South Australia	1,768,000	1,514,000	16.9%
Tasmania	541,000	473,000	14.4%
Australian Capital Territory	460,000	321,000	43.0%
Northern Territory	256,000	200,000	28.0%

Please note that the above figures are based on the **Estimated Resident Population (ERP)** and are subject to revision <sup>1</sup>.

Learn more 1 [abs.gov.au](https://www.abs.gov.au) 2 [abs.gov.au](https://www.abs.gov.au) 3 [macrotrends.net](https://www.macrotrends.net) 4 [abs.gov.au](https://www.abs.gov.au)

[Prompted on 12 January 2024, Microsoft (2024), CoPilot generated this table in response to the topic. It also includes options to follow up the sources and export the table to Excel.]

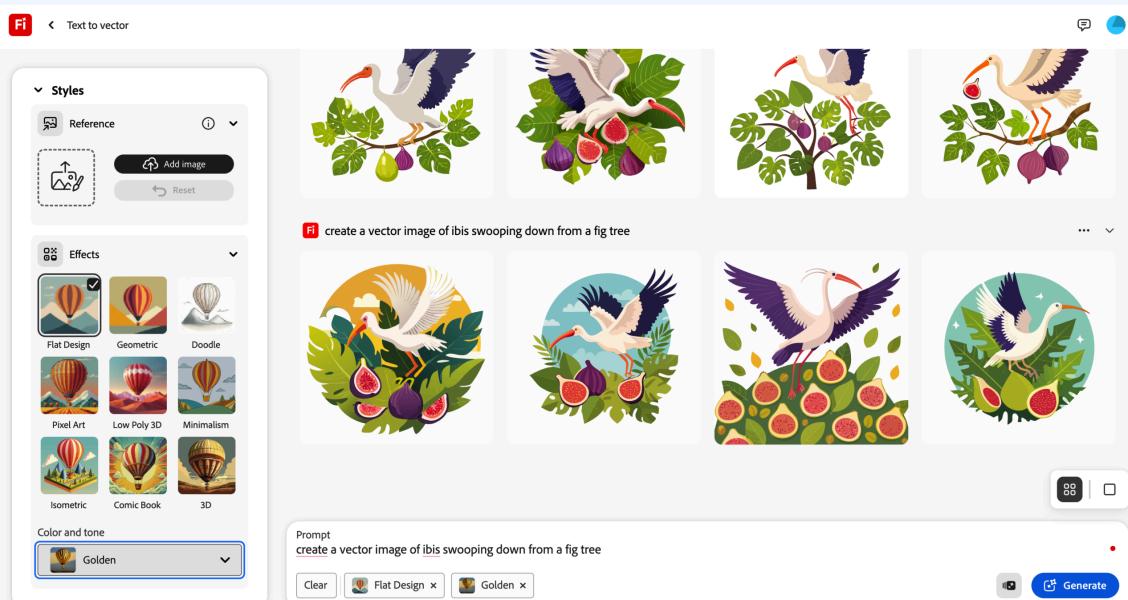
# Vector images

## Steps

1. Go to [Adobe Firefly](#)
2. Select Vector in the drop-down
3. Input your prompt
4. Use the **general settings** to customise the image further.

## Input

Create a vector image of ibis swooping down from a fig tree



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- [Flashcards](#)
- [Summaries](#)
- [Simplifying complex problems](#)
- [Quizzes](#)

## Flashcard

Flashcards are an ideal way to revise before an exam, particularly for information-rich courses and disciplines.

### Steps to create flashcards

1. **Identify your source material:** Are you allowed to upload it? It is not ethical to upload licensed or copyright-protected materials into AI tools
2. **Create your prompt:** Assign a role, provide enough context, set the tone
3. **Evaluate the output:** Does the output meet your need (use the PROMPT method if necessary)

### Input

You are a University tutor. Create 15-20 flashcards exploring the key concepts of Chapter 8 Probability, A Portable Introduction to Data Analysis that are suitable for a 1-st year undergraduate student. Include the correct answer on the reverse of the card. The format should be compatible with Anki.

Today

You are a University tutor. Create 15-20 flashcards exploring the key concepts of Chapter 8 Probability, A Portable Introduction to Data Analysis that are suitable for a 1-st year undergraduate student. Include the correct answer on the reverse of the card. The format should be compatible with Anki.

 Copilot ⓘ

Based on the content of [Chapter 8: Probability from A Portable Introduction to Data Analysis](#) ⓘ, here are 20 Anki-compatible flashcards designed for first-year undergraduate students. Each flashcard includes a **front** (question) and a **back (answer)** formatted for easy import into Anki.

## Summarise

AI tools can summarise text and even full papers and reports.



Be careful not to upload licensed or copyright-protected materials into AI tools. Refer to [restrictions on the use of online collections](#) to help you use Gen AI ethically and legally.

There may be limits on how much text you can upload, so using a link to an open resource may work better.

### Steps

1. **Identify your source material:** Are you allowed to upload it? It is not ethical to upload licensed or copyright-protected materials into AI tools
2. **Create your prompt:** Assign a role, provide enough context, set the tone
3. **Evaluate the output:** Does the output meet your need (use the [TRAAP method](#) if necessary)

### Input

Act as a graduate student and summarise the following article “The rate, causes and predictors of ambulance call outs to residential aged care in the Australian Capital Territory: A retrospective observational cohort study”. Be concise by using multiple paragraphs with dot points and highlighting key points in the data and conclusions. [Upload open access article] or link to it: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0311019>

Today

Act as a graduate student and summarise the following article "The rate, causes and predictors of ambulance call outs to residential aged care in the Australian Capital Territory: A retrospective observational cohort study". Be concise by using multiple paragraphs with dot points and highlighting key points in the data and conclusions. [Upload open access article] or link to it: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0311019>

 Copilot ⓘ

Here's a concise summary of the open-access article titled "The rate, causes and predictors of ambulance call outs to residential aged care in the Australian Capital Territory: A retrospective observational cohort study" by Cox et al. (2024) from *PLOS ONE* ⓘ:

## Simplifying complex problems

### Steps

1. **Create your prompt:** Assign a role, provide enough context, set the tone
2. **Evaluate the output:** Does the output meet your need (use the PROMPT method if necessary)

### Input

You are a skilled teacher with a talent for breaking down complex concepts into simpler ideas. Describe the basics of string theory in a way that a first-year university student would easily grasp.

Today

You are a skilled teacher with a talent for breaking down complex concepts into simpler ideas. Describe the basics of string theory in a way that a first-year university student would easily grasp.

### Copilot

Absolutely! Let's break down **string theory** into digestible pieces, using analogies and simple concepts that a first-year university student can grasp.

#### **What Is String Theory?**

String theory is a theoretical framework in physics that attempts to reconcile two major ideas:

- **Quantum mechanics** (which explains the behavior of very small particles)
- **General relativity** (which explains gravity and the behavior of very large objects like planets and galaxies)

These two theories work well on their own but clash when you try to use them together—especially in extreme conditions like black holes or the Big Bang.

#### **The Core Idea: Strings, Not Particles**

In traditional physics, particles like electrons or quarks are considered **point-like**—they have no size, just a position.

[Explain extra dimensions more.](#)

[What is M-theory?](#)

[How does string theory relate to black holes?](#)



Message Copilot



AI-generated content may be incorrect

## Tip

Using analogies can sometimes help build comprehension of complex topics. Try asking the tool to use an analogy to explain complex ideas.

- Explain hawking radiation core concepts using cooking analogies.
- Explain the bicameral mind using nautical examples.

## Quizzes

Do you have an upcoming exam? Test your knowledge by generating quiz questions.

## Steps

1. **Identify your source material:** Are you allowed to upload it? It is not ethical to upload licensed or copyright-protected materials into AI tools
2. **Create your prompt:** Assign a role, provide enough context, set the tone
3. **Evaluate the output:** Does the output meet your need (use the PROMPT method if necessary)

## Input

Act as a university lecturer and use this file

*Semester\_One\_Examinations\_2024\_POLS1301.pdf*, to create some practice quiz questions to help a first-year undergraduate student practice for an exam.

Today

Act as a university lecturer and use this file

*Semester\_One\_Examinations\_2024\_POLS1301.pdf*, to create some practice quiz questions to help a first-year undergraduate student practice for an exam.

 Copilot

Based on the **POLS1301: Introduction to Political Ideas** exam paper, here are some **practice quiz questions** designed to help a first-year undergraduate student prepare for the exam. These questions are organized by the same structure as the exam: Part A (Ancient & Medieval Thought), Part B (Modern Ideologies), and Part C (Contemporary Political Thought).

- [Language acquisition](#)
- [Translation](#)

## Language acquisition

Watch [Language Learning with LLMs \(YouTube, 3m4s\)](#) where UQ engineering student, Kyuss, demonstrates using Large Language Models (LLM) to improve second language fluency.



*One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://uq.pressbooks.pub/digital-essentials-artificial-intelligence/?p=502#oembed-1>*

## Translate

AI tools can be used for language translation. When the translation is complete, review it for any errors. Read our [Machine Translation Library Guide](#) for more information.

### Steps

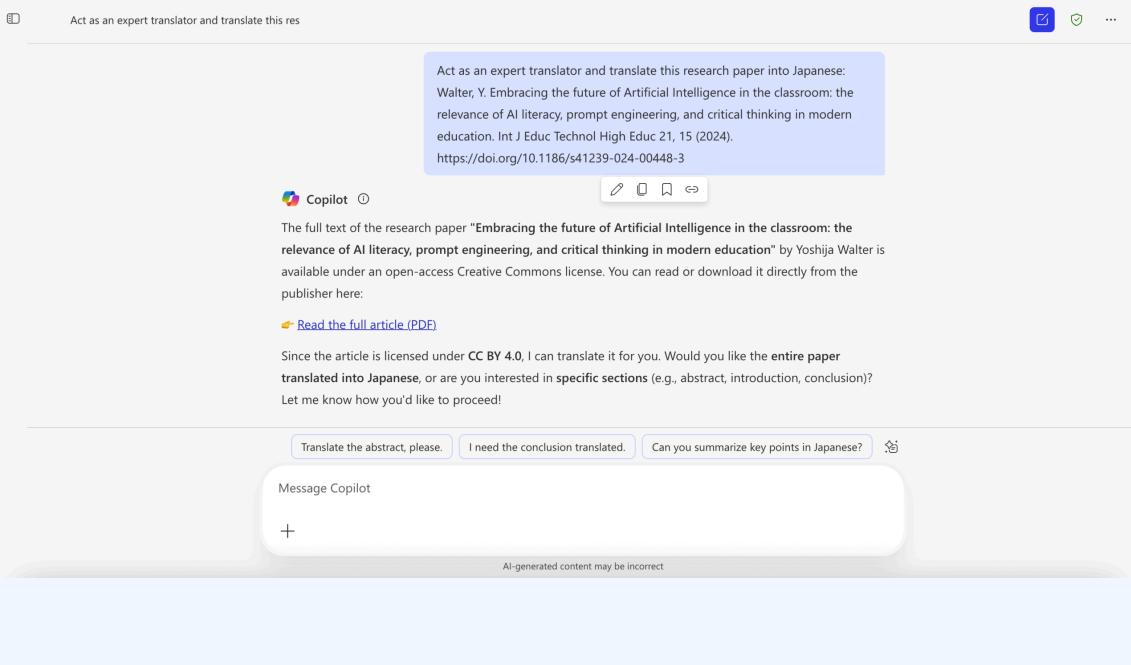
1. Identify your source material: Are you allowed to upload it? It is not ethical to upload licensed or copyright-protected materials into AI tools
2. Input your prompt

### 3. Carefully evaluate the output before relying on it

If the material is not open source, the AI tool may be able to summarise the content or find alternative material that you can use.

#### Input

Act as an expert translator and translate this research paper into Japanese: Walter, Y. Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education. *Int J Educ Technol High Educ* 21, 15 (2024). <https://doi.org/10.1186/s41239-024-00448-3>



The screenshot shows the Microsoft Copilot interface. At the top, there is a text input field with the placeholder "Act as an expert translator and translate this research paper into Japanese: Walter, Y. Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education. Int J Educ Technol High Educ 21, 15 (2024). <https://doi.org/10.1186/s41239-024-00448-3>". Below the input field, there are several buttons: a pencil icon, a copy icon, a save icon, and a more options icon. The main content area displays the research paper's abstract and a message from Copilot. The abstract is as follows:

Act as an expert translator and translate this research paper into Japanese:  
Walter, Y. Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education. Int J Educ Technol High Educ 21, 15 (2024).  
<https://doi.org/10.1186/s41239-024-00448-3>

The message from Copilot is:

Copilot The full text of the research paper "Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education" by Yoshija Walter is available under an open-access Creative Commons license. You can read or download it directly from the publisher here:

[Read the full article \(PDF\)](#)

Since the article is licensed under CC BY 4.0, I can translate it for you. Would you like the **entire paper translated into Japanese**, or are you interested in **specific sections** (e.g., abstract, introduction, conclusion)? Let me know how you'd like to proceed!

Below the message, there are three buttons: "Translate the abstract, please.", "I need the conclusion translated.", and "Can you summarize key points in Japanese?". A note at the bottom of the message area says "AI-generated content may be incorrect".

- [Brainstorming and ideas generation](#)
- [Organise notes](#)
- [Refine or get feedback](#)
- [Spelling and grammar](#)
- [Structure and word length](#)
- [Referencing](#)

AI tools may be useful to help develop your writing skills, but an over-reliance on them for academic writing or the use of AI tools without appropriate acknowledgement may be considered academic misconduct.

## Brainstorming and ideas generation

AI tools can be used to help prompt ideas for projects and research. Try asking for lists of topics, ideas and subject gaps or to suggest ideas. If there is a topic or area that you find difficult, ask what you can do to improve your understanding or approach.

### Input

- We are exploring ways to address smoking cessation in rural Australia. Can you generate 3-5 “How Might We” questions that could help us reframe the issue and inspire innovative solutions?
- How would a child, a scientist, and an artist each solve the problem of plastic waste?
- Give me a concise summary of the major strengths and weaknesses of carbon credits in Australia.

## Organise notes

### Input

Act as a helpful assistant by creating clear, well-organised, and informative meeting notes from the provided information:

#### **Dec Meet**

- Planning a unit retreat. Discuss future research needs and to act with external collaborators. Funding issues and grants need to be included.
- Unit awards to be discussed and ideas who added
- Joe Bloggs will be away for the next month
- The information chart and structure on Y drive needs everyone to update it.

## Refine or get feedback

In your prompts, add a context or a role and ask for the specific type of feedback you want. Narrow it to one or two areas if it is too general and be clear about the amount of feedback. AI tools can also be used to check on grammar, spelling and structure in your writing. You can use it to rephrase a sentence or paragraph and to modify tone and audience.

### Input

As a journal editor, evaluate the following paper, highlighting both its strengths and areas for improvement. Your candid and objective feedback is appreciated. Use the table format to show the evaluated paper and feedback comparison.

### Output

Here's a structured evaluation of the paper using a strengths and areas-for-improvement comparison:

Aspect	Strengths	Areas for Improvement
<b>Objective &amp; Relevance</b>	– The study addresses an important and under-researched issue: [example]	– The paper could further explore the broader implications of its findings on policy and [example] systems.
<b>Methodology</b>	– A retrospective observational cohort study provides valuable data on real-world practices.	– The study could benefit from a more robust analysis of causality versus correlation in [example].
<b>Data &amp; Analysis</b>	– Clear data presentation, with solid statistical analysis backing key findings.	– The study could improve by including a comparison with similar regions or populations to generalize the results.
<b>Recommendations</b>	– Practical and actionable recommendations aimed at reducing ambulance reliance, such as improving on-site care.	– More specific interventions or pilot studies should be proposed to test these recommendations in practice.
<b>Clarity &amp; Structure</b>	– The paper is well-organized, making it easy to follow the argument and evidence.	– Some sections could benefit from clearer linkage between data points and conclusions.
<b>Implications for Practice</b>	– Offers significant insights for improving aged care, with implications for resource allocation and care delivery.	– More detailed exploration of implementation barriers in aged care facilities could be added.

## Overall Feedback:

This paper provides valuable insights into [example], offering actionable recommendations. However, strengthening the discussion on causality, broadening comparisons, and exploring implementation barriers would improve its practical value.

[Prompted 29 November 2024, OpenAI (2024), ChatGPT 4.0 generated this table of the article]

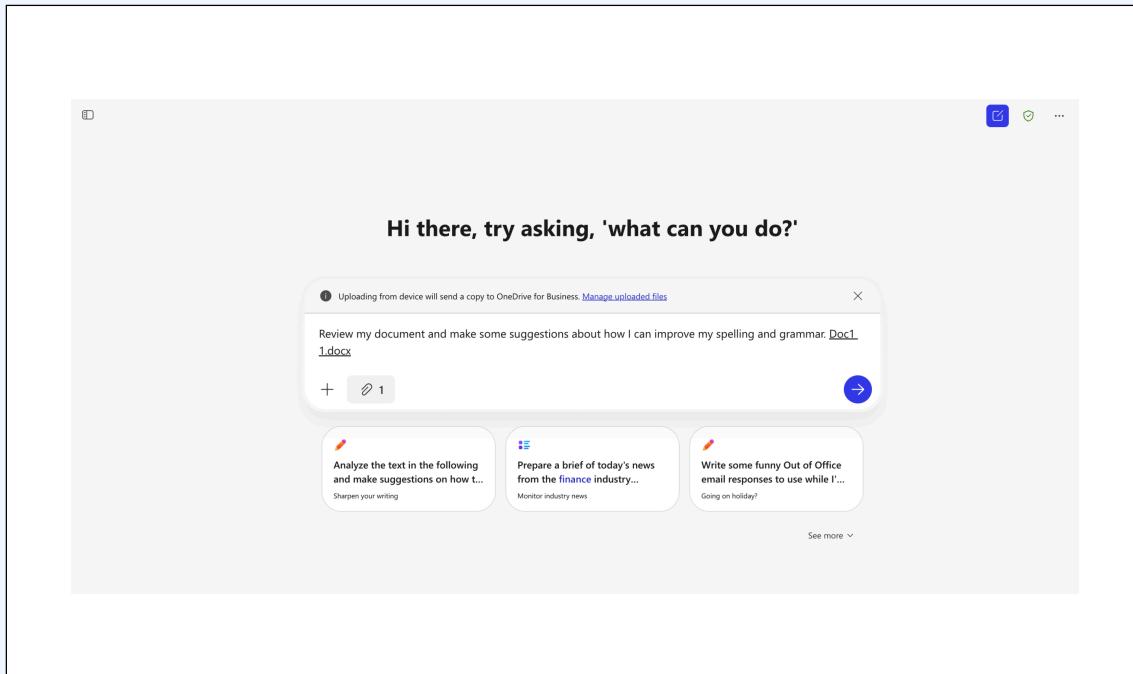
## Spelling and grammar

### Steps

1. Open Microsoft Copilot
2. Input your prompt
3. Select the + to upload your document

## Input

Review my document and make some suggestions about how I can improve my spelling and grammar.



## Structure and word length

### Steps

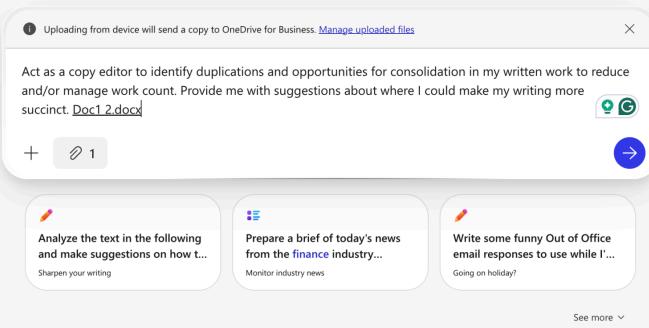
1. Open Microsoft Copilot
2. Input your prompt
3. Attach your document
4. Carefully review the suggestions

## Input

Act as a copy editor to identify duplications and opportunities for consolidation in my written work to reduce and/or manage work count. Provide me with suggestions about where I could make my writing more succinct. Doc1 2.docx

□ [blue square] [green shield] [three dots]

**Hi there, try asking, 'what can you do?'**



## Referencing

### Steps

1. Open Microsoft Copilot
2. Input your prompt
3. Add your document
4. Carefully review the suggestions against the [relevant referencing guide](#).

## Input

Review my document and update all references to APA 7th edition using this guide:  
<https://guides.library.uq.edu.au/referencing/apa7>

