USING AI TOOLS AT UNIVERSITY

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CONTENTS

ABOUT THIS BOOK

This resource is a guide on how to use Artificial Intelligence (AI) tools while undertaking university study and research.

It explores the multifaceted role of AI in research planning, content creation, evaluation, and publication. It delineates the benefits, risks, and ethical considerations of utilising AI tools in various stages of your study and research, emphasising the importance of critical evaluation and responsible use. From leveraging AI for brainstorming research ideas to evaluating AI-generated content and navigating legal and ethical complexities in publication, this resource offers a comprehensive guide for students and researchers to harness the potential of AI while navigating its limitations and ethical challenges.

Charles Sturt students, researchers and academics will all benefit from the information and suggestions presented. Please [contact Charles Sturt University Library](#) with any questions, feedback or recommendations on content.

Please note that the field of AI is rapidly evolving, and the content provided in this book reflects the knowledge

available at the time of publication. However, due to the dynamic nature of AI technology, the information may become outdated quickly. Readers are encouraged to stay informed about the latest advancements in AI research and technology beyond the scope of this book. As new AI tools emerge and Charles Sturt University policies adapt and change the content will be updated.

RECOMMENDED CITATION

This textbook can be referenced. In APA 7 citation style, it would appear as follows:

Charles Sturt University Library. (2024). *Using AI tools at university*. Charles Sturt University. Retrieved from https://opentext.csu.edu.au/usingai

ACKNOWLEDGEMENT OF COUNTRY

'Yindyamarra Winhanganha' – The wisdom of respectfully knowing how to live well in a world worth living in.

We respectfully acknowledge the Traditional Owners and Custodians of the lands on which we reside. Charles Sturt University and its staff pay respect to Elders within First Nations communities and acknowledge the continuity of cultures, languages, leadership and knowledge systems.

Image: Charles Sturt University, Albury (Wiradjuri Land)

DISCLAIMER

Charles Sturt University Libary has exercised due care and skill in preparing and compiling the information in this publication. While all care has been taken to ensure that the information contained in this publication is correct at the time of publication, the field of AI is rapidly evolving, and the content provided reflects the knowledge available at the time of publication.
This guide is not intended to be solely relied upon as a comprehensive representation of technical, policy or ethical advice. Students are expected to abide by the Academic Integrity Policy and Student Misconduct Rule 2020. At the time of publication un-authorised use of Generative Artificial Intelligence (AI) in assessment tasks may be considered a breach of Academic Integrity.

INTRODUCTION

Artificial Intelligence (AI) is transforming various fields – including the academic study and research space – where AI tools are increasingly being utilised to enhance research capabilities and streamline processes. Learning to use AI tools effectively and appropriately is an essential digital literacy skill for your studies, researching and future career.

This information is designed to start you on your journey to learn more about this technology and give you the background to use AI effectively and with integrity.

Each chapter discusses using AI tools in a stage of your study and researching process. Jump into any section, depending on how and where you are wanting to use AI in your studies. To navigate to a specific part of the web version of this guide, please use the 'Contents' drop-down menu at the top of the screen.
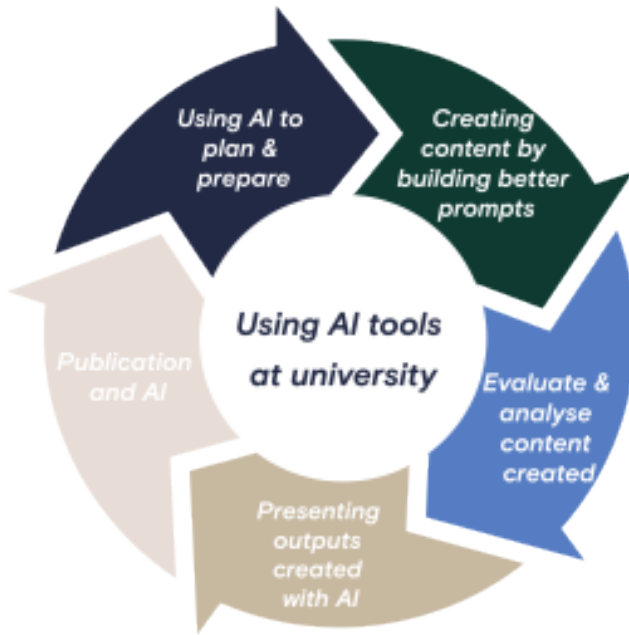
Key Point

When using AI tools, ethical and responsible use principles, such as transparency, privacy, academic integrity, and fairness should be considered. For more information please refer to Charles Sturt University's [Statement of Principles for the use of Artificial Intelligence.](#) Have a question about the principles? Email academicquality@csu.edu.au.

Read [Your guide to generative Artificial Intelligence (AI)](#) for current information and advice regarding AI use in your studies and assessments.

USING AI TO PLAN & PREPARE

Artificial Intelligence (AI) has become a buzzword, and for good reason. It has the potential to revolutionise the way we approach study and research. However, before diving into the world of AI, it is important to have a clear understanding of what you hope to achieve from using these AI tools plus the benefits and risks involved. This chapter will guide you through the process of using AI in the planning stage of your study or research. We will explore the rationale for using AI, its purpose, and the benefits, risks and limitations. Finally, we will delve into the ethical considerations of using AI. Learning to use these tools effectively and with integrity is an important part of becoming a digitally fluent citizen.

- [Why use AI when planning your study or research?](#)
- [Ways you can use AI tool when planning your study and research](#)
- [Using AI – Risks, Limitations and Ethics](#)

Key Point

Before deciding to use an AI tool (for example, ChatGPT), **check with your subject coordinator or lecturer or supervisor** to make sure that it's permissible in your subject, and that your intended use won't breach the University's academic integrity policy (refer to [Your guide to generative AI](#) for Charles Sturt University's policies and rules regarding use of Generative AI tools at university).

Why use AI when planning your study or research?

When embarking on your first assessment or researching a major project the first step involves assimilating and integrating the enormous amount of literature that already exists. This can take time and is a key area where AI tools can help. There are several ways you can use many different AI tools in the planning phase. Using AI responsibly at this initial stage will improve your efficiency and productivity plus promote critical thinking. See our [AI tools](#) chapter for links and infomration on some of the AI tools we describe below.

Ways you can use AI tools when planning your study and research

Key Point

When using AI tools to plan your research, keep accurate

records about the sources of those AI generated notes or summaries, so you can reference appropriately and find original sources later. Consider using our documenting tool in the chapter's [Creating content by building better prompts](#) and [Evaluate and analyse content created](#).

Brainstorm and generate ideas

Using AI tools to generate ideas can be a good starting point in researching for an assessment or project. Ask a Generative AI (GenAI) tool (such as ChatGPT, Copilot or Gemini) to brainstorm ideas or use a more specific AI research tool such as [SciSpace](#) to search for key concepts or ask a research question. SciSpace will then show questions related to your initial search and insights from top papers.

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https://opentext.csu.edu.au/usingai/?p=42#h5p-1

Understand difficult concepts

If you're struggling to understand a concept, GenAI tools can provide concise summaries using language that is easy to understand. Don't assume the summary is completely accurate or contains all necessary information, but it can

be a useful way to help you understand key concepts, thereby helping you better understand a reading or article. Use GenAI tools such as ChatGPT for summaries, but consider the question (or prompt) you ask the tool so that you receive a useful answer. Crafting good prompts is discussed further in the chapter Creating content by building better prompts.

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https://opentext.csu.edu.au/usingai/?p=42#h5p-4

Scope the literature

Locating relevant articles with AI tools can help you start looking for literature. You can use GenAI tools such as ChatGPT, but there are also more specific AI tools such as Research Rabbit, Keenious and Sematic Scholar (see our chapter on AI tools for further suggestions). You may need to sign up for an account and always look for the free ones.

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https://opentext.csu.edu.au/usingai/?p=42#h5p-2

Assist with reading

When researching for an assessment or trying to better understand a topic, GenAI tools can help you identify which readings, authors or key concepts to focus on.

Keep in mind that GenAI tools tend to reflect existing social biases, so if you ask for key readings or key authors you may get a list that skews towards social groups who have traditionally had more power and privilege. Being aware of this bias is important and using multiple tools to source information (such as the library databases), not just AI, when investigating will help.

Specific AI research tools can summarise academic papers. Look for TLDRs (Too Long; Didn't Read – super short summaries of the main objectve and results) found in [Sematic Scholar](#) and [SciSpace](#). Other tools such as [ChatPDF](#) can summarise and answer questions about PDF documents users upload onto the site. GenAI tools can also create summaries when you use the right prompts.

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> [*https://opentext.csu.edu.au/usingai/?p=42#h5p-3*](https://opentext.csu.edu.au/usingai/?p=42#h5p-3)

Tips on using programs and software

Ask GenAI tools for advice on how to use applications

such as Microsoft Word and Excel, or generate some code. Leveraging AI tools for coding can significantly enhance productivity and accuracy.

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https://opentext.csu.edu.au/usingai/?p=42#h5p-17

Exercise

Start using an AI tools now! Go to an AI tool (see our lists in AI tools) and sign up. Then try to:

- Brainstorm a question
- Ask for clarification of a concept

How did you go? Experiment with different tools and don't forget to tweak your prompt if the content provided isn't what you are after (see Creating content by building better prompts for ideas).

Using AI – Risks, Limitations and Ethics

Remember that these AI tools results are affected by their limitations which include:

Limitations	Producing inaccurate or false information	Data set being used	Data bias and misrepresentation
What does it mean?	These tools can produce misinformation and what is known as hallucinations meaning the references produced may be fabricated.	Where is this information coming from and how old is it? For example ChatGPT 3.5 had its last knowledge update in January 2022.	Outputs may not be neutral and the content may reflect the biases inherent in the data and the algorithms used.
How to avoid?	Always investigate the sources and check any references. Put your critical thinking hat on and question the output then verify by checking other reliable resources (such as library databases).	Look for a description of the data set being used to train the tool (often in the "About" or "Help" sections) to give you an understanding of the data being drawn on to create the content.	Recognising that bias exists is a good first step, the ensure you evaluate the sources and use other resources to gain a different picture.

As with all sources you use in your assessments, you should evaluate them for their quality and biases. Learn now to evaluate key information sources, like AI tools, on our Evaluating information webpage and Evaluating websites, news and media guide. We talk

more about the ethical use of AI in the chapter on [Presenting outputs created with AI](#).

See our Digital Skills module on [Using AI tools in your studies](#) for other uses and risks to consider.

Learn more

Want to learn more about hallucinations? Watch this video on [Why Large Language Models Hallucinate](#).

CREATING CONTENT BY BUILDING BETTER PROMPTS

This chapter is going to focus on prompts by describing what building a prompt means and how to construct one. Then we will look at hints and tips on prompt creation. We'll also have suggestions on where you can find further training options and more information on prompts.

- [What does building a prompt mean?](#)
- [How do I build a prompt?](#)
- [Building a prompt for a specific purpose](#)
- [Hints and tips for prompt building](#)
- [AI prompt generators](#)

What does building a prompt mean?

Building a good prompt is like finding the right keywords in a search. Having the right prompt will help you get the results that you are looking for, in the right style and

format. Your prompt can take the form of a question, text, information or coding. Essentially anything that communicates to AI tool what response you are looking for. Another way to think about a prompt is to think of it as a seed or a conversation starter. You can start small and build on what you want the AI to deliver, this is called building. In this chapter we will show you what things to think about, and some other tips and tricks.

How do I build a prompt?

There are some specific things that you can think about when you are building your prompt.

Tone

What is it?

Tone is the attitude or mood that you want the AI tool to deliver. Author's often use tone when they want to convey a particular mood or style. Academics usually use a formal tone when writing for peer reviewed journals.

How do you choose your tone?

Think about what you want your output to be, and the purpose of your output. Is it a fun email to a friend? Is it a simplified version of a research concept that you want to better understand?

Audience

Think about your intended audience. This is going to have an effect on your output. Are you creating prompts to

start a discussion for your research? Are you looking at creating marketing content? Are you going to write a social post promoting your research?

Audience Exercise

Try this exercise. Go to your favourite generative AI tool and add in prompts for your research topic to:

- Apply for a grant.
- Promote your research on your blog.

Did you see a difference when writing for different audiences?

Clarity

Be very clear when writing your prompt. AI tools are not intuitive, you will need to be very specific when asking for outputs. For example; if you ask for a response to a research question, think about if you want the answer to be a long response or a concise response.

Role play

Play acting or role play is a way of putting yourself into a situation to better understand it. You can do this with AI tools by getting them to "act as though...". This provides very clear directions for what sort of output you want from the tool. A really good example of this can be seen

in a blog post by Harvard University [Getting started with prompts for text-based Generative AI tools](#).

Role Play Exercise

You try. Go to your favourite Gen AI tool and ask it to give a summary of your research topic.

- Now ask it to act as though it is your Dean and give a summary of your research topic.

Can you see a difference?

Type of output

What type of output do you want your Generative AI tool to give you? There are many outputs that can be generated by Gen AI tools. Some of these include:

- computer code
- text
- images
- video
- music
- speech
- product designs

Different tools are built for different uses. If you are using Research Rabbit for example, it will give you a list of

references that you can use when searching. Check the specifics of your tool, and use the next chapter on Evaluate & Analyse content created to assess the tool.

Building a prompt for a specific purpose

See Using AI to plan & prepare for more information around building prompts for brainstorming, understanding concepts and finding research on a topic.

Different tools will help you create different prompts. As part of your preparation you need to think about your intended use. There are specific tools listed in our AI tools chapter that you can explore.

Hints and tips for prompt building

Below you will find some hints and tips to help you get the most out of your AI prompt building.

Boolean operators for AI

Just as you use AND, OR, NOT to refine your search, there are words you can use in your AI prompt that will assist you to include the information you do want and to exclude the information that you don't want. Use DO to include information in your prompt.

Example

> Write a short research question for a survey to Librarians regarding the use of Universal Design for Learning, do include School Librarians.

You can see in the example above that we have specifically included "School Librarians" in our prompt. If we wanted to exclude School Librarians and only focus on University Librarians we could write it like this:

Example

> Write a short research question for a survey to Librarians regarding the use of Universal Design for Learning, don't include school librarians.

Your turn:

Exercises

> Try adding in the examples above to your favourite text based AI tool and see the differences in the results.

Use examples

By using examples in your prompt you are giving the AI tool the specific information that it needs to be able to

create the results that you want. Be careful with this one – remember copyright and don't upload existing paragraphs and ask it to infringe on copyright by rewriting it. Use examples to show the AI tool what output you want. You can see a great example of this in a blog post by the Thesis Whisperer [Using ChatGPT (ChattieG) to write good](#).

> Example
>
> PROMPT: The cat in the hat sat on the mat. Write a short sentence similar to this one for the cat in a wig
>
> RESPONSE: the cat in the wig danced on a twig.

Build on previous prompts

As you do with your searching, start broad and build on it for more information. This allows the AI Tool to understand what you are looking for and allows you to refine your prompt to ensure you are getting your best results.

You don't have to fit everything into your first prompt. As you do with your searching, try starting with a basic question and adding to it over time. Change the wording, tone or add more context and specifics to guide the AI toward the output you're looking for.

Make corrections

By working with the AI to give feedback and correct it,

you build on the knowledge available. It is important to remember that AI is a tool. You need to review the outputs and correct mistakes or ask for clarifications if needed. You still need to have a good working knowledge of your topic or research to ensure the information is correct and useful.

Document your prompts

Documenting your prompts helps you to evaluate the effectiveness of the results. You can use the exercise below to create a document to help you keep track of the changes you are making to your prompt and why. This is particularly useful when using AI as part of higher degree research. See the chapter on Evaluation for more information.

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https://opentext.csu.edu.au/usingai/?p=24#h5p-20

AI prompt generators

Prompt generation can be complicated. There are generative tools specifically designed to create prompts. You can use the tips and tricks listed above, but you can also use these tools and we have listed a few below.

Remember to use the evaluation tips in [Evaluate & Analyse content created](#) to see if this tool is useful for you.

Title of Tool	Description
Taskade	Although there are some subscription services you can start with the free version. Remember to use the evaluation tips in the following chapters to see if this tool is useful for you.
Freedough	This prompt generator will give you prompts for ChatGPT, Midjourney and Stable Diffusion.
AI Tools	This is specifically for text to image. There is a free builder on this site, but you can subscribe and have access to the more advanced version.
Coefficient	This is a free prompt generator that can help you build prompts for text as well as formulas in spreadsheets.

You can find many more tools by going to your favourite search engine and searching for "AI prompt generator".

More information

There are also many courses about prompts. LinkedIn Learning has a broad collection including both beginner and advanced. Once you are logged in to LinkedIn Learning, search for "AI prompt engineering" to see the options.

EVALUATE & ANALYSE CONTENT CREATED

Most current forms of Artificial Intelligence (AI) have a narrow focus and can only do one thing well. This means that you have to carefully consider what AI tool/s you will use and then how you will evaluate and analyse the results from the tools you choose to use. When Using AI to plan and prepare you looked at why you are using AI and considered the benefits and risks of using these tools. In the Creating content by building better prompts chapter you will have located resources, information and chosen tools (possibly including AI tools) and begun utilising these tools. Now you need to consider how you will use the results and evaluate if the tools did their job properly or think about trying a tool that can help you evaluate your results.

Analysing your results is an important step in the research process especially if you use AI to collect the information. This chapter will guide you through the process of evaluating your results and de-conflicting or resolving

any discrepancies. We will then explore the risks, limitations, and constraints of your results, including the potential for bias. Finally, we will discuss the importance of documenting your planning and methodology, as well as providing evidence of use, such as a copy of your prompts.

- Evaluation
- Risks, limitations and constraints of results
- Bias
- Evidence of use
- Document your planning
- Ethics

Evaluation

The evaluation stage is where you evaluate the information you have gained as well as where you got your information. Check out the Charles Sturt Libguides for some subject specific evaluation support or more general guides like "Evaluating websites, news and media" for how to evaluate sources of information.

There are four points you may be considering at this stage regarding use of AI tools:

1. "How do I evaluate the tools I have used?"
2. "How do I evaluate the information the tools have provided?"

3. "[How do I use AI tools to help me evaluate the information I have?](#)"

4. "[Is it ethical to use AI tools to help me evaluate information/data?](#)"

1. *Evaluating AI tools:*

It is important that with every tool you use that you consider if the results you received were accurate, relevant and useful for the desired purpose. You might like to ask yourself some questions about the tool to decide if the tool you used was appropriate or if you might consider using a different tool or no tool at all next time.

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2. *Evaluating information gained from AI tools:*

Through the process of evaluation of the information gained from AI tools, you can resolve conflicting results, ensuring that any inaccuracies are addressed, that the information is relevant and suits the purpose for which it was gained and that ethical considerations have been addressed. [Rose (2023)](#) provides the following suggestions for evaluating AI-generated content.

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https://opentext.csu.edu.au/usingai/?p=26#h5p-14

3. **AI Tools that can be used to help evaluate information:**

Current AI tools cannot think critically about the information they source and so cannot evaluate information for you. However there are tools available to help make sifting through the data easier so that you have more time to do the deep analysis that critical thinking about the data requires. Most will be useful for quantitative data (for example Julius AI) but there are a few that would be useful for transcribing (for example Otter.ai) and then sorting qualitative data (for example MonkeyLearn). Please see the AI Tools page for information on different tools, including links, a short blurb on what they do and tips on how to use them.

4. **Ethics of using AI for evaluating information:**

Ethics is a tricky subject when it comes to use of AI. In regards to using it for evaluating information. The key considerations should be:

- Am I allowed to use AI for this? Consider the university policies, principles and expectations

for [Academic Integrity](#).

- How can I use it to help simplify or increase the speed of evaluating data so that I can spend more time critically thinking about the results?

- Am I totally dependent on AI tools? If the answer is yes, then it is not ethical to use it, as you cannot claim to have added value to your field of study.

AI tools cannot evaluate information like a human. We can think critically about the output, identify limitations, identify incorrect data, generate new data (for example through interviews or field measurements) identify bias within a program, and thoroughly investigate. AI, in its current form, does not have these skills.

So how can we use it ethically if so much of what it generates is based on others ideas and works?

Basically the answer is use it as a tool to help streamline a process, not do the thinking for you. You can use it to locate information, similar to the use of a search engine. You could use it to generate data from information you have gained, for example transcribe an interview. You could use it to generate data from your own input like graphing data from a survey you have completed. Regardless of how you are using it, remember, it is working through algorithms and not thinking or judging the accuracy, fairness, ethics or morals of the input or the output. Always check and apply your own judgment. You also have to consider the rules and regulations of your institution and their policies regarding the use of

AI. While studying at Charles Sturt University, this might also include carefully checking your assessment outlines. Be sure to consider all relevant factors when making decisions about using AI tools, especially in the evaluation and analysis sections of your research.

Risks, limitations, and constraints

Different AI programs and generators have different risks, limitations and constraints. For this reason you may have to use several of them to achieve the results you are looking for and each come with their own drawbacks. Koch (2023) noted that due to the fact that AI requires a lot of data, there can be blindspots, where it won't know what to do, or times when it does not consider rights or legislation such as privacy laws.

Some key risks, limitations and constraints are below.

Risks	Limitations	Constraints
Inaccurate information/ Hallucinations.	Most AI tools can only do one thing well.	Data set being used (How old is data?).
Data bias/ misrepresentations.	They cannot think critically about research/outputs.	Blindspots due to new situations/ inputs/information so unsure what to do.
May ignore legislation and privacy laws.	Limits of use due to pricing/subscription costs.	Number of people who can access results (e.g. only one user – does not allow for collaborative research).

In your evaluation and analysis it is good practice to note any of the risks, limitations or constraints that may have

impacted your results. This is especially important if you plan on publishing your work.

Bias

Bias is a distortion of facts based on inclination or prejudice. This could lead to unfair results or treatment of people or research. Results that AI generates may have bias, based on how the AI was programmed, or what data/ prompts you input into the program. Koch (2023) noted that "If your data isn't representative, the AI will replicate that bias in its decision making, which is exactly what Amazon saw when its AI recruitment bot penalized women candidates after being trained on resumes in a male-dominated dataset." Bias in data or results that AI generates from your input, can impact on your research. It is therefore important to try to be inclusive with inputs and note this issue or limitation in your research results. Analysing and evaluating your data and results requires you to consider the social biases of not just your inputs, but also the social groups that have traditionally had higher education and therefore, research outputs. Also consider that anyone, regardless of qualifications, can post their opinions on the internet. Some popular opinions may not be founded in factual research. Always examine the bias, authority and purpose of the source. Incorporating these limitations and potential for bias should also be a consideration in your evaluation and analysis stage.

Evidence of use

It is important that throughout your research process you

document any use of AI tools, to demonstrate academic integrity and to help other researchers replicate and thereby validate your research. Keeping a log or record in your methodology section of your research is a great start. This might include a copy of your prompts, edits to prompts, screenshots of results (for example tables and graphs). See [Creating content by building better prompts](#) for more information on recording prompts and [Presenting outputs created with AI](#) for more information on referencing use of AI and AI generated material.

To prepare evidence as you research you may like to use a modified version of [Cornell Notes](#), like the one shown below.

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Document your planning

Documenting your planning will vary based on what kind of research and what level of research you are doing. A key component of planning is managing timing and data collection. For this reason it is important that these are all mapped out before you start and to do this, you need to know your task. Whether you are writing your first academic essay or completing research for publishing, you

need to first understand what you need to do. [Planning and preparing](#) requires you to first familiarise yourself with the task. For an undergraduate, this might mean reading your assessment outline carefully and asking your subject coordinator any vital questions you have. For an honours student, this might be identifying a gap in your field of interest to research. For a researcher, it might be familiarising yourself with a publisher and their expectations for a major publication/work or research grants available and their requirements. Once you understand the task, you can then work on timing. Here are some tips to consider when planning your timing:

- Make sure to set aside a greater portion of your time for collecting and analysing data/research. When you know your topic well, the writing becomes much easier.

- Consider your methodology. Collecting primary research (research you collect yourself from the source e.g. surveys, interviews, etc.) is also much more time consuming than secondary research (others research that may provide you with insight into your field of study).

- Make sure to also set aside time to review, proof and edit your final draft.

Another major consideration during the planning and preparing is how you will organise the data you collect. Consider the following when planning data collection method and storage:

- What methodology/ies will you use? How do you

plan on adding this information into your output method (e.g. report, essay, thesis, multimodal presentation, etc.)

- How will primary research be collected (in person, online, written, recorded in some way, physical collection, digital collection)?

- Where is the data/research being stored (on a hard drive, USB, the cloud, in a special facility for physical samples)?

- What kind of permissions do you have/need for collection and storage of data? For example consider privacy requirements and copyright of material used.

- Other ethical considerations? For example do you need to apply for permissions from an ethics committee?

- Other considerations? For example have you provided yourself time to develop an Appendix for your collection/samples?

Once you have rough plan of the basics, you might also like to document your search plan (don't forget to include prompts and AI tools used in this section – see Creating content by building better prompts for more on how to do this), how you will evaluate your information (e.g. using the SIFT method or the CRAP test), any literature, systemic or systemic-like reviews you might need to do, any further research required, reading and writing method and style and referencing.

Included in the activity below is a generic planning tool to

help you get started with your task. Please note, however, that it will not cover all kinds of tasks or at all levels of study. You might also like to know that you can skip sections, or come back to them later, and download the information you submit throughout the document on the last page. You may like to check out some of the links above for more information on each part of the planning stage that you might consider documenting.

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> *https://opentext.csu.edu.au/usingai/?p=26#h5p-16*

Documenting your planning will help you later evaluate your aims and whether you achieved your goals or not. It will also help you to organise your data for a easier process when it comes to analysing the data.

Ethics

As you have read in the Ethics of using AI for evaluating section (above), there are a lot of considerations around ethical use of AI. In the Presenting outputs created with AI chapter, there is advice on steps you can take to ensure you are utilising these tools ethically.

Reference

Koch, R. (2023, January 27). ChatGPT, AI, and the future

of privacy. *Proton*. January 22, 2024, https://proton.me/ [blog/privacy-and-](https://) [chatgpt?utm_source=proton_users&utm_medium=email](https://) [&utm_campaign=ww-en-2c-generic-coms_email-g_awa-](https://) [newsletter_feb_2023&utm_term=proton_users](https://)

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PRESENTING OUTPUTS CREATED WITH AI

There are some important aspects to consider when presenting your outputs if you have used Artificial Intelligence (AI) in the process. This chapter will guide you through the process of using AI to create presentations, including tools for presenting and images. We will look at the scope of using AI in presentations or your outputs (such as essays and literature reviews), like checking grammar. Finally, we will then explore the ethical considerations involved in using AI when presenting, such as acknowledging the source of the images, the importance of referencing AI and acknowledging its use and avoiding the use of hallucinations in your references.

- How to use AI to create presentations
- How to use AI in delivering presentations
- How to use AI in your written outputs
- Acknowledging the use of AI generated material
- Responsible use of AI

How to use AI to create presentations

Various software and applications have already integrated AI into their interface to help create, enhance and deliver visually appealing presentations. There are also more specfic tools you could look at, a couple of examples include:

- [Tome]: promotes itself as an AI storytelling tool, but it is the most effective when used to generate PowerPoint presentations. Simply enter a prompt, and Tome will generate presentation slides on your chosen topic, including text and images. Slides are editable and can be shared. The free trial has limitations and it does require fact checking for accuracy.

- [Beautiful.AI]: another subscription AI presentation tool, uses a back-end system called DesignerBot to create AI generated presentations that can include figures, tables, infographics, charts and other data. Mostly aimed at businesses, but can create professional looking slides for a variety of contexts. Also includes a separate prompter to create AI generated images.

- [Simplified's AI Presentation Maker]: handles image and content creation for any topic and the first set is free. Simplified also has a number of other AI tools.

How to use AI in delivering presentations

Instead of getting GenAI tools to create a presentation for you, use them to assist you in the creation process by:

- Brainstorming ideas for the content of your presentation

- Suggesting a structure or activities for your presentation to aid in engagement

- Provide feedback on the presentation. An example is [PowerPoint's Speaker Coach](#).

An interactive H5P element has been excluded from this version of the text. You can view it online here:
https://opentext.csu.edu.au/usingai/?p=28#h5p-8

How to use AI in your written outputs

Providing content directly generated by AI is unlikely to be allowed. But there are other appropriate ways to use AI to improve your writing.

- Improve your written communication skills by refining your language and style using a tool such as [Grammarly](#)

- Creative decorative images for presentations using tools such as [DALL-E](#), [Midjourney](#) or [Firefly](#)

- Restore low quality images or upscale images, LetsEnhance is one example.

- Help analyse data by creating tables and collating information. GenAI tools can collate input data when using the right prompts. Careful about the data you enter into a GenAI tool in terms of privacy.

- Check coding errors or formulas with GenAI tools or more specific AI coding checkers.

Key Point

When using AI in your assessments don't forget to document the use, review the accuracy of the content produced plus acknowledge and reference the tool used.

Acknowledging the use of AI generated material

At a minimum, you should include a declaration of use that explains what technologies, if any, you have used in working on your assessment. Provide a description of the AI tool used, how the information was generated, including the prompts you used, and the date accessed. You could add this declaration as a footnote or at the end of your reference list but you should check with the subject coordinator to clarify.

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https://opentext.csu.edu.au/usingai/?p=28#h5p-5

In certain circumstances, in addition to a declaration, you may also be required to cite and reference material generated by artificial intelligence as you would any other source in your assessment. Academic skills provide suggestions for referencing GenAI in APA 7 style and the APA Style Blog has How to cite ChatGPT.

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https://opentext.csu.edu.au/usingai/?p=28#h5p-7

Responsible use of AI

When using AI tools for study and research, you need to recognise the ethical risks as well as risks to your academic integrity. Relying on AI tools can reduce your ability to develop critical thinking and research skills (Charles Darwin University Library, 2023).

Some of the key ethical concerns include:

> *An interactive H5P element has been excluded from this version of the text. You can view it online here:*
> *https://opentext.csu.edu.au/usingai/?p=28#h5p-19*

Complete this memory card game to match the key concerns listed above with a scenario:

> *An interactive H5P element has been excluded from this version of the text. You can view it online here:*
> *https://opentext.csu.edu.au/usingai/?p=28#h5p-6*

Understanding the limitations and issues of AI means you can critically evaluate the tools you use and the content generated to make sure you are using tools ethically and with academic integrity.

Learn more

[Using Generative AI Technology at Charles Sturt University](#)
This video is an assistive tool for students studying at Charles Sturt University in relation to the ethical and appropriate use of generative AI technology.

Reference

Charles Darwin University Library. (2023). Using AI tools at university. https://www.cdu.edu.au/library/language-and-learning-support/study-skills/learning-cdu/using-ai-tools-university

PUBLICATION & AI

If you have used Artificial Intelligence (AI) in the research process it is important to understand the legal and ethical considerations when publishing. We will explore what publishers are considering regarding the use of AI and if grant applications can have AI generated content. Then we'll discuss the legal and copyright issues involved in publishing research that uses AI. The chapter on [Presenting outputs created with AI](#) talks more about acknowledging the use of AI in research and providing appropriate attribution plus considers more on ethics.

- [Using AI in articles for publication](#)
- [Using AI in grant applications](#)
- [Copyright](#)

Using AI in articles for publication

Major publishers have policies on the use of generative AI (GAI) in articles submitted for publication, as well reviewing and editing. If you intend to publish your work read the publisher's information page for authors to check whether using GAI for article preparation is allowed.

Currently no major publishers permit AI tools to be an author ([Ganjavi, et al., 2024](#)). AI tools cannot carry out the role of an author in making a substantial contribution, approving a final version or being accountable for accuracy, integrity and license agreements ([Committee on Publication Ethics, 2023](#)). These tasks require knowledge of the subject, critical thinking, analysis, and interpretation of data ([Kaebnick, et al., 2023](#)).

AI is not considered capable of initiating an original piece of research without direction from human authors. AI also raises issues of plagiarism as there is no guarantee that content is original and not copied from existing sources. While some AI tools can assist in the literature review process, they cannot apply the judgement or evaluation added by the researcher.

The allowable use of GAI and how it should be disclosed varies between publishers and journals. Standardised guidelines have not yet been developed ([Ganjavi, et al., 2024](#)) See the list below for some examples of publisher policies.

- [Cambridge University Press](#)
- [Elsevier](#)
- [Emerald](#)
- [IEEE](#)
- [SAGE](#)
- [Science](#)
- [Springer Nature](#)

- [Taylor & Francis](#)
- [Wiley](#)

Practices and policies around use of AI in education, research and publishing are rapidly evolving. Some current articles include:

Lin, Z. (2024). Towards an AI policy framework in scholarly publishing, *Trends in Cognitive Sciences, 28*(2), 85-88. https://doi.org/10.1016/j.tics.2023.12.002 discusses the needs for coherent AI policy; reviews policy commonalities, inconsistencies and limitations, and summarises current AI policies for authors and reviewers, and offers some recommendations for policy development.

Pinzolits, R. (2023). AI in academia: An overview of selected tools and their areas of application, *MAP Education and Humanities*, 4, 37-50. https://doi.org/10.53880/2744-2373.2023.4.37 "provides a comprehensive overview of AI tools that can be used for academic purposes. The perspective of a university educator is taken to guide educators in higher education on emerging AI technologies. The paper covers a range of tools, including those for searching the literature, attributions to peer-reviewed articles, scientific writing, and academic writing and editing. The objective is to foster an informed approach to the integration of AI tools in academic settings, ensuring that educators are well-equipped to leverage these technologies to enhance the quality and output of academic work. The paper also discusses ethical considerations related to the use of AI in academia."

(Summary generated by Perplexity https://www.perplexity.ai/ using the prompt "summarise this paper" 2024, February 16).

Using AI in grant applications

The principles of integrity and accountability apply to all stages of research including grant applications. Also consider privacy and confidentiality and IP if uploading information into AI tools for funding applications.

- [NHMRC Policy on Use of Generative Artificial Intelligence in Grant Applications and Peer Review](#) (29 June 2023)
  "Applicants are to exercise caution when using generative AI tools in the preparation of grant applications, given it may not be possible to monitor or manage subsequent use of information entered into generative AI databases. "
  "Applicants and their Administering Institutions must certify that all information provided in their applications is accurate and are accountable for any misinformation and factual errors more broadly, including those resulting from the use of generative AI in their applications."

- [ARC Policy on Use of Generative Artificial Intelligence in the ARC's grants programs](#) (7 July 2023)
  The ARC advises applicants to use caution in

relation to the use of generative AI tools in developing their grant applications.

The DVC-R is required to certify applications on submission to the ARC. This includes certification that all participants are responsible for the authorship and intellectual content of the application. Applications must not breach the [Australian Code for the Responsible Conduct of Research 2018](#).

Copyright

There are ongoing debates and legal uncertainties about copyright and generative AI (GAI) both in Australia and globally. The main concerns around copyright are:

- Copyright protected works are used to train generative AI models

Data used for training AI systems may include text, artworks, images, music, audio, computer code and metadata, and other materials that are protected by copyright. There is often a lack of transparency about the source of materials that have been used to build databases to 'train' AI systems, which may include copyrighted works from websites, social media and blogs. Some content creators argue that their content should not be used by AI systems without consent or payment and there are calls for increased transparency to enable copyright owners to maintain visibility over when and how their materials are being used. When using AI tools, uploading third party material may be infringing the copyright owners rights.

- Australian Copyright legislation is not technology friendly.

Copyright legislation is not the same in all countries. Users of copyright material have to abide by the legislation in the country where they are using the work. Australia's "fair dealing" exceptions are more restrictive than "fair use" exceptions in some other countries. Specifically, there is no exception in Australian copyright law for text and data mining. Investors argue that inflexible and outdated copyright law poses a barrier to investment in AI in Australia, because they risk exposing themselves to copyright infringement lawsuits. (Australian Digital Alliance, 2022)

Globally there are uncertainties due to the international nature of AI. For example, while the inclusion of a certain work in training material for an AI might constitute infringement in one jurisdiction, that may not be the case in another jurisdiction, yet the AI product may be available for use in both. (WIPO, 2024)

- AI outputs may infringe copyright.

Copyright protects original works, not ideas or styles. For example, it may not be infringing copyright to paint a picture in the style of another artist, however if a picture is "substantially" copied it would be infringing. It is easy to create text, music and artwork with AI tools that imitate the style of human creators. Some creators argue that highly imitative works have the potential to impact their careers and revenue streams.

- Content generated by AI systems may challenge traditional notions of authorship and originality.

In many countries, including Australia, only humans can be copyright owners. However, that concept is currently being challenged in some jurisdictions. There is ongoing debate about the meaning of originality in work where AI is used in the creative process (WIPO, 2024).

- Copyright in the AI system

Software and coding is protected under Copyright as a form of literary work. The Copyright Act does not have a specific provision for the protection of 'databases'. However, as a 'literary work' is defined to include 'a table, or compilation, expressed in words, figures or symbols', a database may be protected by copyright as a compilation. (Australian Copyright Council, 2023)

The legal uncertainties around copyright and AI highlight the need for organisations and individuals to be aware of and apply the principles of ethical use, fairness, integrity and transparency when using AI tools.

A vivid, dynamic graffiti mural on a city wall, showcasing the complex interaction between artificial intelligence (AI) and copyright. The mural features abstract representations of AI technology, such as neural networks and robots, intertwined with symbols of copyright, including the copyright symbol ©, books, and digital media. The AI elements are depicted as merging with and transforming the traditional symbols of copyright, illustrating the evolving debate over intellectual property rights in the digital age. The background is filled with bright, contrasting colors to highlight the tension and synergy between these two concepts. The style is energetic and expressive, capturing the essence of street art's ability to comment on contemporary issues.

"The dialogue of artificial intelligence and copyright"

Note: Image was generated using ChatGPT 4 with the text prompt: "Create an image of the interaction of artificial intelligence and copyright in the style of graffiti".

References

- Australian Copyright Council (2023, May) Artificial Intelligence & Copyright Fact sheet G142v01. https://www.copyright.org.au/browse/book/Australian-Copyright-Council-Artificial-Intelligence-&-Copyright-INFO142

- Australian Digital Alliance (2022, April 22) Submission in response to the digital technology

taskforce's automated decision making and AI regulation issues paper. https://digital.org.au/resources/dtt-adm-ai-issues-paper-submission/

- Committee on Publication Ethics [COPE] (2023, February 13) Authorship and AI tools: COPE position statement, https://publicationethics.org/cope-position-statements/ai-author.

- Ganjavi, C., Eppler, M. B., Pekcan, A., Biedermann, B., Abreu, A., Collins, G. S. et al., (2024, January 31) Publishers' and journals' instructions to authors on use of generative artificial intelligence in academic and scientific publishing: bibliometric analysis, *BMJ,* 384. doi:10.1136/bmj-2023-077192

- Kaebnick, G.E., Magnus, D. C., Kao, A., Hosseini, M., Resnik, D., Dubljević, V., Rentmeester, C., Gordijn, B., & Cherry, M.J., (2023) Editors' Statement on the Responsible Use of Generative AI Technologies in Scholarly Journal Publishing, *AJOB Neuroscience*, 14(4), 337-340. doi:10.1080/21507740.2023.2257181

- World Intellectual Property Organization [WIPO] (2024, February 6) Generative AI, WIPO Conversation on intellectual property (IP) and frontier technologies: eighth session: summary https://www.wipo.int/meetings/en/

details.jsp?meeting_id=78188

Declaration

The author acknowledges the use of [ChatGPT 4](#) to create an image titled "The dialogue of artificial intelligence and copyright" in February 2024, using the prompt: "Create an image of the interaction of artificial intelligence and copyright in the style of graffiti".

AI TOOLS

In this chapter, we will explore some different AI tools that can be used in academic study and research. This is no way an exhaustive list but will give you a starting point of tools to explore. AI tools are constantly changing and evolving, new tools appear and exisiting tools may change to premium versions. It is worth looking at a few options, noting that new AI tools arrive daily. Each tool has its own unique capabilities and use cases, so it's important to choose the right tool for your specific research needs.

- [GenAI tools](#): Generative AI (GenAI) is a type of artificial intelligence that uses machine learning algorithms to generate new data based on existing data.

- [AI Research Tools](#): There are many AI-powered tools available for academic research. These tools can help researchers search for research, analyse data, extract key insights, and make informed decisions with greater speed and accuracy.

- [AI Tools for teaching and learning](#): There are several tools specifically designed for teaching

and learning in mind. These help provide teachers with lesson planning support such as producing handouts, questions and presentations. For students there are note taking tools and organisational tools to help you get organised and with time management.

Icon Key

Free tools are completely free to use with all features.

Freeware tools include basic functionality for free. Additional features may need to be paid for.

Open source tools are developed in a collaborative manner and can be used, modified or shared openly. This software can be used for free and often includes a lot of support documentation.

Paid tools can only be used after purchasing, and agreeing to, a product licence.

GenAI Tools

Key Point

For those considering use of GenAI Tools (also known as GAITs), please be mindful of the [university policies/principles](#) and expectations of their use for study and assignments. You can find out more on the [Your guide to generative Artificial Intelligence (AI)](#) webpage and the [Generative AI: For Study](#) Library Guide.

Tools	Summary	Help and Tutorials	Cost
Anthropic's [Claude 2](#)	Chatbot. A genAI Large Language Model, in open beta and has limited unpaid users.	[How to use new Claude 2.1](#)	
Gemini (Google's [Bard)](#)	Chatbot. An internet-connected genAI tool, powered by PaLM2 and it is free.	[Getting Started with Gemini AI.](#) [How to use Gemini AI - Tutorial for beginners.](#)	
Meta AI's [Hugging Face Llama 2 Chat](#)	Chatbot. A genAI tool with a user interface provided by Perplexity Labs, free to use.	[Llama 2 with Hugging Face Pipeline: Tutorial for beginners](#)	

Tools	Summary	Help and Tutorials	Cost
Microsoft's [Copilot](#) in Bing	Chatbot. A Microsoft search engine now with AI-powered functionality; requires Microsoft sign-in and using Edge web browser software and is free. Can be used to navigate large content (e.g. government websites) for information and locate sources. Can add documents that are held securely, not accessible to others, for use in copilot. Provides its process of thought.	[How Copilot for Microsoft 365 works](#) [Get started with Microsoft Copilot for Microsoft 365](#) [Get started with Microsoft Copilot Studio: How to create your first copilot](#)	
OpenAI's [ChatGPT](#)	Chatbot. A genAI chatbot with the current free public version running GPT-3.5 and the paid ChatGPT Plus accounts having access to GPT-4.	[Introducing ChatGPT](#) [ChatGPT Tutorial 2024: How to use ChatGPT - Beginner to Pro!](#)	
[Adobe Firefly](#)	Multimodal genAI. A suite of generative AI tools developed by Adobe for generating images. Free or premium plans.	[Overview of Adobe Firefly](#) [Learn how to use Adobe Firely: 5 minute tutorial](#)	

Tools	Summary	Help and Tutorials	Cost
OpenAI's DALL-E 2	Multimodal genAI. A genAI system developed by OpenAI that can create realistic images from a text description.	How to use DALL-E 2: A step-by-step guide How to use DALL-E 2 to generate images & A.I. Art	
Midjourney AI	Multimodal genAI. A genAI for creating images, can only be accessed via their official Discord server.	Discord Help Centre Midjourney quick start guide	
Stability AI's Stable Diffusion	Multimodal genAI. AI text-to-image generator.	How to use Stable Diffusion Stable Diffusion crash course for beginners	
D-iD	Video creation platform. Humanises interactions with digital world. Creates agents/ avatars which can be used in presentations, videos or to chat with.	Getting Started FAQs A step-by-step guide to creating videos with D-iD	

Tools	Summary	Help and Tutorials	Cost
Runway v2	Multimodal genAI. Can generate novel videos with text, images or video clips.	How to use Runway Gen-2 to create AI videos Runway Gen-2 ultimate tutorial: Everything you need to know!	
ElevenLabs	Converts text to speech online for free with AI voice generator. Creates natural sounding voices in any language. Changes your voice with speech to speech. Access Dubbing studio for further editing of voices.	Voice cloning guide: how to use our technology safely and follow best practice How to use ElevenLabs AI to Clone your voice & generate natural speech from text	
HeyGPT	Chatbot. For when you have reached character limit. Can chat with larger files, websites, etc. Files stored locally and temporarily. Pinecones can be used to store larger files/vectors. Unlock Premium features with a one off fee. No subscription to keep using. Chats with files etc.	HeyGPT You can now summarize files and websites on http://HeyGPT.chat!	

Tools	Summary	Help and Tutorials	Cost
Perplexity	Chatbot. Similar to ChatGPT but provides references from recent literature. Free. Does not read PDF's very well.	Will this AI tool blow ChatGPT out of the water for research?	

AI Research Tools

For those undertaking a more research heavy assessment, honours project or systematic-like reviews, you may benefit from utilising some of the more research focused and literature mapping AI tools. They may make a great research assistant. We have already mentioned some of these throughout this resource but there are many others, and this landscape is constantly evolving! Many of the tools can move to premium versions, so if you get asked to start paying look for alternatives and consider changing or moving between different tools. If you plan on publishing, some further guidance for use of these tools is provided in the "Where to publish: Scholarly publishing & Generative AI" Libguide.

Tools	Summary	Help and Tutorials	Cost
ResearchRabbit	A citation-based literature mapping tool. Add relevant seed papers to a collection to receive recommendations for related, or connected, papers. Simple keyword search function also provided. Free to use, login with a free account.	Welcome to Research Rabbit	
Semantic Scholar	AI-powered academic search and discovery tool. AI algorithms assist in discovering hidden connections and links between research topics. New Semantic Reader application contextualises citations and improves accessibility among other features. Free to use, login with a free account.	Semantic Scholar 101: search	

Tools	Summary	Help and Tutorials	Cost
[Connected Papers](#)	Creates a graph that maps literature related to an inputted paper. Input using an existing article, or conduct a topic search to locate an article. Search engine is powered by Semantic Scholar. Free tier (offering 5 graphs per month) available.	[How to use connected papers to find similar and relevant research literature papers/tutorial review](#)	
[SciSpace](#)	Is a comprehensive academic platform providing access to over 200 million research papers. Assists researchers in discovering, understanding, writing, formatting, and publishing their research. Simplifies academic texts and ensures compliance with journal guidelines. Free to use, login with a free account.	[Introducing SciSpace](#)	

Tools	Summary	Help and Tutorials	Cost
[Keenious](#)	An AI-based tool to help find high quality research papers to enhance your work. Analyses the downloaded article, a link to the article, a selected passage from the article or written text and recommends similar or related content. Find ideas for an essay or article. You can use Keenious directly in Word, through a web browser or in Google Docs.	[Keenious product video](#)	
[ChatPDF](#)	Can summarise and answers questions about PDF documents users upload onto the site. Free version with limits: 3 PDFs/day amd 50 questions/day.	[How to use ChatPDF: the AI chatbot that can tell you everything about your PDF](#)	

Tools	Summary	Help and Tutorials	Cost
Perplexity	A genAI search engine powered by GPT-3. Provides accurate and comprehensive answers to user queries using up to date sources, explores topics in depth to learn new things, interacts with your files and organises threads on topics. Has a copilot feature with specific aims in mind, e.g. academic research, professional research, etc.	Getting started	

Tools	Summary	Help and Tutorials	Cost
Elicit	A genAI academic research tool powered by GPT-3. Use for finding papers, filtering study types, automating research flow, brainstorming, summarising and more. Can add own library (e.g. your own research/research notes etc.). New version can cost money, 5000 free credits to start. Considers what researchers use it for with own work (PDF's. E.g. can extract. Can create columns too for different types of information. Can use to get evidence backed answers quickly.	Start your literature review here! Elicit AI research assistant literature review tool tutorial	

Tools	Summary	Help and Tutorials	Cost
[Litmaps](#)	Creates interactive literature maps - collections of articles that make up your different research topics. Free version allows 1 Litmap. Litmaps helps to navigate papers. It can quickly find derivatives/prior works to see what other works have cited seed paper/s. Can see what has happened in research since and where it has moved to, just from a single seed paper.	[Introduction to Litmaps](#)	
[Scopus AI](#)	Search tool powered by genAI that enhances your understanding and enriches your insights with unprecedented speed and clarity. Available when logged in to Scopus.		
[Consensus](#)	Academic search engine using AI to find insights in research papers. Ask research questions, find relevant answers within research papers, and synthesise the results.	[AI Research Tools: Consensus](#)	

Tools	Summary	Help and Tutorials	Cost
MonkeyLearn	Provides text analytics, creates instant data visualisations and detailed insights, supports various types of analysis. MonkeyLearn is a fully featured Artificial Intelligence Software designed to serve Startups, Enterprises. MonkeyLearn provides end-to-end solutions designed for Web App. This online Artificial Intelligence system offers Graphical Data Presentation, Text Analysis, Summarization, Topic Clustering, Taxonomy Classification at one place.	Advice and answers from the MonkeyLearn Team AI guides	

Tools	Summary	Help and Tutorials	Cost
Julius AI	JuliusAI is a powerful AI data analyst that helps you analyze and visualize your data. Chat with your data, create graphs, build forecasting models, and more. It helps you to interpret, analyze, and visualize complex data in a user-friendly manner, making data analysis accessible to individuals without a background in data science or statistics.	How to use Julius AI? A step by step guide	
Tableau	Allows user to connect to data, create data visualizations, present your findings, and share your insights with others. Various products at different pricing. Can access a free trial. Students and teachers can apply for a free 1 year license.	Tableau tutorial - a step-by-step guide for beginners	

Tools	Summary	Help and Tutorials	Cost
Microsoft Power BI	Turns data into visuals with advanced data-analysis tools, AI capabilities, and a user-friendly report-creation tool. Works with Copilot, an AI tool that create reports in seconds, generate DAX calculations, create summaries, and get answers, all in conversational language.	How to use Microsoft Power BI - tutorial for beginners Get started with Power BI desktop	
Polymer	Free trial for 14 days. Create visualizations, build dashboards, and present your data like a pro — in minutes. Can work with data across different platforms.	Polymer app overview	
Akkio	Free trial for 14 days. Adds AI-powered analytics and predictive modeling to your service offering, so customers can chat with their data, create live charts and graphs, and predict future trends. It also helps generate reports and predictions.	Getting started with Akkio The complete beginner's guide to machine learning	

Tools	Summary	Help and Tutorials	Cost
Copyseeker	Helps reverse image search to find images you may want to use and where they came from. Great for locating image rights and illegal copies of users works.	Copyseeker.net: AI-powered reverse image search Reverse image search - things you should know	Only API function has a fee.
Scite assistant	Science researcher. Accesses research articles. Assisting in generating easy tables/ scaffolds from our inputs to allow for analysis of information early and save time. Free trial 7 days.	How does scite Assistant work? Scite tutorials/ guides	
Cognosys	Free version. Connects to other apps, improves workflow and automates tasks. Provides a variety of sources plus the links to where the information was found (i.e. articles). Up to date (better at finding newer research). Won't replace literature reviews.	Agent GPT rival on the browser: Cognosys AI - beginner's tutorial: No code AI agent	

Tools	Summary	Help and Tutorials	Cost
Aomni	As a research tool, it provides more recent research, shows internal thought process and how it found information and why. Also provides better overview of information. Includes a free trial.	Aomni AI research tool: how to use in 2024 (step by step)	
Notion	Notion is a connected workplace that supports docs, wikis, projects and calendar functions. It helps build and use databases and is designed to support small business, enterprises and personal use. AI has been added to Notion to also help answer questions, summarise information, and act as an integrated assistant. It has an education pricing which is free for students, teachers and student organisations and discounts for teams and schools.	Reference Getting started with Notion AI: introduction and everything we'll cover in this course	

Tools	Summary	Help and Tutorials	Cost
Weights and Biases	Quickly track experiments, version and iterate on datasets, evaluate model performance, reproduce models, and manage your ML workflows end-to-end. Supports visualisation of data with live metrics, datasets, logs, code, and system stats in a centralized location. Helps analyze collaboratively across your team to uncover key insights and allows for comparing side-by-side to debug easily, and build iteratively.	Welcome to Weights & Biases - introduction walkthrough (2020) A complete Weights & Biases tutorial Quickstart guide	

AI Tools for teaching and learning

Here are a few more AI tools mainly with teachers in mind to help streamline the lesson planning process and save time so that the focus can be more on the time in the classroom not on admin. There are also a few AI tools added here for students who want to streamline some of the processes like note taking. Please note however that

when taking away one process, that usually contributes to retaining information, it is a good idea to use that time to implement another learning strategy such as teaching someone else what you learnt. This way you have saved time but also worked towards retaining the information you have learnt.

Tools	Summary	Help and Tutorials	Cost
[Otter AI](#)	Creates meeting notes. Real time transcriptions. Can use to record collaborative meetings and discussions. Also has a workspace for teams and organisations.	[Otter quick start guide](#)	
[Eduaide AI](#)	Lesson planning platform. Helps generate teaching resources, streamline administrative duties, creates assessments, adjust difficulty level to meet divers learners, accesses over 15 languages, has a chat function. It also can help provide timely, relevant and actionable feedback.	[Eduaide.ai quick run-through](#) [Eduaide - AI for teacher](#)	

Tools	Summary	Help and Tutorials	Cost
Goblin Tools	Magic ToDo - Input an item you have to do and it generates a list of smaller steps to help manage those big tasks. Formalizer - improves ideas/writing. Judge - helps identify tone of text. Estimates timeframe of tasks. Generates a list of tasks based on random thoughts input. Chef - Write ingredients, dietary needs, serving sizes and anything else needed to get a recipe for what you can cook.	What the tech: Goblin Tools	Through webpage. App has a small one time fee.
Immerse zone	Helps reverse image search using image file or sketch. Searches quotes.	How to find similar images with Immerse.zone AI	

Tools	Summary	Help and Tutorials	Cost
ChatTube	ChatTube allows you to chat with YouTube videos in real-time using AI - ask questions, get summaries, pinpoint key points, translate content, and more.		
Quizalize	Helps teachers create quizzes. Use quizzes in interactive games. Student progress can be monitored and gaps in learning pinpointed with student data tools. Can add follow up activities. Can use others quizzes.	[How to use Quizalize: the basics](#) [Welcome to Quizalize. All you need to know in two minutes!](#)	

Tools	Summary	Help and Tutorials	Cost
TeachMateAI	AI-powered digital assistant. AI tools include free access to our Report Writer, Activity Ideas Generator, and Maths Starter Questions — to improve learning experiences while drastically reducing your workload. Supports Australian curriculum	Step-by-step instructions A step-by-step guide for TeachMateAI - updated summer 2023	
Translate Video	Generates captions, subtitles, video dubbing, AI voice-overs, records voice, generates transcripts and exports files for video content. Exports of files however require a subscription.		

Tools	Summary	Help and Tutorials	Cost
[Twee](#)	Generates learning resources to use in class. Can generate questions, activities or summaries for youtube videos (5 minutes at a time in the free version). Can generate texts on topics with activities for students to work through in class. Can also help generate tasks to build vocabulary and grammar. Generates homework tasks and tasks to get students talking.	[Twee: AI tools for English teachers to create EFL lesson plans fast and with minimal effort AI powered tools for English teachers](#)	
[Teach AI](#)	Generates gamification lessons for student engagement, quiz generation, lesson plans, and other teaching resources. Also provides an AI tutor and automates school reports.	[Introducing TeachAi: unlocking next-generation educational potential with generative AI](#)	

Tools	Summary	Help and Tutorials	Cost
Khanmigo	Provides one-on-one tutoring, lesson planning, insightful student feedback, provides suggested next moves for students to improve/ complete task, helps students learn code.		
Structured	Day planner that automatically syncs across devices. Can import calendars, plan recurring tasks and customise alerts. Structured assistant uses AI technology to organise a schedule based on prompts you put in about what you want to do and timing.	How to use the structured assistant	

Can't find the right tool?

See Futurepedia for this ever-expanding list or check out

[There's an AI for that](#) for AI tools lists and their launch dates if you want to try the latest tools, or try the search function for a quick list of relevant tools.

CHECK YOUR KNOWLEDGE

All the answers to the quiz questions can be found throughout this resource.

> **Quiz**
>
> There are 4 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://opentext.csu.edu.au/usingai/?p=530#h5p-22*

CONCLUSION

Summary

Using AI to plan and prepare

- **Understanding AI in study and research**:
    - AI presents opportunities to revolutionise study and research methods.
    - Clear understanding of the goals, benefits, and risks is essential before utilising AI tools.
- **Why Use AI in planning research**:
    - AI aids in assimilating existing literature, enhancing efficiency, productivity, and critical thinking.
    - Various AI tools offer assistance in brainstorming, summarizing, and scoping literature.
- **Using AI tools in research planning**:
    - Brainstorming Ideas: AI tools can

generate ideas or research questions, facilitating the initial phase of a project.

- ◦ Understanding Concepts: AI tools provide concise summaries to aid comprehension of complex concepts.

- ◦ Scoping Literature: AI tools help locate relevant articles and literature, expediting the research process.

- ◦ Assisting with Reading: AI tools assist in identifying key readings, authors, and concepts, though users should be wary of inherent biases.

- **Risks, limitations, and ethics of using AI**:

  - ◦ Limitations include inaccuracies, reliance on outdated data, and biases inherent in algorithms.

  - ◦ Users should critically evaluate AI-generated content, verify sources, and be mindful of biases.

  - ◦ Ethical considerations surrounding AI usage should be acknowledged and addressed throughout the research process.

Creating content by building better prompts

- **Building effective prompts for AI tools**:

  - ◦ Understand the components of a prompt and how they influence AI-

generated outputs.

- **Key elements of prompt building**:

  - **Tone**: Consider the desired mood or style of the output, tailored to the intended audience and purpose.

  - **Audience**: Define the target audience to shape the content and tone of the AI-generated output.

  - **Clarity**: Ensure clear and specific instructions to the AI tool to generate accurate outputs.

  - **Role play**: Direct the AI tool to "act as though" to provide precise guidance for desired outputs.

  - **Type of output**: Specify the desired format of the AI-generated content, such as text, images, or code.

- **Building prompts for specific purposes**:

  - Tailor prompts to specific research or project goals, considering the capabilities of different AI tools.

- **Hints and tips for effective prompt building**:

  - Utilise boolean operators to refine prompts and include or exclude specific information.

  - Incorporate examples to guide the AI tool in generating accurate outputs.

  - Gradually build on previous prompts to

refine and enhance the AI-generated
results.

- Make corrections and provide feedback
  to the AI tool to improve the accuracy
  of outputs.

- Document prompts to evaluate
  effectiveness and track modifications
  over time, especially in higher degree
  research settings.

- Use a prompt generator.

Evaluate & analyse content created

- **Considerations for using AI tools in research**:
  - Choose AI tools carefully based on their
    narrow focus and capabilities.
  - Evaluate and analyse results obtained
    from AI tools to ensure accuracy and
    relevance.

- **Evaluation stage**:
  - Assess the accuracy, relevance, and
    usefulness of AI-generated outputs.
  - De-conflict discrepancies and address
    any inaccuracies in the results.
  - Consider the risks, limitations, and
    constraints of using AI tools.

- **Evaluating AI tools**:
  - Assess the appropriateness of AI tools

based on the accuracy and relevance of their results.

- ○ Reflect on whether the tool fulfilled its intended purpose and consider alternative tools for future use.

- **Evaluating information from AI tools**:
    - ○ De-conflict results to ensure accuracy and relevance for the research purpose.
    - ○ Address ethical considerations in the evaluation process, including biases in AI-generated content.

- **AI tools for information evaluation**:
    - ○ Utilise AI tools to streamline data analysis but acknowledge their limitations in critical evaluation.
    - ○ Consider university policies and ethical guidelines when using AI for data evaluation.

- **Documenting use of AI tools**:
    - ○ Maintain records of AI tool usage, including prompts, edits, and results, to facilitate transparency and reproducibility in research.

- **Ethical considerations**:
    - ○ Adhere to ethical guidelines in AI tool usage, research planning, and data evaluation.
    - ○ Ensure transparency and accountability

in the use of AI tools throughout the research process.

Presenting outputs created with AI

- **Using AI to create presentations**:
    - Various software and applications integrate AI to create visually appealing presentations.
    - Examples include Tome, Beautiful.AI, and Simplified's AI Presentation Maker.
- **Using AI in delivering presentations**:
    - Rather than having AI create presentations, it's advised to use AI to assist in brainstorming ideas, suggesting structures, and providing feedback.
- **Using AI in written outputs**:
    - Directly using AI-generated content is typically not allowed.
    - However, AI tools like Grammarly can help refine language and style, while others like DALL-E and LetsEnhance can aid in creating decorative images and restoring/upscaling images, respectively.
- **Acknowledging the use of AI generated material**:
    - It's important to document the use of

AI in assessments, review the accuracy of the content, and acknowledge and reference the tools used.

◦ At a minimum, include a declaration of use explaining the technologies used, how the information was generated, and the date accessed.

- **Responsible use of AI**:

    ◦ Recognize the ethical risks associated with using AI tools and ensure responsible and ethical use, as over-reliance on AI can diminish critical thinking and research skills.

Publication & AI

- **Legal and ethical considerations in publishing with AI**:

    ◦ Understanding the legal and ethical implications of using AI in research publication is crucial.

    ◦ Publishers' policies regarding the use of AI in articles and grant applications should be examined.

- **Using AI in articles for publication**:

    ◦ Major publishers generally do not permit AI tools to be listed as authors due to their inability to contribute substantially or ensure accuracy and integrity.

- ◦ AI-generated content may raise concerns about originality and plagiarism, and most AI tools are not effective in creating literature reviews.

- **Using AI in grant applications**:

  - ◦ Grant funding bodies like NHMRC and ARC have released guidelines on the use of generative AI in grant applications.

- **Copyright issues**:

  - ◦ Materials generated by AI may contain copyrighted content, and using such materials without permission can breach copyright laws.

  - ◦ AI tools currently do not have legal status and cannot own copyright; copyright ownership lies with human contributors.

Declaration

The author acknowledges the use of [ChatGPT 3.5](#) to create a summary of each chapter in Febuary 2024, using the prompt: "Provide a summary of the following content in dot points…".

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