

AI Building Blocks Series

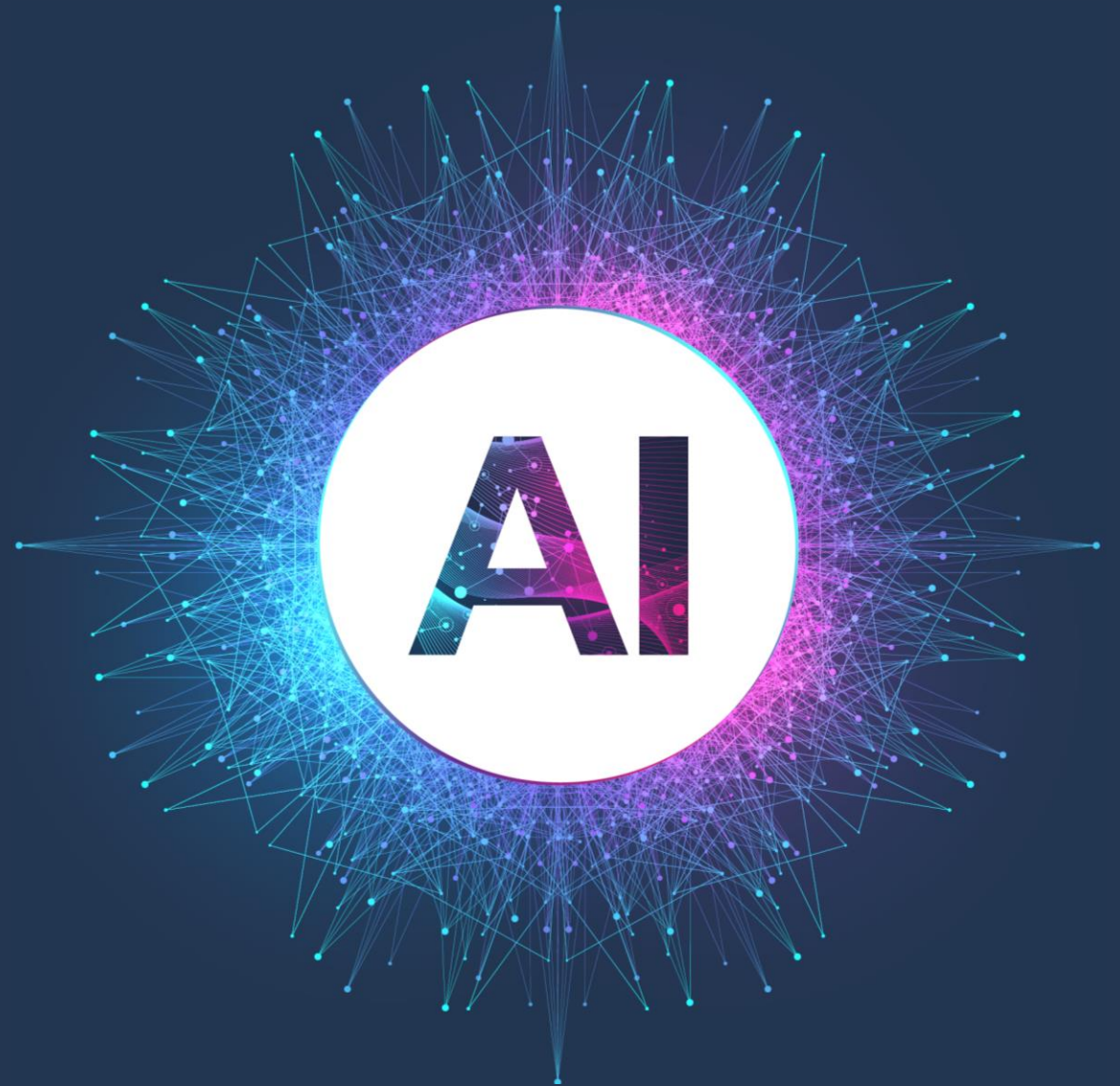
# AI Foundations

Dr Aidan Deery

Digital Learning Designer – CED



QUEEN'S  
UNIVERSITY  
BELFAST





# AI Building Blocks Series

AI Foundations

13 Feb, 11am

Aidan Deery

AI Ethics

20 Feb, 11am

Aidan Deery

AI for Everyday Tasks

27 Feb, 11am

Una Lynch

AI and Accessibility

06 Mar, 11am

Sarah Stewart

AI for Teaching and Learning

13 Mar, 11am

Kirsty Gillen

Pedagogy Over Tech

7 Steps for Active Learning with AI

20 Mar, 11am

Patrick Phillips

AI for Research

27 Mar, 11am

Vilinda Ross, Aidan Deery



[Live Sessions: Sign up here](#)



[Recorded Sessions: Catch up here](#)

# R-A-I-S-E

Our guidance is based on the RAISE Principles:  
**Responsible Use, AI Best practice, Integrity,  
Support, and Equitable Access.**

## Key Guides

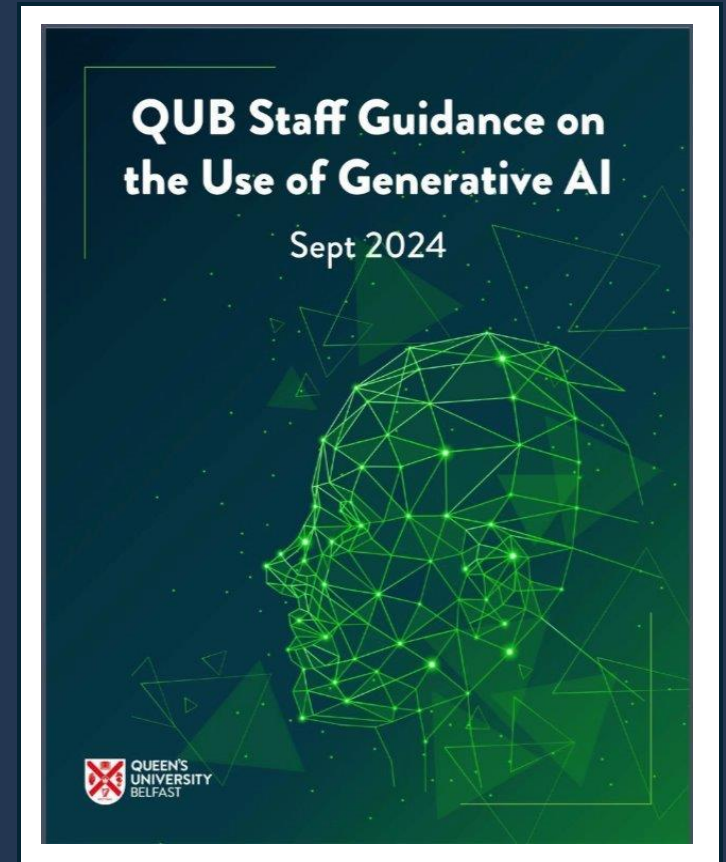
- [QUB Position on AI](#)
- [RAISE Principles: QUB Staff Guidance on the use of Generative AI](#)
- [Trailblazers Guide: AI as Your Partner](#)

## AI and Assessment

- [Guidance on the use of AI in Assessment: 24-25](#)
- [Use of Gen AI in Dissertation Projects](#)
- [Use of AI Detection Tools](#)
- [AI Assessment Self-help Guide](#)

## Video

Watch our short video for advice on what to look out for when starting to use Generative AI: [Click here](#)





## Accessing AI Tools

Copilot Chat, ChatGPT and more



## Enhancing your Prompts

Generate better outputs

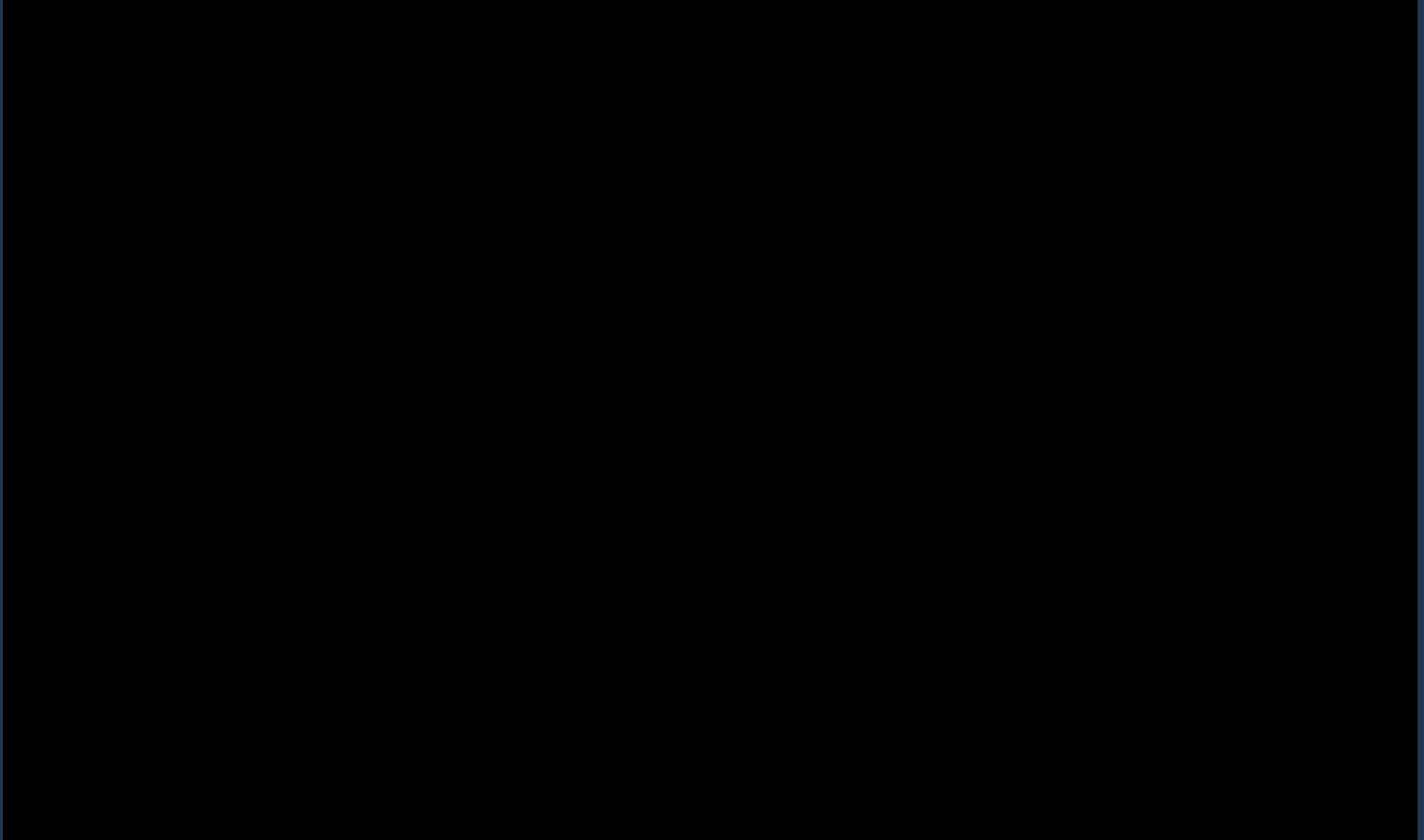


## Key Guides and Resources

Exploring the Queen's AI Hub



*Before you begin...*



[Watch in Panopto](#)



# 'Personality' of Large Language Models



Conviction vs. Accuracy



Accessibility and Equity



"Word Predication Machines"



Multimodal Capabilities



Bias in Training Data



Adaptability to Feedback



Not Specialised Knowledge



Collaborative, not a Replacement



“Unfortunately, there is no general manual to tell you the shape of the Jagged Frontier of AI abilities, which are constantly evolving. Trial and error, and sharing information with peers, is vital to figuring this out”

Ethan Mollick



One Useful Thing: 15 Times to use AI, and 5 Not to

A large lecture hall with students seated at long tables, each with a laptop. The room has large windows on the left and a large screen on the right. The screen displays various AI-related icons, including a robot head, a gear, a Wi-Fi symbol, and the text 'CoPilot' and 'AI'. The text 'Accessing AI Tools' is overlaid in the center of the image.

# Accessing AI Tools



# AI Tools



Copilot Chat



ChatGPT



Gemini



Perplexity



Claude



DeepSeek



Hugging Chat



Le Chat



Artificial Analysis - Model Comparison



One Useful Thing: Which AI to Use Now

"Assume this is the worst AI  
you will ever use."

Ethan Mollick



[Coaching for Leaders Podcast: Principles for Using AI at Work](#)



# Copilot Chat: Free access, Enterprise account at Queen's

Home

Copilot

Pages

Create

OneDrive

Apps

WorkWeb

New chat

...

Copilot

**Get more done**  
What are 5 - 6 ways to beat procrastination?

**Improve your writing**  
Rewrite this to sound more professional and less verbose:

**Explore what's possible**  
Tell me an interesting fact and hypothesize what it reveals about the world

**Get instructions**  
Give me step-by-step instructions for making an Instagram Reel

**Track changes over time**  
Create a line chart showing the relationship between inflation rates and interest rates over the last 20 years.

**Sharpen your writing**  
Analyse the text in the following and make suggestions on how to improve it: [text]

View prompts

Ask me anything...

0 / 16000

Copilot

Agents

Visual Creator

Get agents

Create an agent

Recent chats

What are some techniques to he

11:15

Create an image of a frog jump

1/28

summarise this paper in 200 wo

1/23

Can you create a presentation?

1/16

You are a {role/character}. Ge

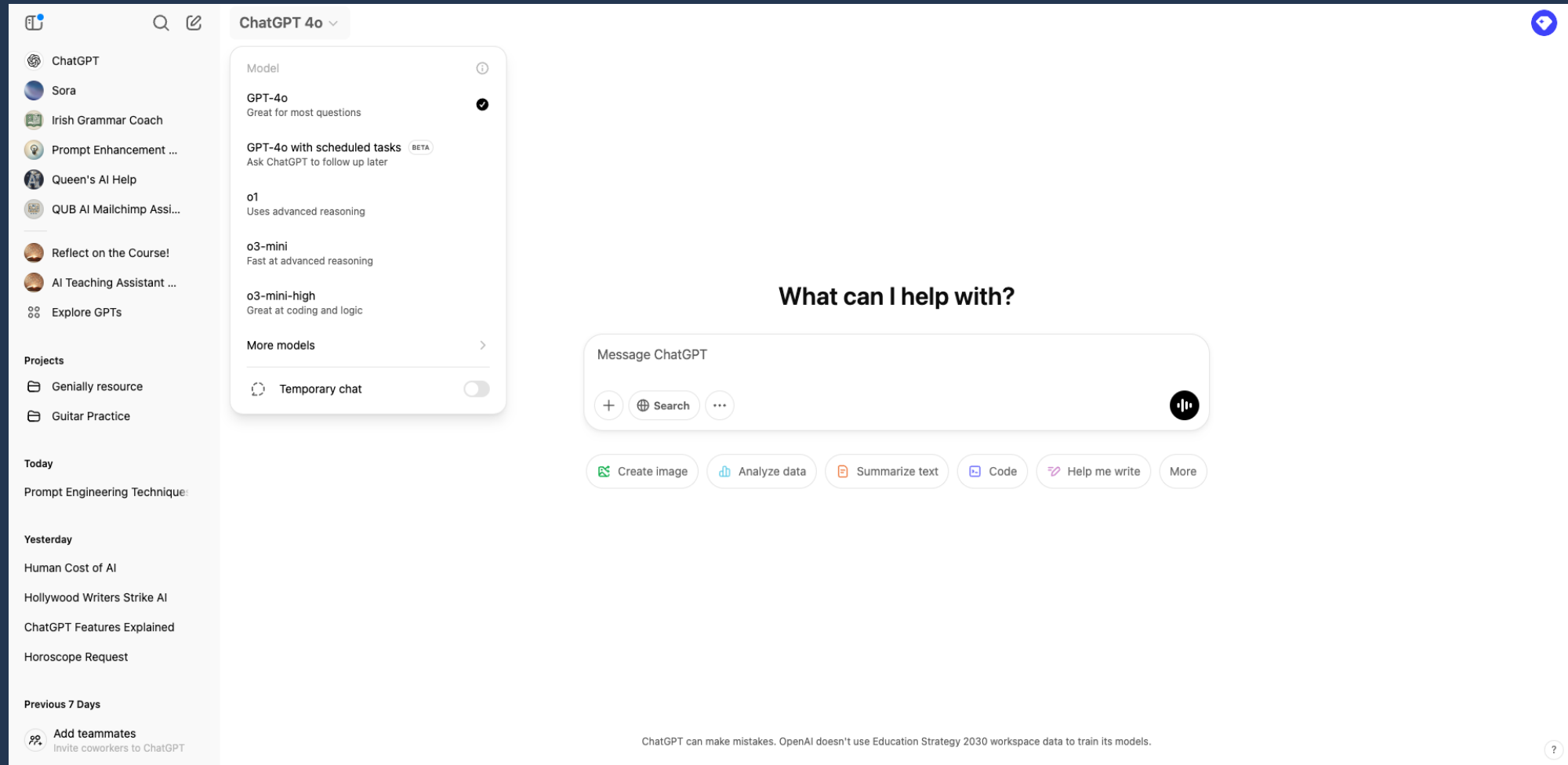
12/12

[See more](#)



# ChatGPT:

Free account: Limited access to GPT-4o,  
ChatGPT Plus: GPT 4o, o1, o3-mini and more, + Custom GPTs, \$20 p/m



[Watch Video in Panopto](#)

A futuristic classroom setting with students seated at desks with laptops. Large digital screens in the background display various AI-related terms and icons. The text "Enhancing your prompts" is overlaid in the center.

# Enhancing your prompts

Prompts

Prompting  
conversations

PROMPT

AI  
DASH

Enhancement

Enhancing  
Answers

API

Answers



## Basic Prompt Example

Generate a variety of innovative ideas for a workshop on {subject}.



# Enhance your Prompts



Use Simple Language



Request a Writing Style



Set a Role



Set Restrictions



Select a Task



Define and Refine



Choose a Format



Human Review



Role

## Enhanced Prompt

Task



You are a {role/character}. Generate a variety of innovative ideas for a workshop on {subject}. The ideas should align with {criteria, themes or goals}, addressing {Any challenges/constraints}, and consider {other relevant factors}. Provide {Number: e.g. at least 10 or top 3} ideas formatted as {format}, written in a {writing style} tone of voice.



Restriction



Format



Tone

# Enhanced Prompt

You are a {role/character}. Generate a variety of innovative ideas for a workshop on {subject}. The ideas should align with {criteria, themes or goals}, addressing {Any challenges/constraints}, and consider {other relevant factors}. Provide {Number: e.g. at least 10 or top 3} ideas formatted as {format}, written in a {writing style} tone of voice.

role = digital learning advisor at a UK university

subject = Digital Learning

criteria = standards of digital learning outlined at Queen's University Belfast

challenges/constraints = limited time for academic staff

number = 5

format = table

writing style = easy to understand



# Prompt Enhancement Assistant



## Prompt Enhancement Assistant

By community builder 8

Helps you to craft effective prompts.

How can I refine  
this prompt for  
better results?

What role should  
I assign to the  
AI in this task?

Can you provide  
a better format  
for this prompt?

What tone would  
work best for  
this audience?

Message Prompt Enhancement Assistant

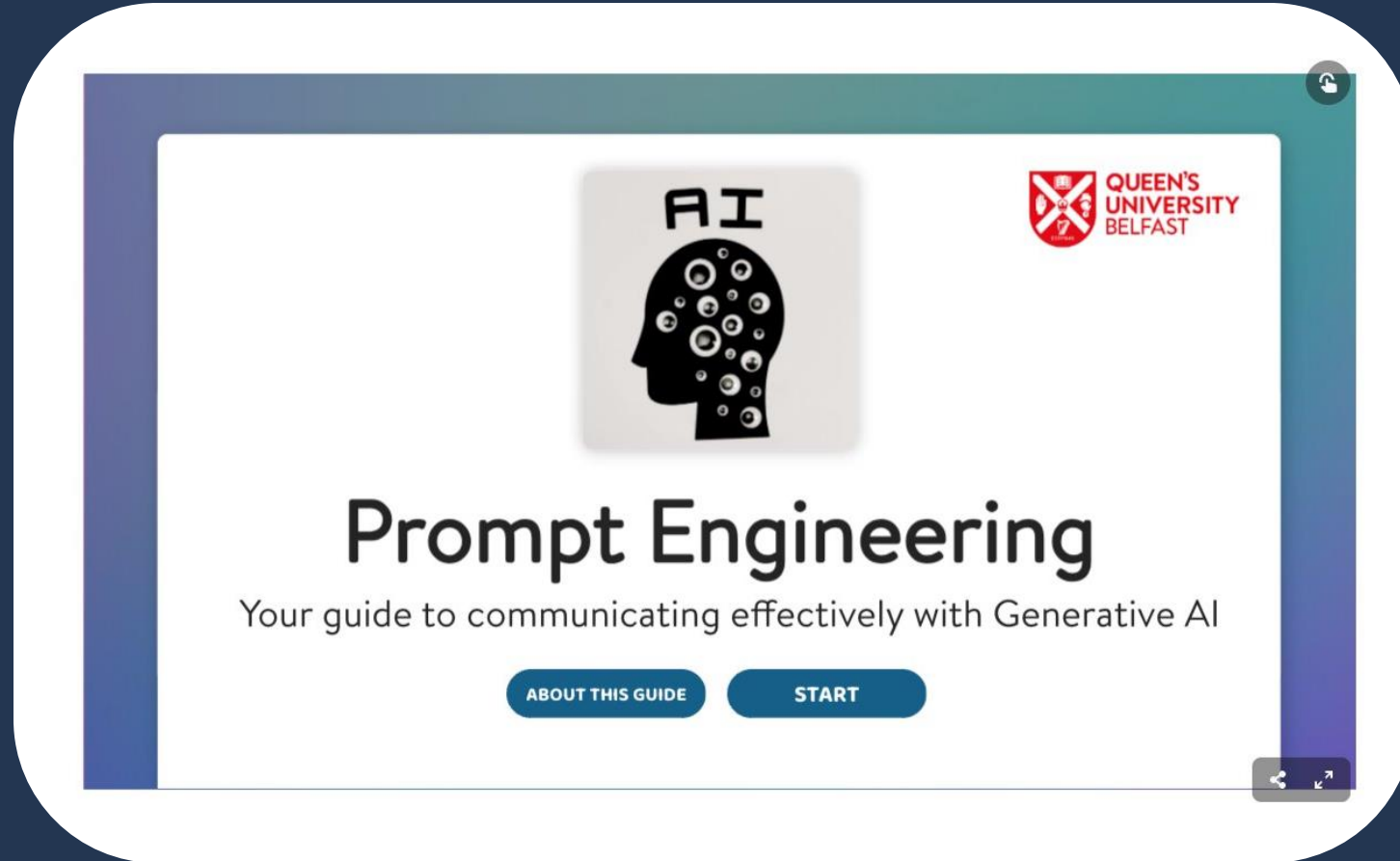


ChatGPT can make mistakes. Check important info.





## Interactive Prompt Engineering Resource



## Prompt Library by Shelby Hanna - AI Summer Sessions

## 'Magic Prompts' by Conor Grennan



### **SPLIT**

Ask ChatGPT to debate the answer it just gave you.



### **BIONIC**

After ChatGPT answers you, ask it to become smarter and give you a better answer.



### **CONJURE**

ChatGPT can conjure up Einstein or Jeff Bezos or others to offer advice.



### **TIME TRAVEL**

Ask ChatGPT to travel from the future and say what went right or wrong with your idea.

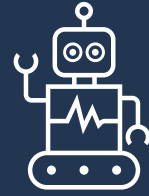


### **MIMIC**

Insert a short writing sample before your prompt, then tell ChatGPT to write in your voice.



[Link to LinkedIn Post](#)



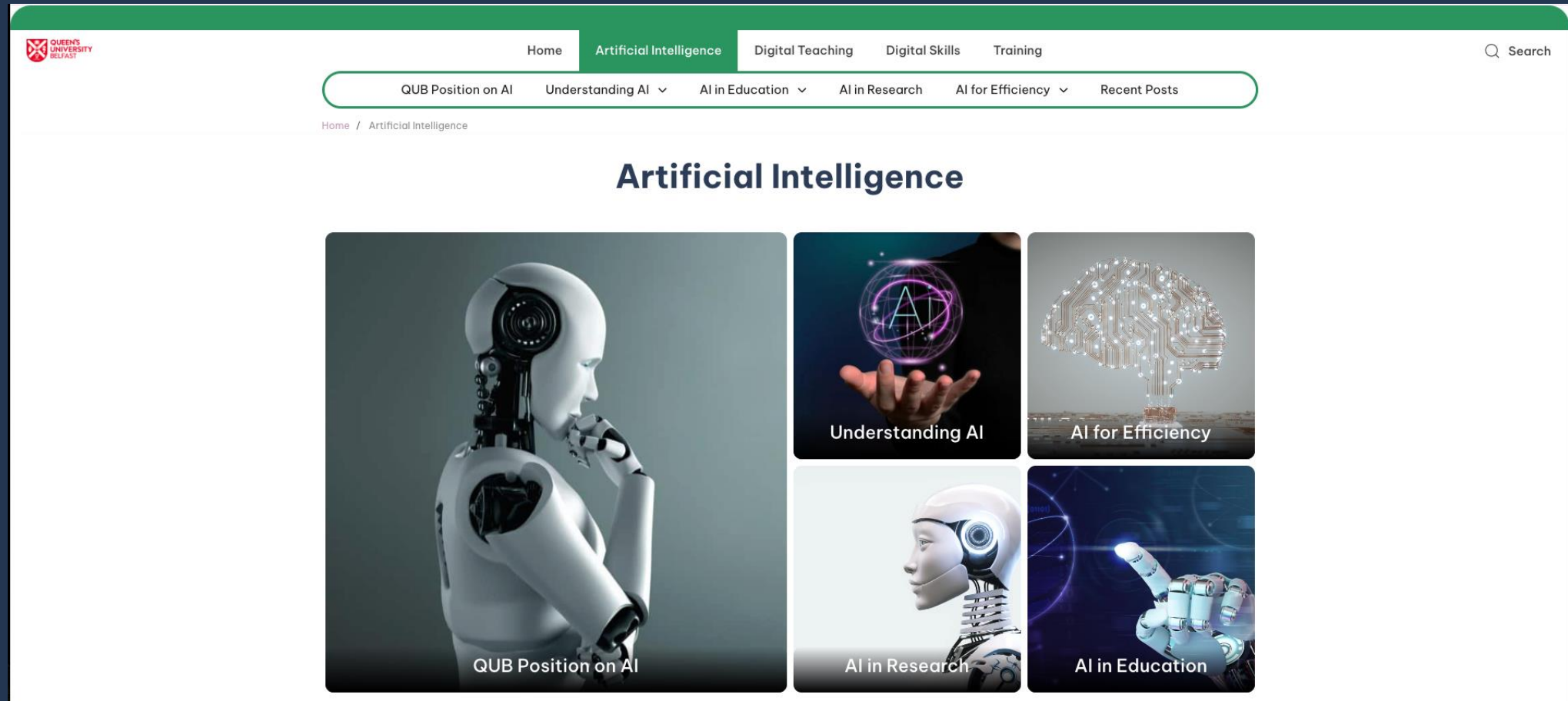
## What else can you do?

- Create images [Image Generation Resource Bank \(Jisc\)](#) [Video Demo: Images](#)
- Upload documents and ask questions [Video Demo: Documents](#)
- Upload spreadsheets and analyse data [Video Demo: Data Analysis](#)
- Create custom GPTs (paid – Chat GPT only)



# Key Guides and Resources

# Queen's AI Hub



[go.qub.ac.uk/AI-Hub](https://go.qub.ac.uk/AI-Hub)



# R-A-I-S-E

- Responsible Use
- AI Best Practice
- Integrity
- Support
- Equitable Access

## Integrity

Integrity and academic rigour will be upheld.

An open dialogue between staff and students is important, not only about the introduction of AI but also about its appropriate application. Students should be informed of the [importance of academic integrity](#) and the repercussions of inappropriate or non-permitted use of AI. Every educator has an important role in guiding students to make informed decisions regarding the appropriate and responsible use of AI.



[RAISE Staff Guide](#)

## QUB Staff Guidance on the Use of Generative AI

Sept 2024



# AI Trailblazers's Guide

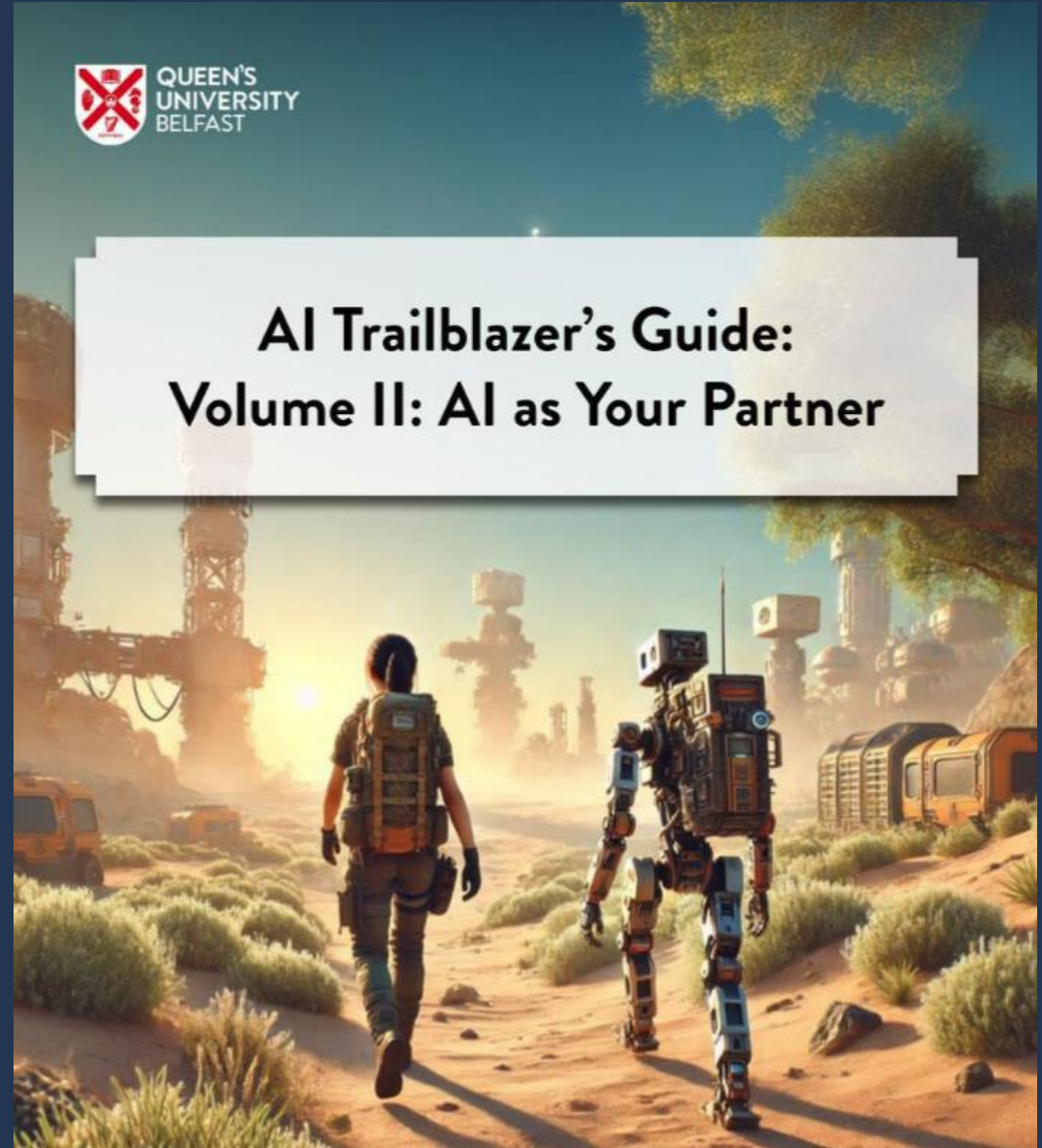
*"Using AI now prepares you for a future of co-intelligence"*

Guidance and Advice on:

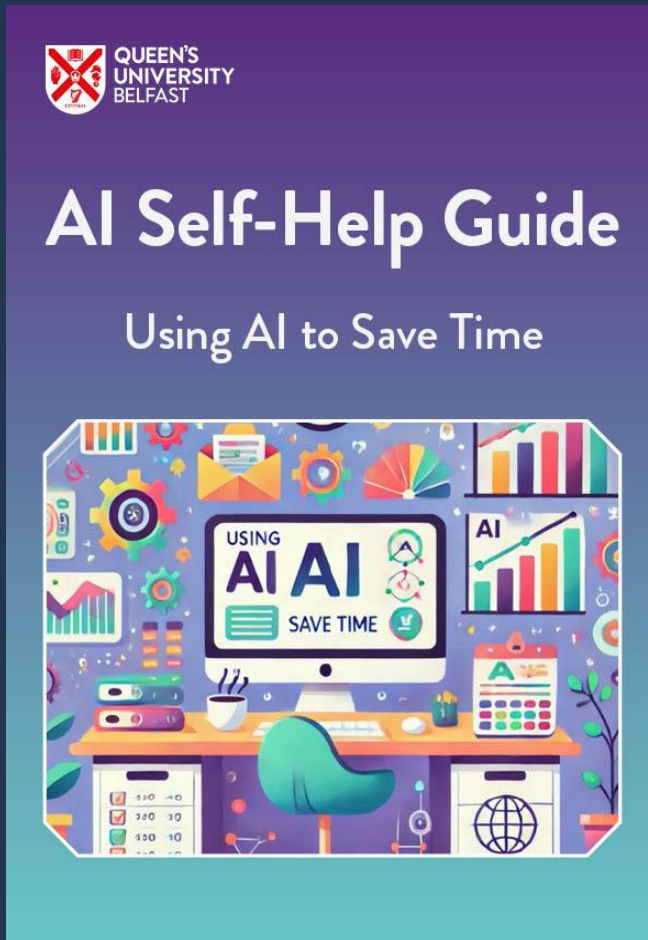
- AI as your Personal Assistant
- AI's Transformation of Education



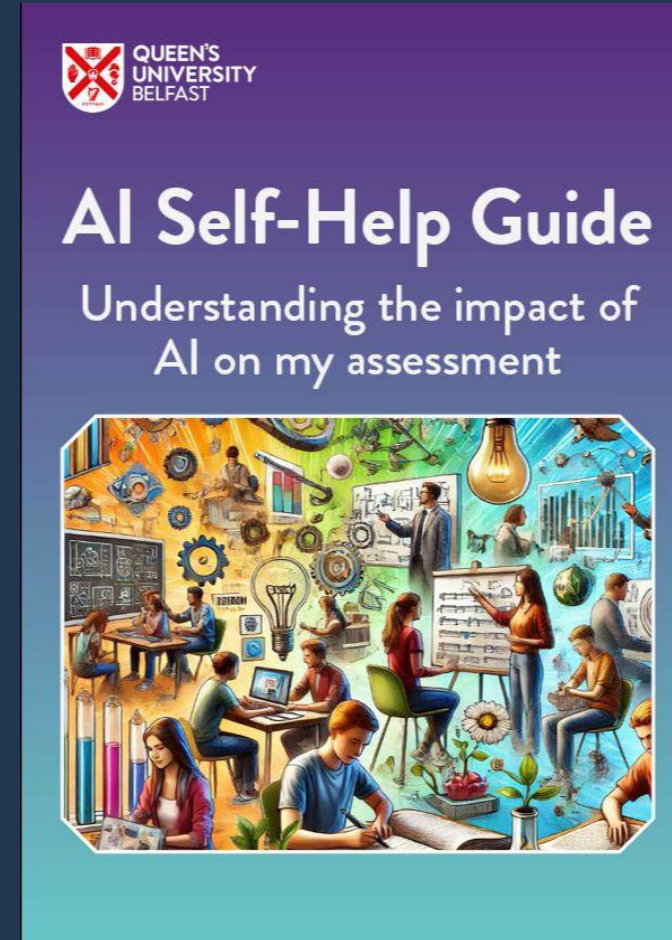
[AI Trailblazer's Guide](#)



# AI Self Help Guides



[!\[\]\(c507f772dba2b921f86777f01218e570\_img.jpg\) Click here to view](#)



[!\[\]\(cbe80b694ebd74fcfe136a095b608235\_img.jpg\) Click here to view](#)

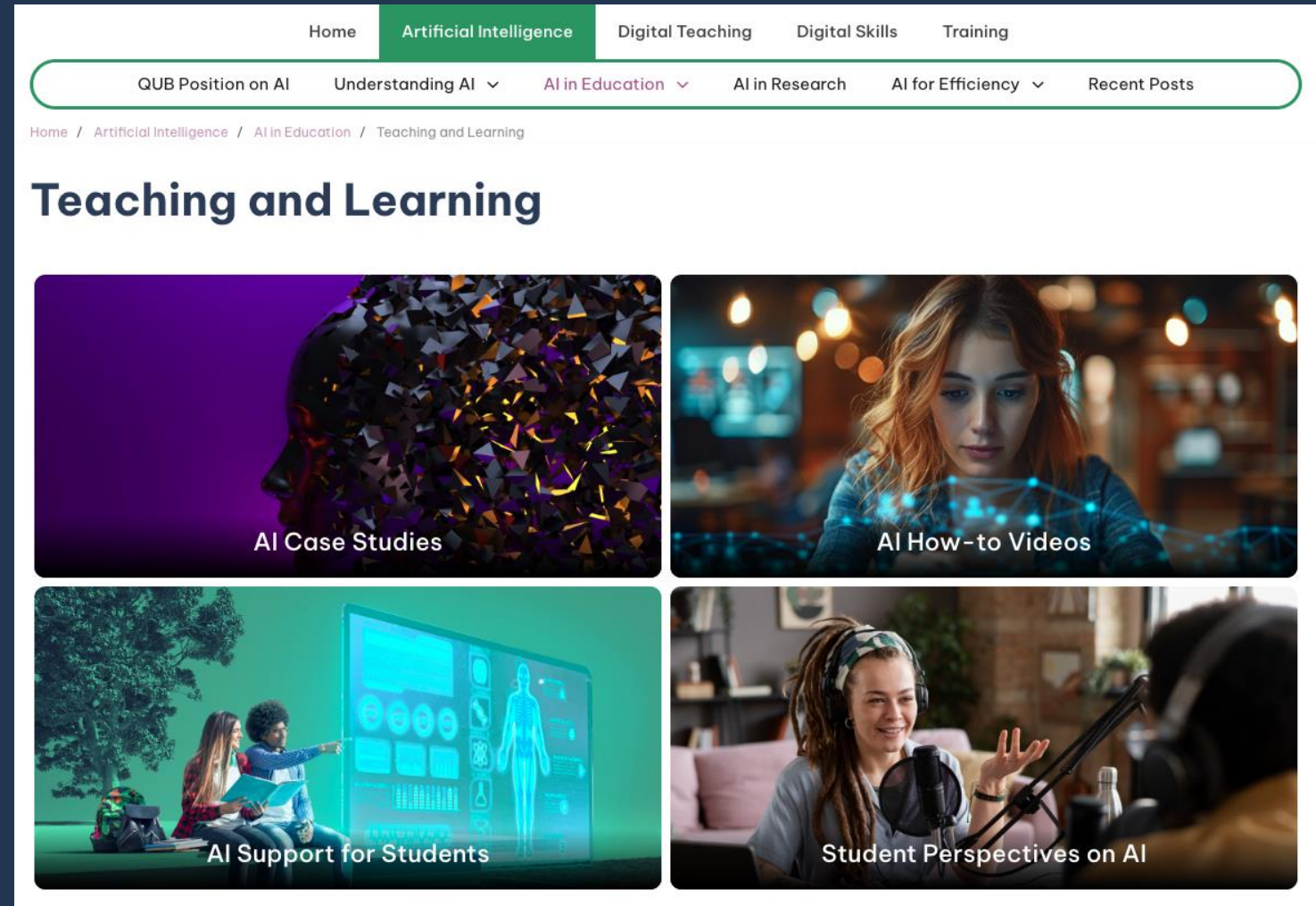


# Teaching and Learning

- AI Case Studies: Innovative use of AI by staff at Queen's
- How-to-videos: AI Tips and tricks
- AI Support for Students: Resources tailored for students
- Student Perspectives: Videos, Podcasts and more



[Teaching and Learning Page](#)





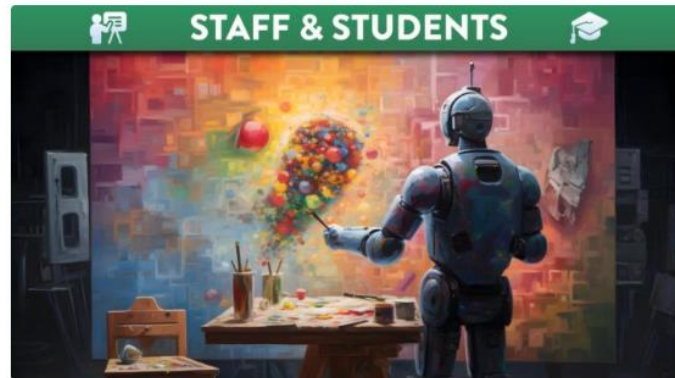
# AI Blogs

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## Recent Posts

Discover the latest news, posts, and guides on all things AI at Queen's in our "Recent Posts" section. Check back frequently to see new content. If you are interested in contributing, get in touch at [AI-Hub@qub.ac.uk](mailto:AI-Hub@qub.ac.uk).

Filter by [All](#) [AI Tools](#) [Reflections](#)



AI and the Death of Humanity: Lessons for Educators

[CONTINUE READING](#)

A Socratic Debate with ChatGPT: Reflecting on the Use of Gen AI in Research

[CONTINUE READING](#)



# AI Tools for Research

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## AI Tools for Research

### Leveraging AI for Research in Higher Education

Welcome to our dedicated resource page for leveraging Artificial Intelligence (AI) in academic research within Higher Education.

The impact of AI transformation in Higher Education is inevitable ([QAA, 2023](#)) and necessitates the development of AI literacy for both staff and students ([Russell Group, 2024](#)). Its potential for innovation and creativity should be explored in tandem with a careful and critical approach. This page reflects this balanced view by identifying AI-driven tools to support different stages of the research process, alongside internal and external guidelines on the responsible use of AI for research.

AI applications, when used responsibly and ethically, can assist researchers in the four stages of the research process: (a) conception and execution, (b) dissemination, (c) translation, and (d) funding and compliance ([Cornell University, 2023](#)). AI tools may also improve researchers' time efficiency by optimising administrative tasks, enhancing information processing, and freeing up time for meaning engagement ([QAA, 2023](#)).

The use of AI tools should align with the University's Code of Conduct and Integrity in Research ([QUB, 2024](#)), as well as abide by funders and external organisations' regulations ([European Commission, 2024](#)). Supervisors also have a responsibility to advise their PhD students on the ethical implications of the use of AI in research.

Whether you are working on your study design or diving deep into data analysis, these resources may support you to develop your AI literacy and future-proof your research. We invite researchers across the university to collaborate in order to keep this resource list updated. If you are using an AI research tool that is not featured below, please let us know by contacting [AI-Hub@qub.ac.uk](mailto:AI-Hub@qub.ac.uk).

Research Tools

AI can assist in a wide range of research tasks, from searching for relevant literature to finalising your research paper. Below are a selection of tools that cover a range of applications at every stage of your research.

**Suggested tools**

- [Scite](#) - Ask a question, get an answer backed by real research. £14.13 p/m.
- [Jenni](#) - AI-powered text editor helps you write, edit, and cite with confidence. Free for 200 AI words per day, \$20 p/m unlimited.
- [Humata](#) - Chat with articles and ask AI to summarise PDFs. Basic features for up to 60 free pages of use.
- [Consensus](#) - AI Search Engine for Research. 20 free AI credits, or \$8.99 p/m.
- [Scholarcy](#) - Summarise anything, understand complex research, organise your knowledge. Free for 3 summaries per day.
- [Elicit](#) - Automate time-consuming research tasks like summarising papers, extracting data, and synthesising your findings. 5000 free credits, \$10 p/m.
- [SciSummary](#) - Summarise scientific articles and identify opportunities for future research. Includes a multi-article summary. Free for 10k words p/m.

[+ Chat with Academic Papers](#)

[+ Literature Review](#)

[+ Data Analysis](#)

[+ Grant Applications](#)



AI Research Tools



# Library AI Guidance

- Advice on library databases, AI-augmented search and critical evaluation
- How to reference AI
- Uploading content to LLMs
- Further assistance if required

The screenshot shows the 'AI and the Library: Home' page from Queen's University Belfast. The page has a red header with the university's crest and name. Below the header, there's a navigation bar with links to 'Library', 'LibGuides', 'AI and the Library', and 'Home'. A search bar is located on the right. The main content area starts with a 'Purpose' section explaining the guide's aim to help users integrate Generative AI tools like ChatGPT into their research. It includes a reminder to check university guidelines and a list of links: 'Understanding AI', 'AI in Education', 'AI in Research', and 'AI for Efficiency'. A 'Key Message' section states that while AI can expedite research, it should not replace peer-reviewed academic sources. At the bottom, there are three columns of content: 'The Role of Generative AI in Academic Research' (discussing the limitations of AI tools), 'AI and Library Databases & Resources' (explaining how AI enhances search), and 'Evaluating AI-Generated Information' (emphasizing critical evaluation and spotting errors).

**Queen's University Belfast**

Library / LibGuides / AI and the Library / Home

## AI and the Library: Home

This guide provides an overview for students and staff in effectively integrating Generative AI tools, such as ChatGPT, into their literature search process.

Home Referencing AI Uploading content to LLMs Further Assistance

**Purpose:** This library guide offers an overview of how you can utilize Generative Artificial Intelligence (AI) to enhance your use of library resources at Queen's University Belfast.

Remember, before incorporating Generative AI into your research or writing, ensure you:

- Review the guidelines from your course or school regarding AI usage. Consult with your Academic Advisor, Programme Director or Module Convenor to confirm if AI is permitted.
- Read the [University's Position on AI](#) where you will find further direction on:
  - [Understanding AI](#)
  - [AI in Education](#)
  - [AI in Research](#)
  - [AI for Efficiency](#)

After completing these steps, explore this guide for advice on using AI effectively and ethically in literature searches and in sourcing materials for your studies.

**Key Message:** Generative AI can help expedite some elements of traditional library research, but it should not be used as an alternative resource for finding peer-reviewed, academic sources. Always validate information using the Library's academic databases and its wider range of resources.

### The Role of Generative AI in Academic Research

#### What is Generative AI?

Generative AI tools, such as ChatGPT, are advanced systems that create text based on patterns learned from vast amounts of data. These tools are trained on large datasets that include books, articles, websites, and other publicly available information. By recognizing linguistic structures and common themes, they can produce coherent and relevant responses to a wide range of queries.

However, it's important to note that while these tools may provide helpful, contextually accurate information, they do not access real-time data or all peer-reviewed academic sources. They cannot search university library databases nor Google Scholar, meaning that the information they generate is based on past data and not guaranteed to be academically verified or up-to-date. Therefore, when using AI for academic purposes, it's essential to

### AI and Library Databases & Resources

#### How do library databases use AI?

AI has long enhanced search performance in library bibliographic, full-text, and other databases by enabling users to control searches with keywords and filters, while the AI efficiently processes and delivers relevant results.

With advances in generative and conversational AI, we relinquish up some control over the search process, relying on AI to deliver relevant results. As we interact more, the AI learns and improves its accuracy. Conversational AI allows natural language searches, shifting away from traditional database methods. The University's guidance on this is detailed in the [Prompt Engineering](#) section.

Generative AI models are impressive tools that continue to improve, but their content is not guaranteed to be academically

### Evaluating AI-Generated Information

#### The Importance of Critical Evaluation:

All content from AI tools needs to be critically evaluated. AI can provide useful insights, but it's essential to fact-check and cross-reference information with reliable academic sources to ensure its accuracy and credibility.

#### Spotting Errors:

To identify misinformation or inaccuracies in AI-generated content:

- Watch for vague or unclear claims.
- Check for outdated information.
- Look for a lack of proper citations.
- Be aware that Generative AI can present inaccurate or made up information



[libguides.qub.ac.uk/AIlibrary](https://libguides.qub.ac.uk/AIlibrary)

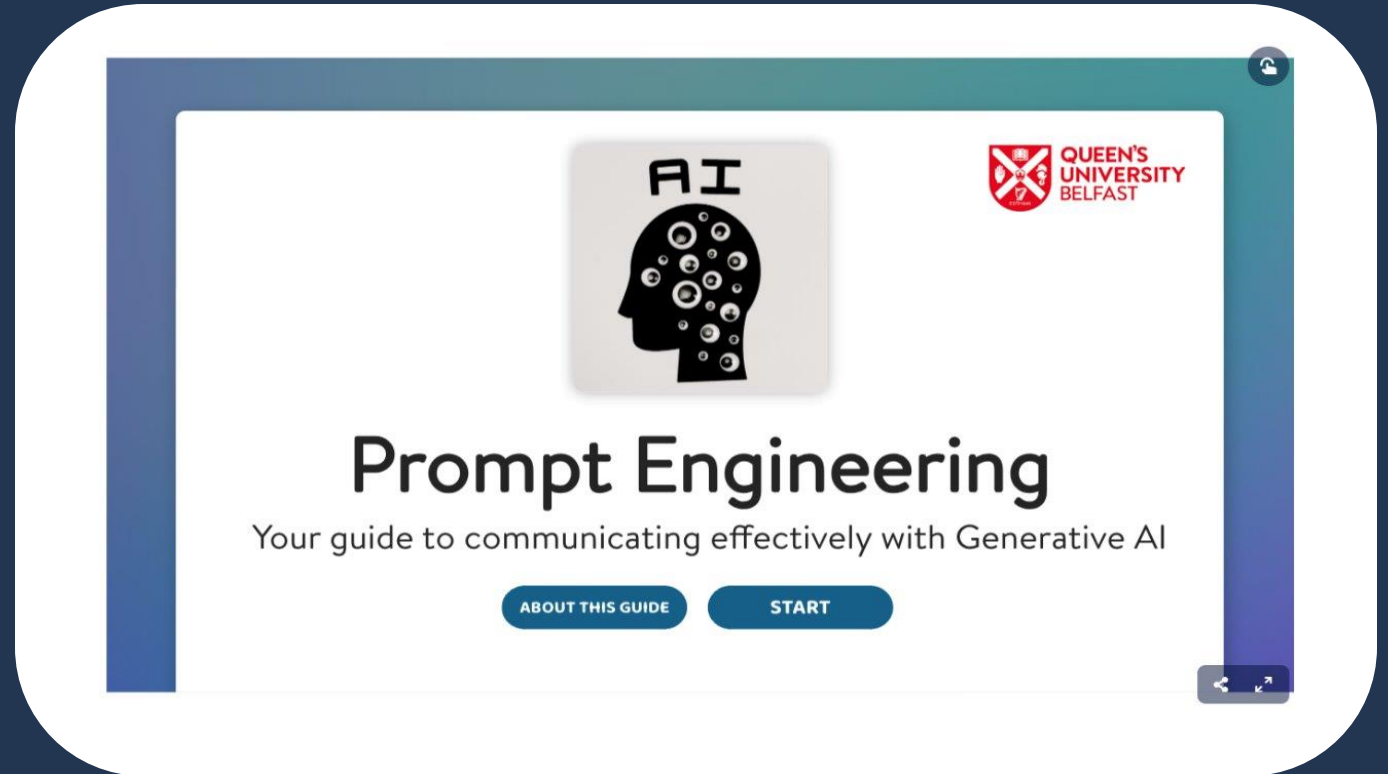
# Interactive Prompt Engineering Resource

## Interactive Resource Includes:

- Tips and tricks on writing effective prompts
- Use cases and sample prompts for both teachers and students.

 [AI, Step by step](#)

 [Prompt Engineering](#)



# Feedback Form

Please take a couple of minutes to tell us your thoughts on the session, and AI support at Queen's:

 [forms.office.com/e/pqf5g8jh9Z](https://forms.office.com/e/pqf5g8jh9Z)

## AI Building Blocks Series





Questions?