AI and education

Sue Attewell
Head of AI

Art

Advice & Guidance

Training

Community

Collaborating and Advocating

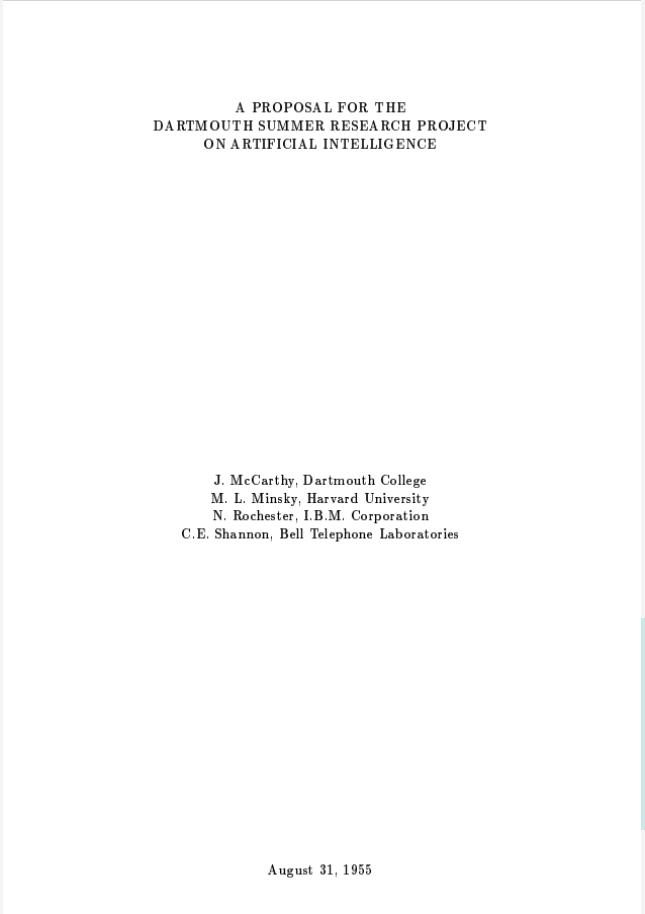
70 Years of AI

August 1955:

“We propose that a 2 month, 10 man study of artificial intelligence be carried out during the summer of 1956…

An attempt will be made to find how to make machines use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves.

We think that a significant advance can be made in one or more of these problems if a carefully selected group of scientists work on it together for a summer.”



A PROPOSAL FOR THE
DARTMOUTH SUMMER RESEARCH PROJECT
ON ARTIFICIAL INTELLIGENCE

J. McCarthy, Dartmouth College
M. L. Minsky, Harvard University
N. Rochester, I.B.M. Corporation
C.E. Shannon, Bell Telephone Laboratories

August 31, 1955

1955
Term ‘Artificial Intelligence’ coined.

1958
The **Perceptron is** developed

1966 ELIZA
Joseph Weizenbaum creates ELIZA.

Shakey the Robot is created.

1969
The General Problem Solver is developed.

AI WINTER

1972
MYCIN Expert System is developed for medical diagnosis.

1986
Geoffrey Hinton and colleagues publish a paper on backpropagation.

1997
Windows releases speech recognition software.

2006
Netflix introduces its Recommendation System

2005
Google Translate launched

2016
AlphaGo defeats Lee Sedol in Go.

2018
Release of BERT by Google.

2020
GPT-3 by OpenAI is released

2021
AlphaFold solves the protein-folding problem.

2022
ChatGPT is released

2024
UN AI Resolution

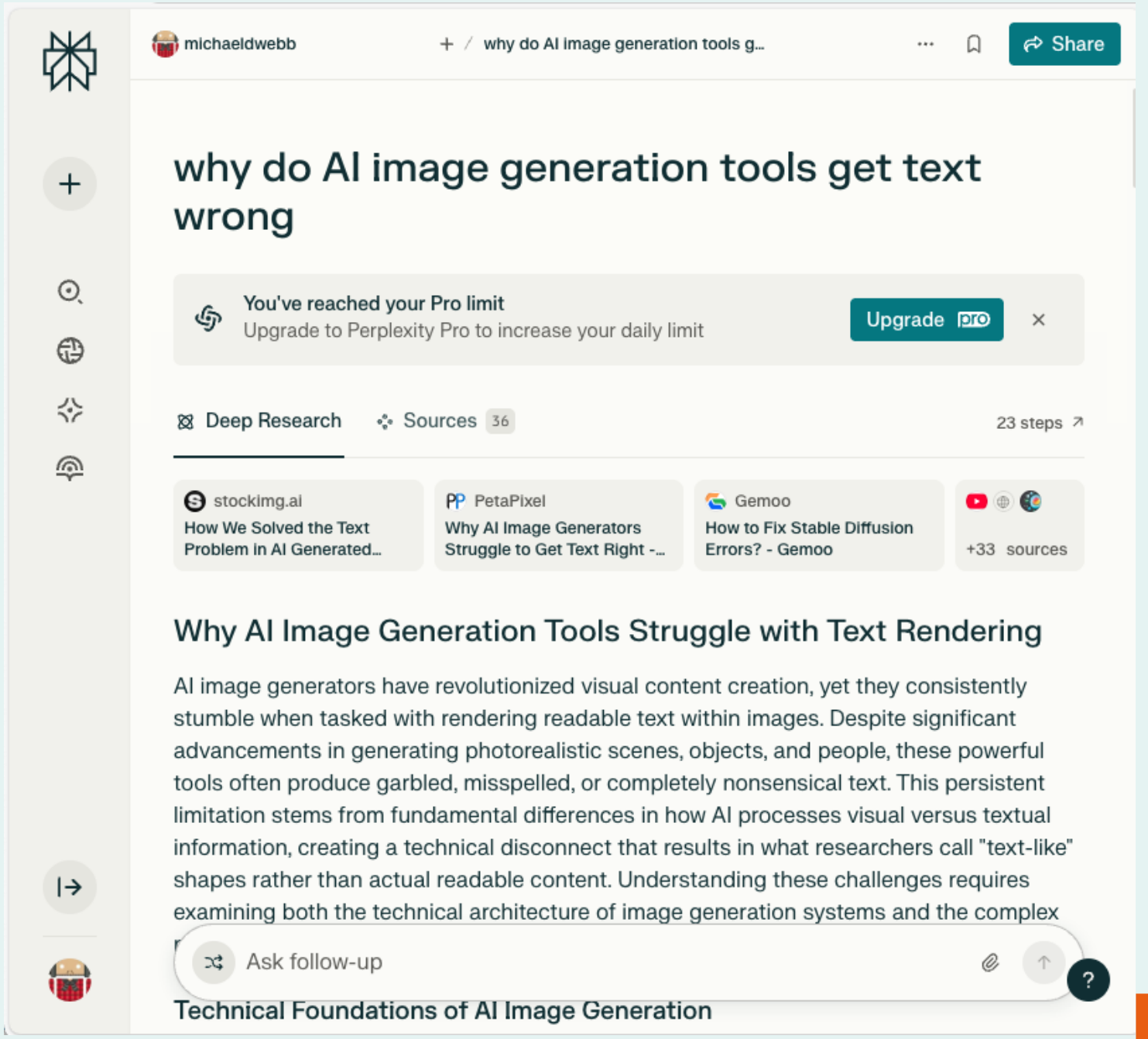
Technology Developments

Key AI developments over the last few months

Deep Research

Perplexity, Google, Open AI and more.

Deep Research lets you ask complex questions and get rich, trustworthy answers—drawing from your documents, messages, meeting transcripts, and the internet—with clear sources so you can easily check and explore further.



The latest image generation tools

A step change in AI Image Generation in Open AI’s latest models

Diffusion models

The first wave of AI image generation struggles with text and certain types of detail (hands!)

Prompt:

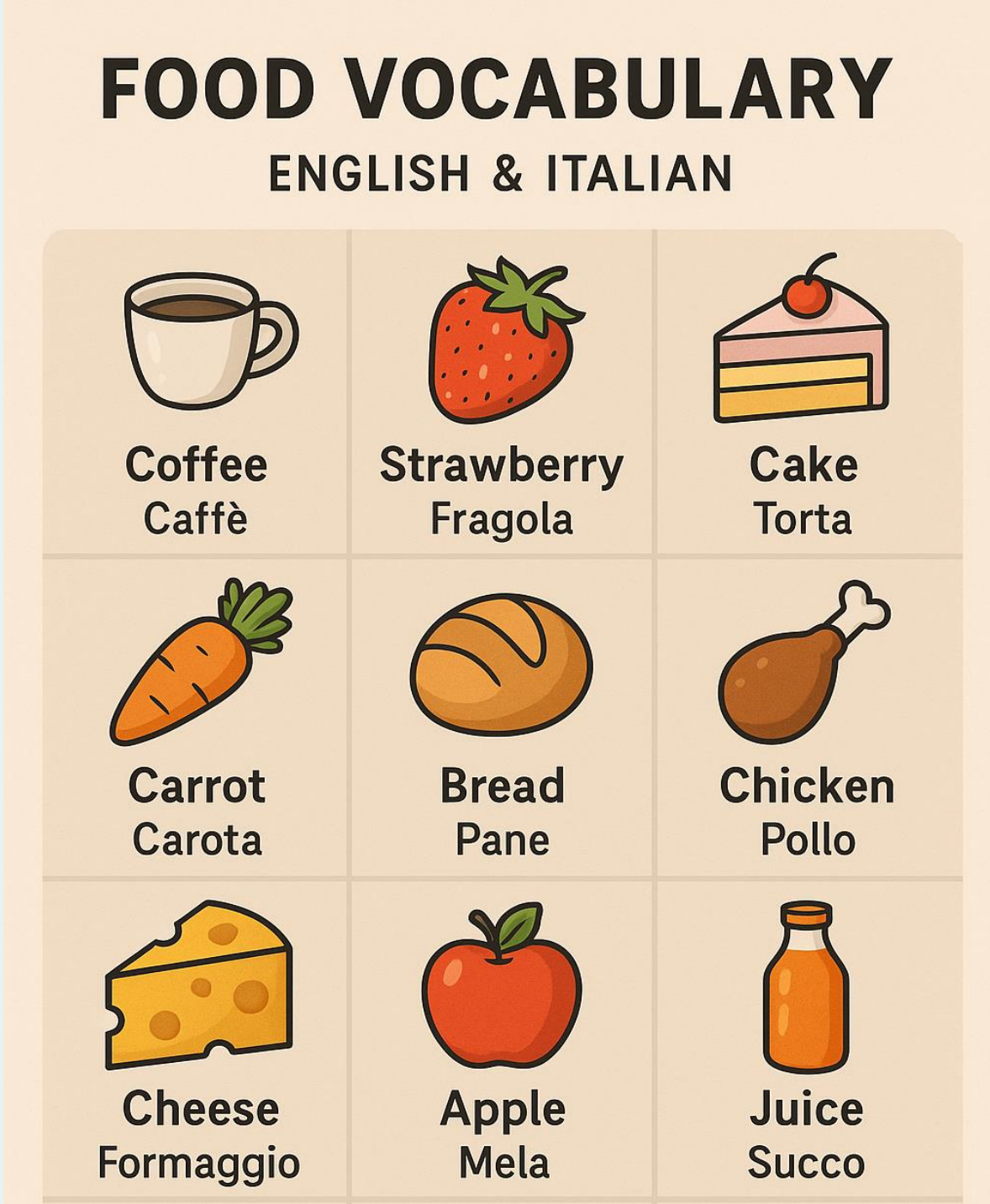
Create an educational poster with basic food vocabulary in English and Italian side by side. Include ten words (e.g., “Coffee – Caffè” “Strawberry – Fragola,” “Cake – Torta,” etc.) in a grid layout with icons. Title: “Food Vocabulary – English & Italian”.

Auto-regression models

Based on a different technique, the latest models can create complex images accurately.

Prompt:

Create an educational poster with basic food vocabulary in English and Italian side by side. Include ten words (e.g., “Coffee – Caffè” “Strawberry – Fragola,” “Cake – Torta,” etc.) in a grid layout with icons. Title: “Food Vocabulary – English & Italian”.

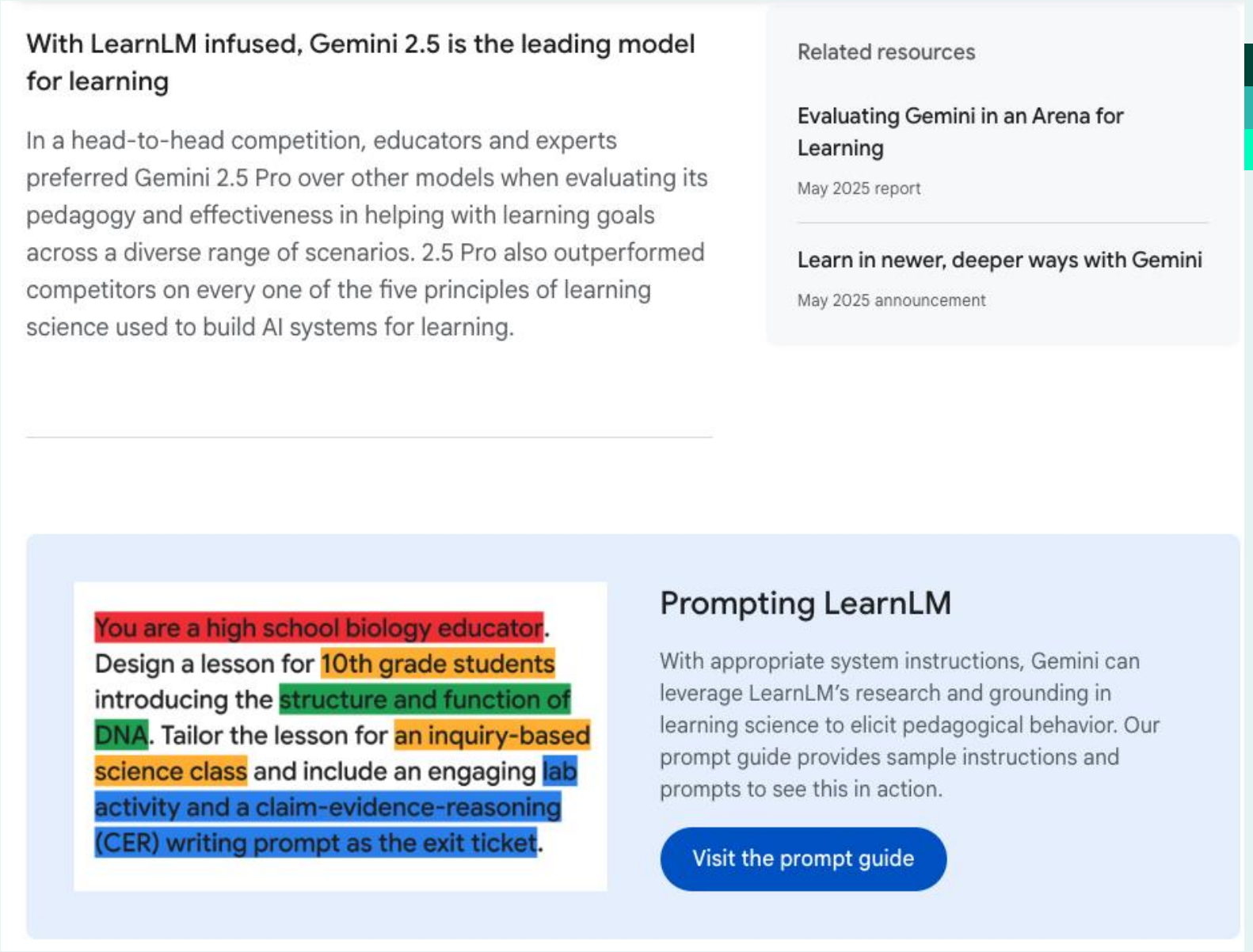


What challenges does this present when the text is so real?

LearnLM

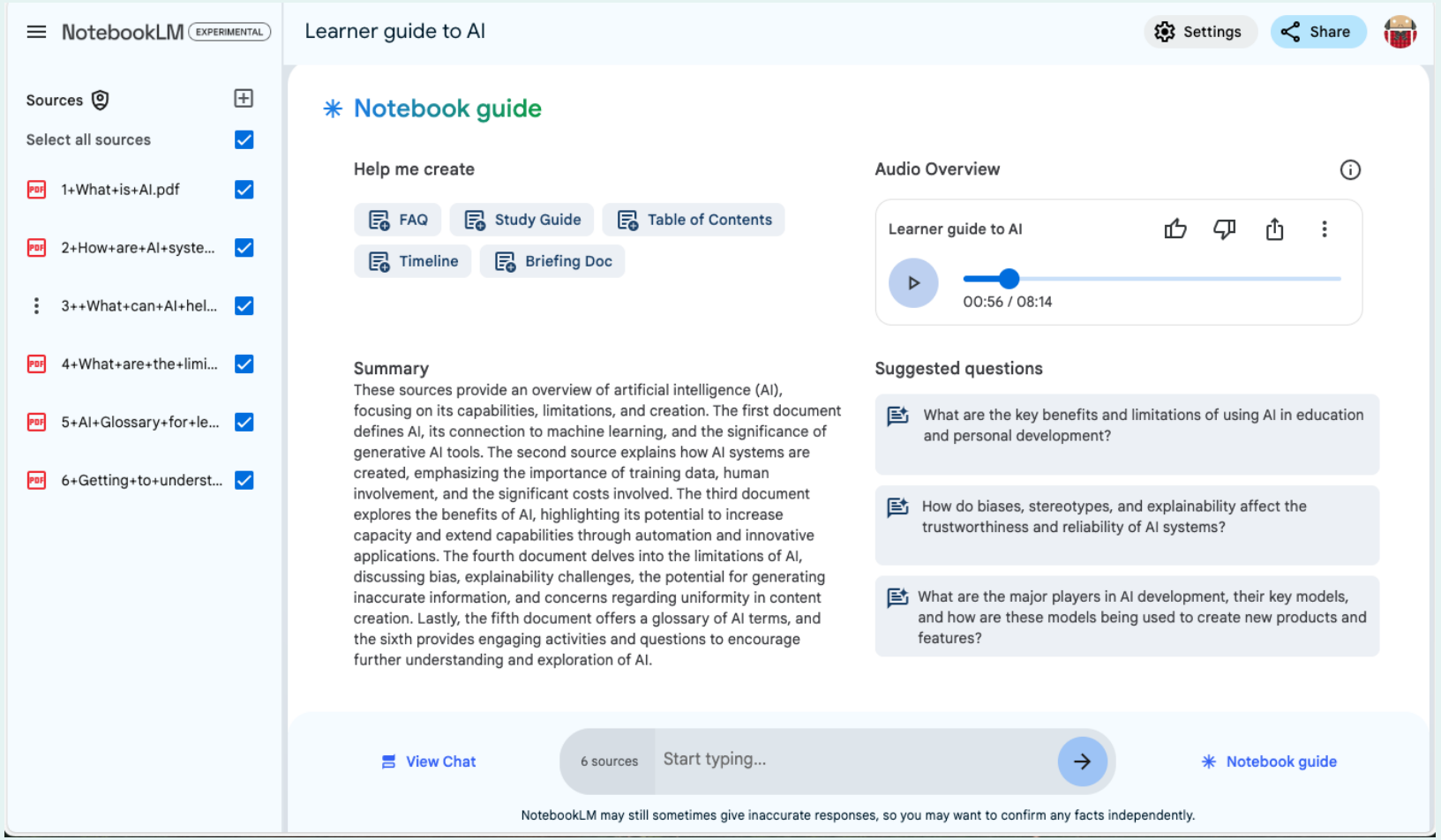
AI designed for learning from the ground up

Google are incorporating AI Models fine-tuned for learning into many of their products



Notebook LM

Google's Notebook LM lets us work with our own documents, and present them in many ways, including as a podcast.

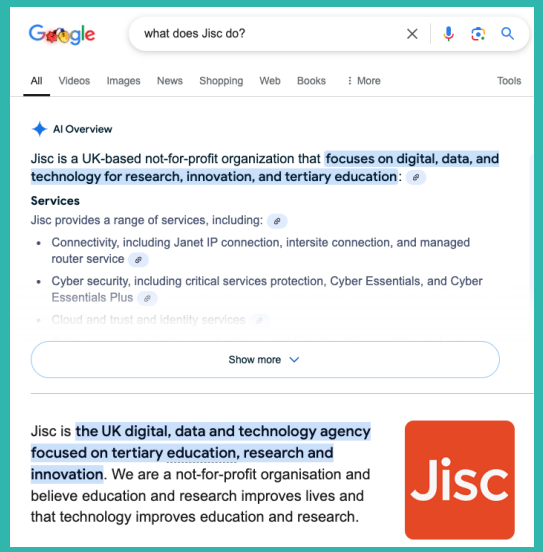


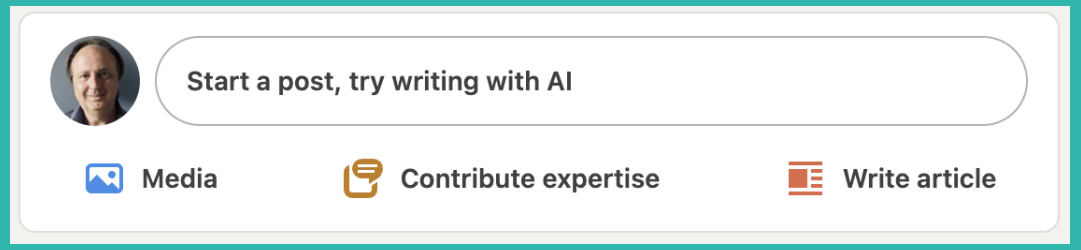
We are shifting how we think about tools…

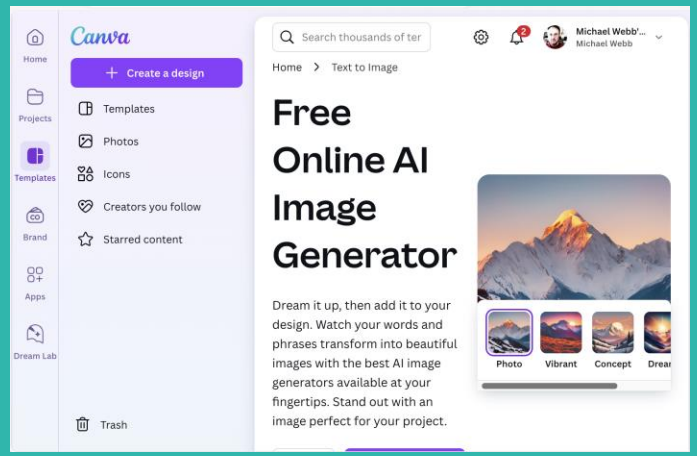
AI TOOLS

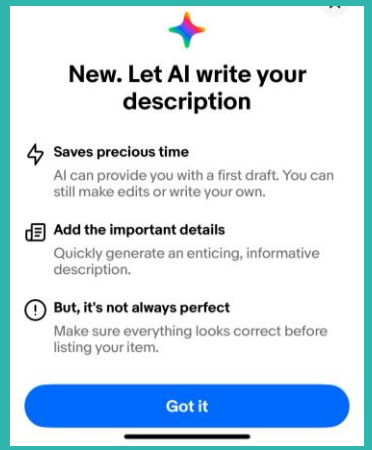
ChatGPT

TOOLS INCORPORATING AI









Jisc

Saving staff time - tools become built into existing platforms…

Microsoft AI in Teams for Education

▶ *Applies To*

Microsoft Teams for Education is a suite of tools and resources that enable educators and students to leverage the power of artificial intelligence in teaching and learning. With Microsoft Teams for Education, you can create personalized and interactive learning experiences, enhance curriculum and assessment design, and empower students with future skills.

Core features for assignments

Assignment Instructions

AI instructions for educators are designed to streamline assignment creation and editing to offer options to add more details, increase inclusivity, and engage young readers. Using AI, teachers can easily update their assignments with instructions for students that are clear, concise, and appropriate for their grade level.

Learn more about AI Instructions for assignments in Microsoft Teams.

Get answers to some common questions on instructions generation.

Examples of AI in education

Case Study: Blackboard Learn Ultra's AI Design Assistant

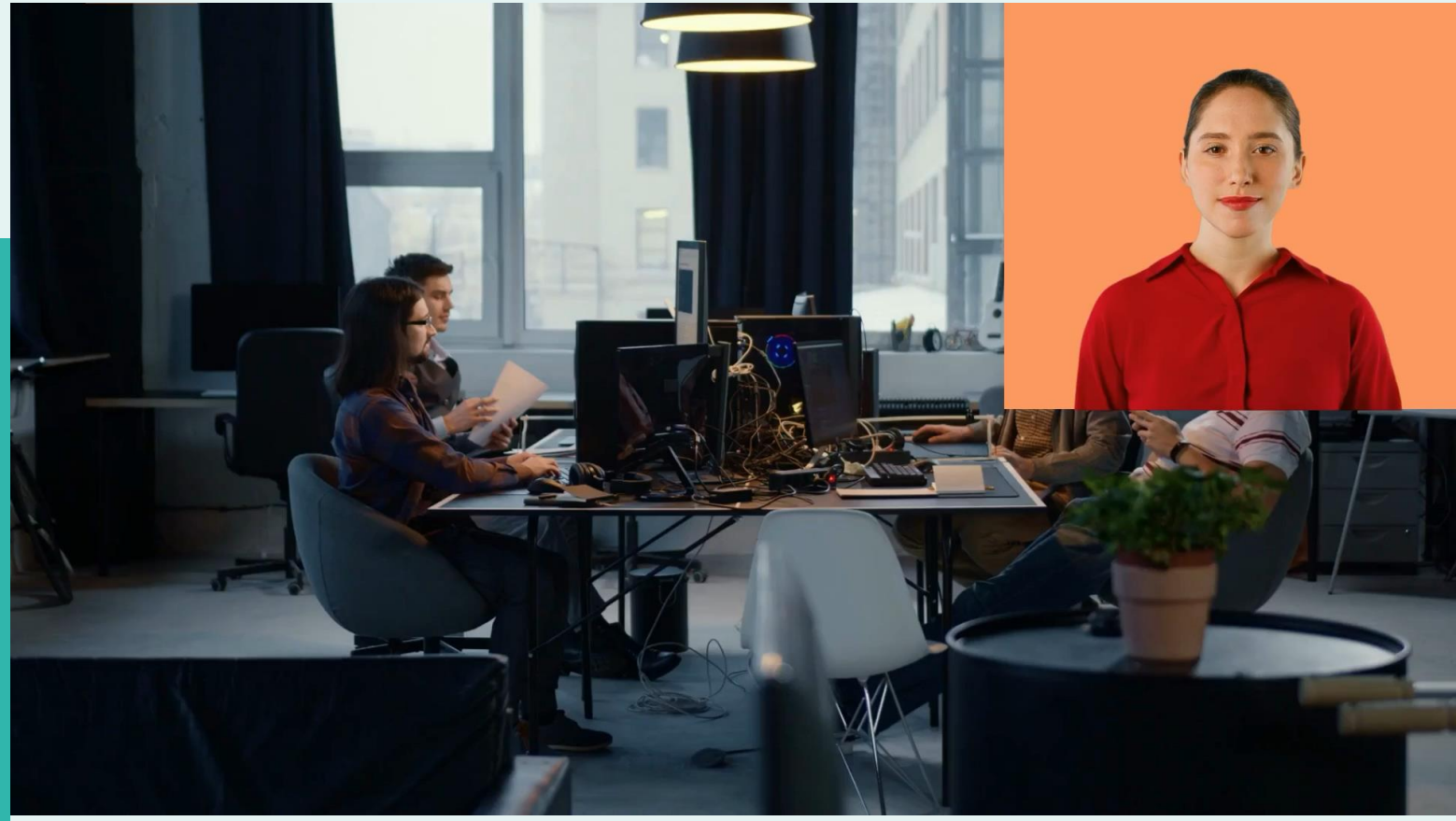
By Tom Moule 24 April 2024 No Comments

Virtual Learning Environments (VLEs) – a ubiquitous tool in tertiary education – have begun to harness generative AI, leading to exciting new features and

Presenting content in multiple ways…

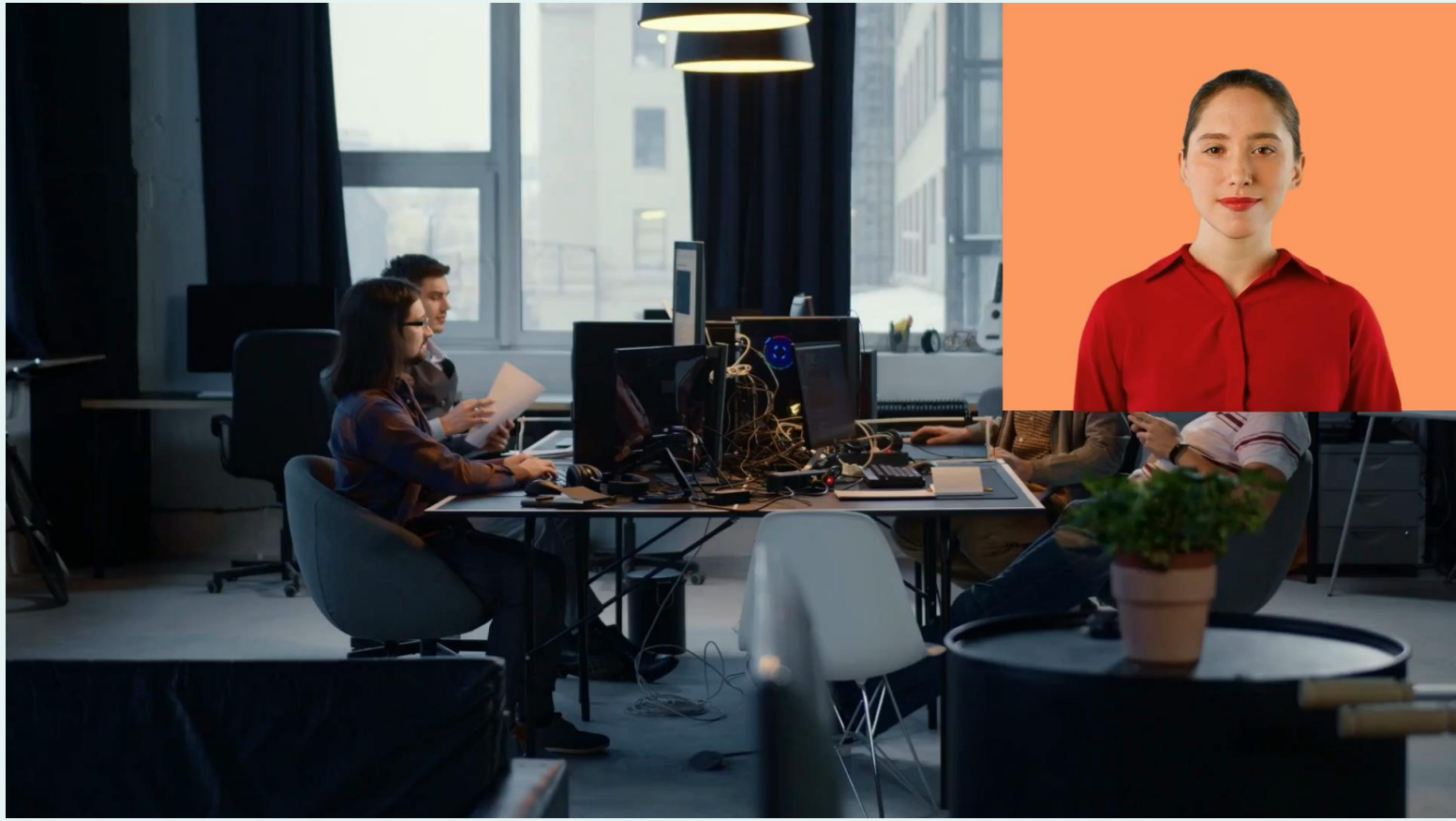
This was created from a blog post using Synthesia.

The content and images were lightly edited – the whole process took about 10 minutes.

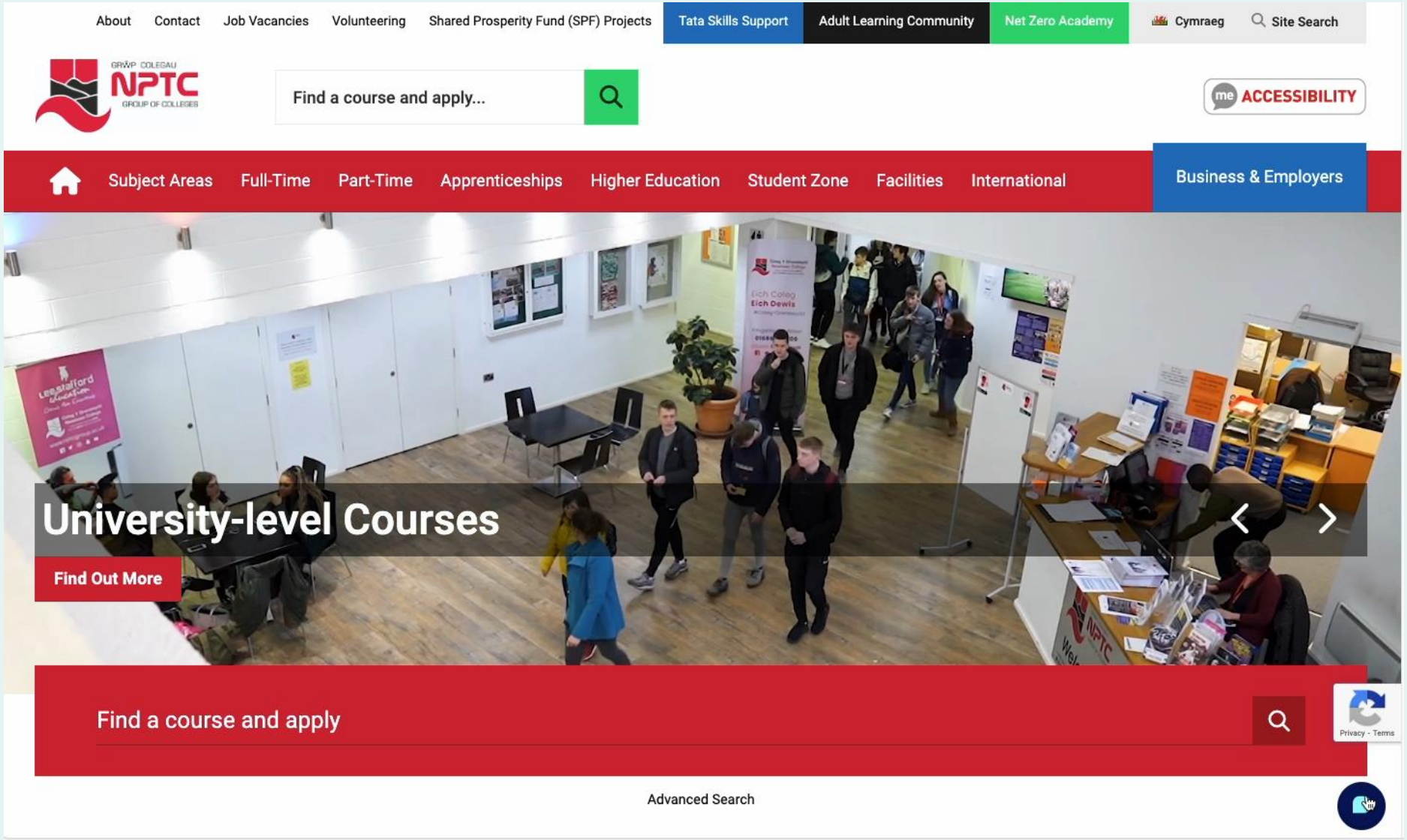


Including multilingual…

- Translation tools are improving all the time.
- We can communicate with students in their language of choice



iImproving the student experience



Broader contexts

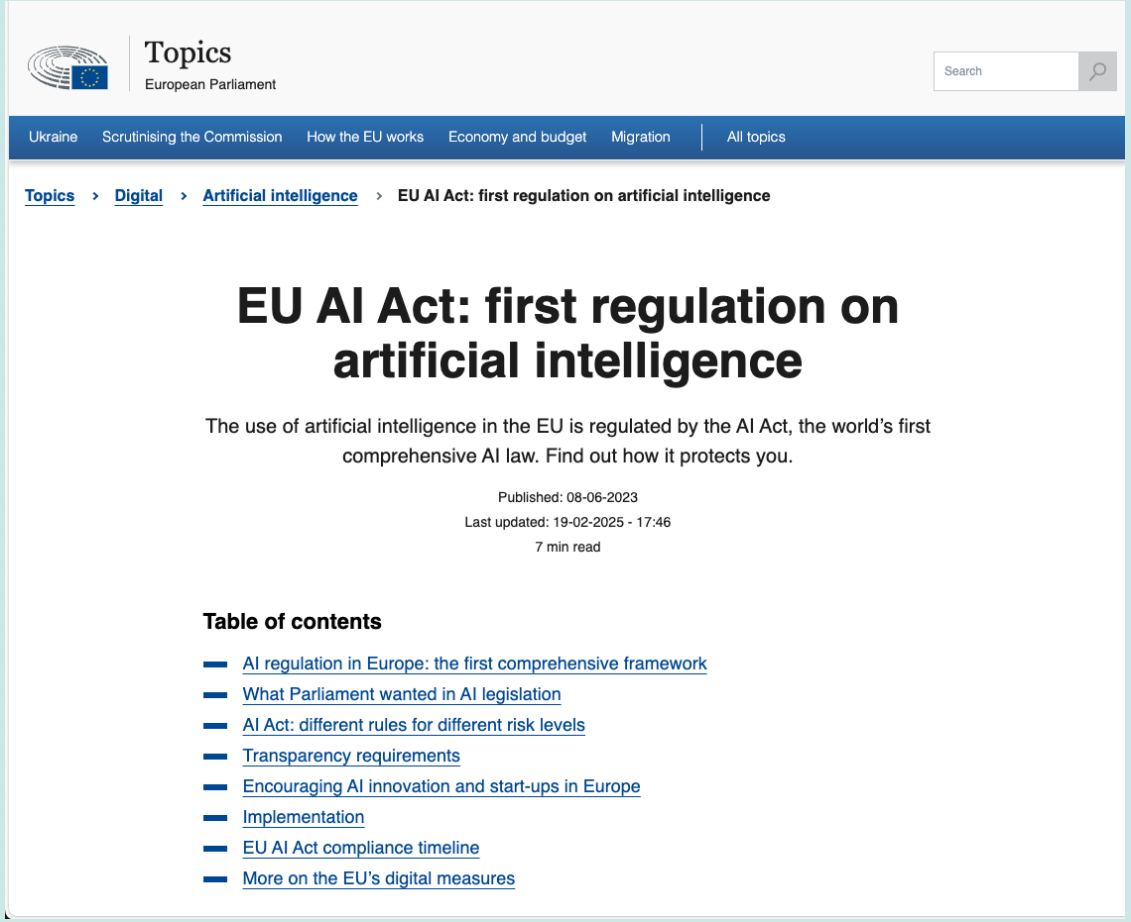
Policy, strategy, regulation and media perceptions

The EU AI Act

AI systems falling into specific areas that will have to be registered in an EU database:

This includes Education and vocational training

Some use cases are banned completely: behavioural manipulation, social scoring, biometric categorisation, and real-time surveillance through remote biometric identification in public spaces



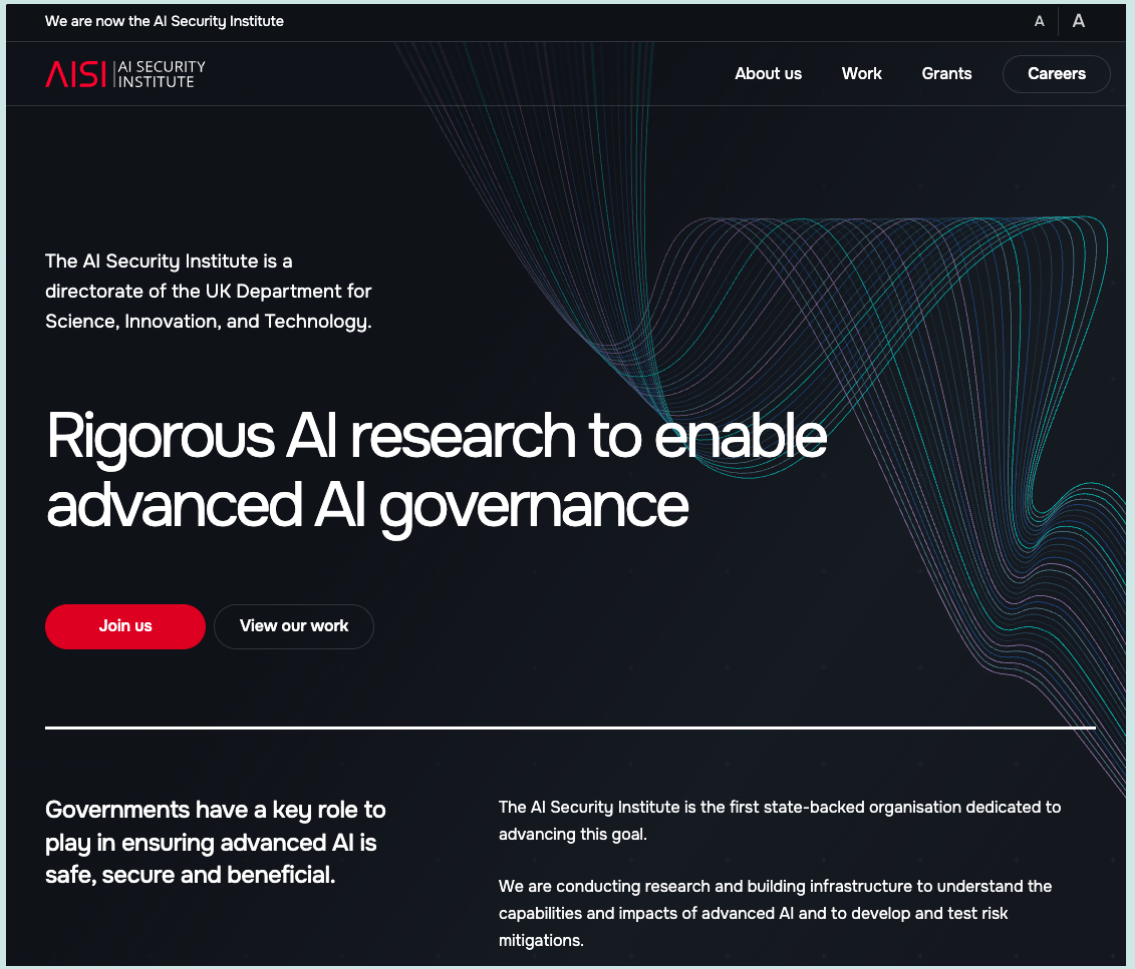
https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence

UK: From AI Safety to AI Security

A shift in approach in the the UK.

AI Safety Institute renamed AI Security Institute

This seems sensible and balanced!



https://www.aisi.gov.uk/

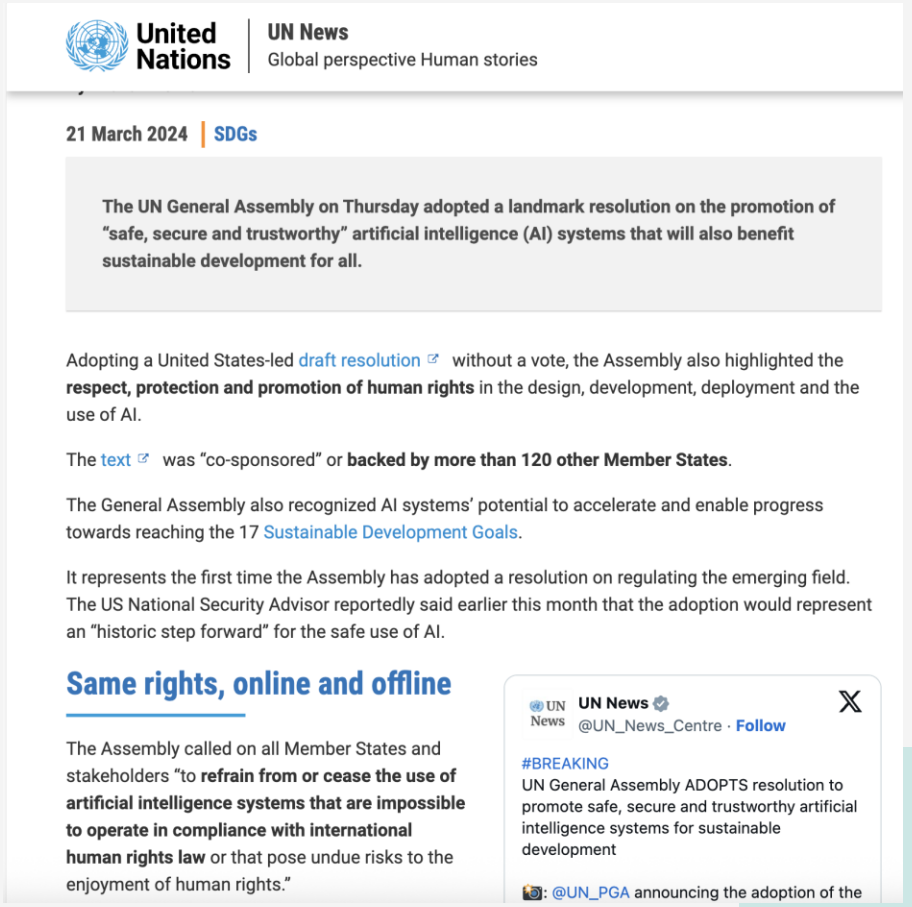
Sustainable AI

We often use ‘sustainability’ as shorthand for environmental sustainability, but it’s perhaps important to recognise its broader dimensions.

Why does this matter?

From an AI perspective, the UK is a signatory to the UN’s draft AI resolution “Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development”

This commits to supporting all 17 of the UN’s sustainable development goals (SDGs) “in its three dimensions – economic, social and environmental.



United Nations | UN News
Global perspective Human stories

21 March 2024 | SDGs

The UN General Assembly on Thursday adopted a landmark resolution on the promotion of “safe, secure and trustworthy” artificial intelligence (AI) systems that will also benefit sustainable development for all.

Adopting a United States-led draft resolution without a vote, the Assembly also highlighted the **respect, protection and promotion of human rights** in the design, development, deployment and the use of AI.

The text was “co-sponsored” or **backed by more than 120 other Member States**.

The General Assembly also recognized AI systems’ potential to accelerate and enable progress towards reaching the 17 Sustainable Development Goals.

It represents the first time the Assembly has adopted a resolution on regulating the emerging field. The US National Security Advisor reportedly said earlier this month that the adoption would represent an “historic step forward” for the safe use of AI.

Same rights, online and offline

The Assembly called on all Member States and stakeholders “to **refrain from or cease the use of artificial intelligence systems that are impossible to operate in compliance with international human rights law** or that pose undue risks to the enjoyment of human rights.”

UN News
@UN_News_Centre · Follow

#BREAKING
UN General Assembly ADOPTS resolution to promote safe, secure and trustworthy artificial intelligence systems for sustainable development

: @UN_PGA announcing the adoption of the

Environmental impact is at the forefront of many people's minds…

Advice and Guidance

Artificial intelligence and the environment: The current landscape

By Catherine Barker 28 March 2025 No Comments

Alan Warburton / https://betterimagesofai.org / Image by BBC

Since writing about the environmental impacts of AI and the importance of taking a responsible approach last September (2024), AI technologies have become even more integrated into our digital infrastructure. Generative AI

Advice and Guidance

Artificial intelligence and the environment: Putting the numbers into perspective

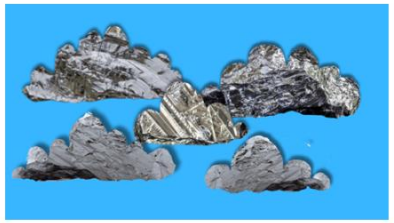
By Catherine Barker 2 May 2025 2 Comments

Headlines around generative AI's environmental impact often focus on isolated numbers and statistics, which can appear alarming without context. However, some recent articles, such as 'What's the impact of artificial

Advice and Guidance

Artificial intelligence and the environment: Looking ahead

By Catherine Barker 5 June 2025 No Comments



Catherine Breslin & Tania Duarte / https://betterimagesofai.org / https://creativecommons.org/licenses/by/4.0/

In our AI and the environment blog series, we've covered taking a responsible approach, provided an update on the current landscape, and looked at putting the numbers into perspective. In this final blog of the series, we're highlighting a few trends we've seen emerging lately. These range from greener energy solutions for AI infrastructure, to […]

Jisc

Microsoft builds first wooden data centre


AI OPPORTUNITIES ACTION PLAN
Ramping up AI adoption across the UK
to boost economic growth, provide jobs for the future and improve people's everyday lives

Government quote

Artificial Intelligence will drive incredible change in our country.

From teachers personalising lessons, to supporting small businesses with their record-keeping, to speeding up planning applications, it has the potential to transform the lives of working people.

Cross economy adoption

Push hard on cross-economy adoption

The public sector should rapidly pilot and scale AI products and services and encourage the private sector to do the same.

Three core strands:

LAYING THE FOUNDATIONS

Infrastructure
Data
Skills
Safety and Trust

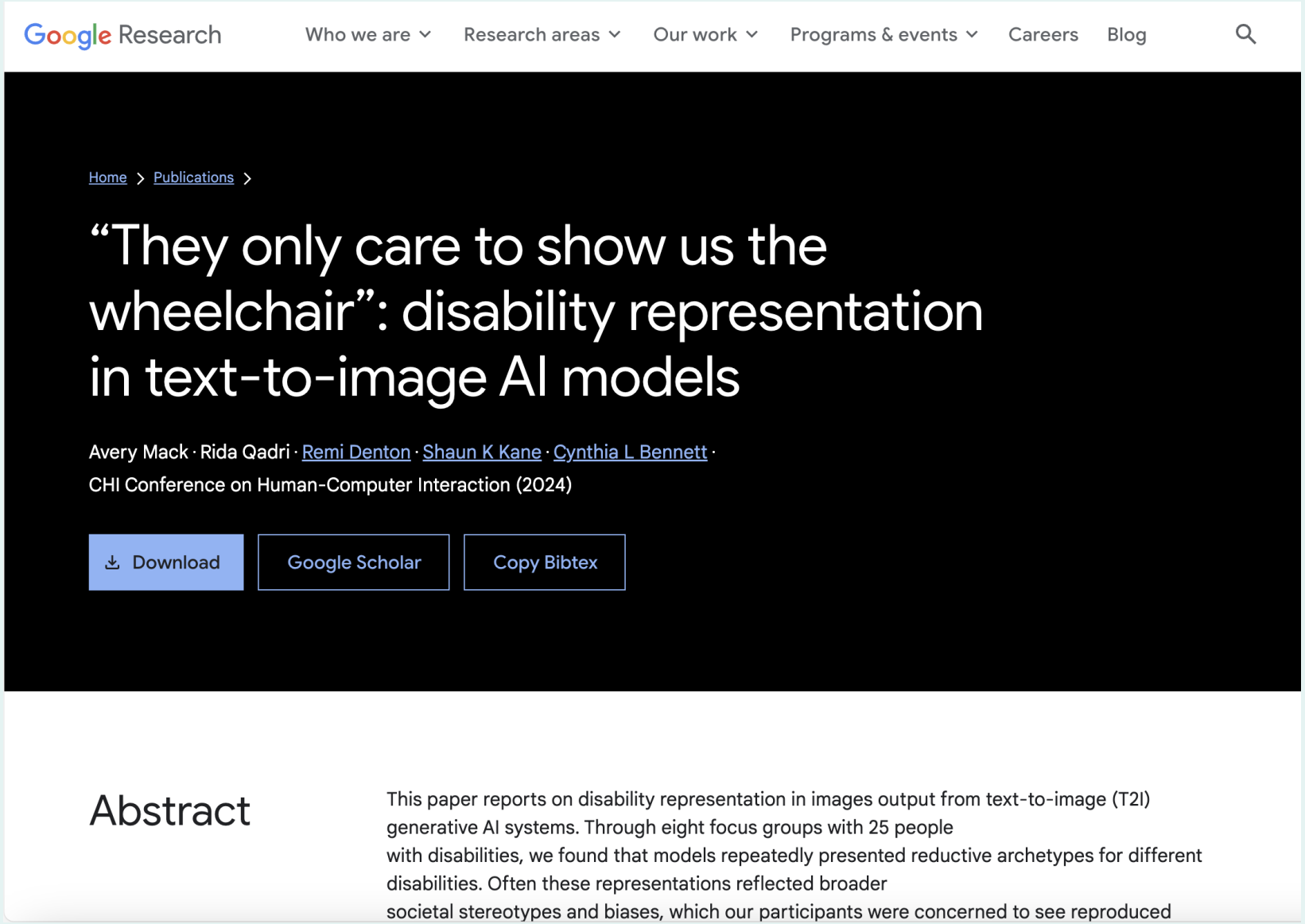
CHANGE LIVES BY EMBRACING AI

Scan > Pilot > Scale

SECURE OUR FUTURE WITH HOMEGROWN AI

Be an AI Maker, not a taker

Bias remained a significant concern

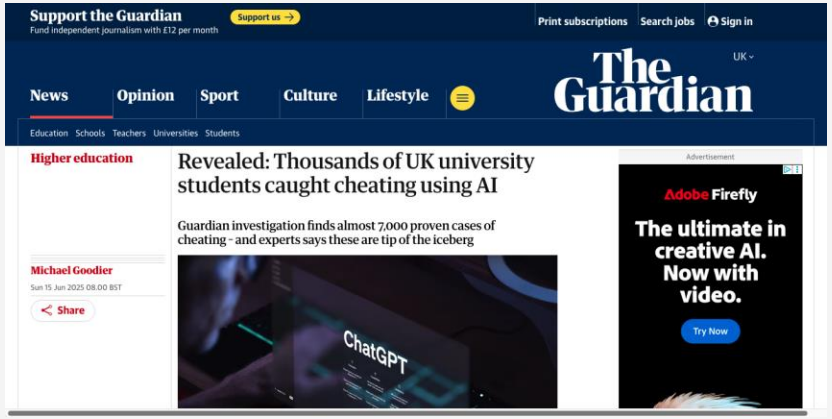


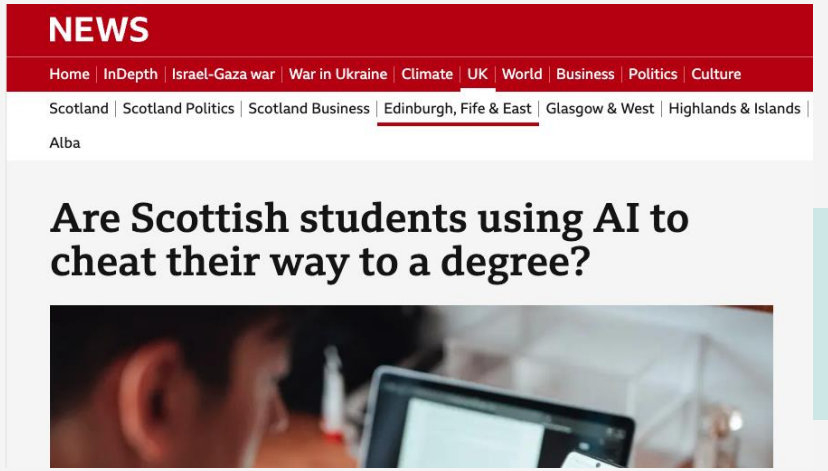
AI in Education and the Media

Everyone Is Cheating Their Way Through College

ChatGPT has unraveled the entire academic project.

By James D. Walsh, Intelligencer staff writer





Academic Integrity and Skills for the Future

A multi-prong approach

A three-pronged approach

Clear advice to students

Typical through “traffic lights” or assessment scales

Robust by design

A move to a mix of assessment methods

Assess the right things

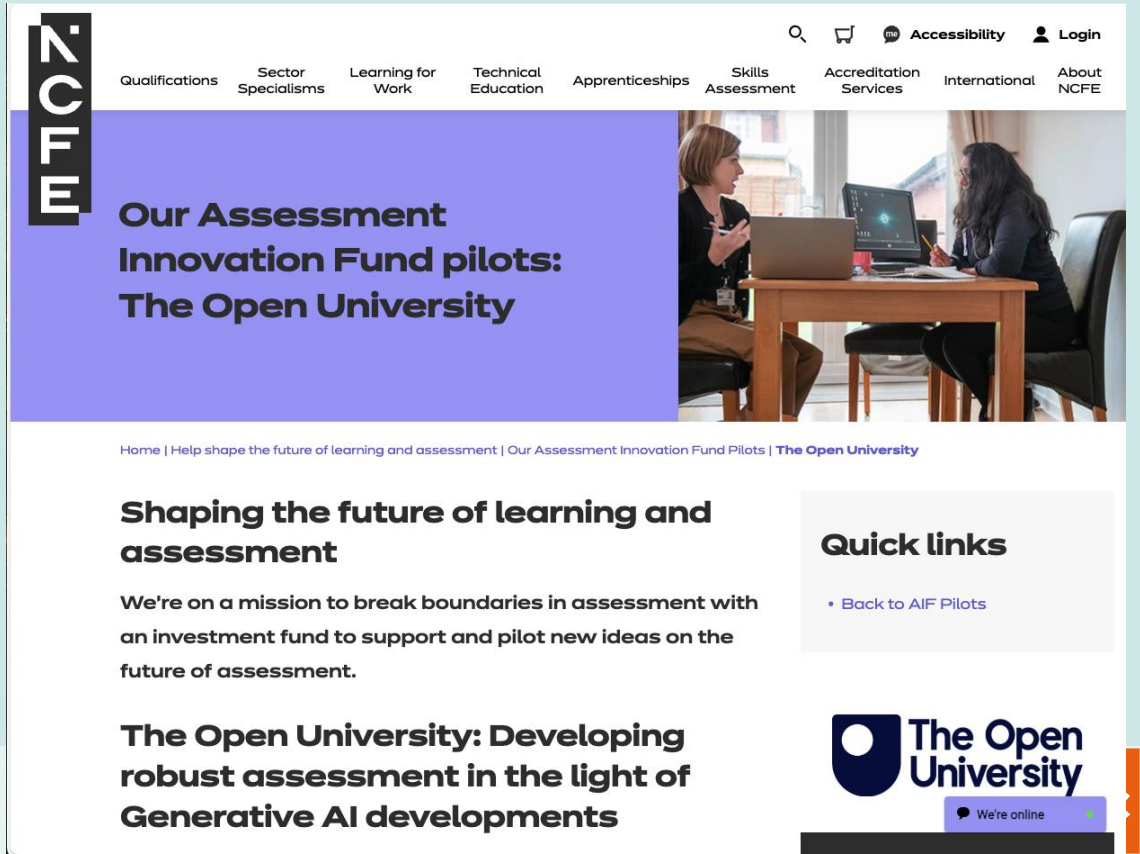
AI skills, ‘soft skills’ and a focus on skills that may be lost due to AI

AI and Assessment: some key studies

We know have access to a lot more research on this:

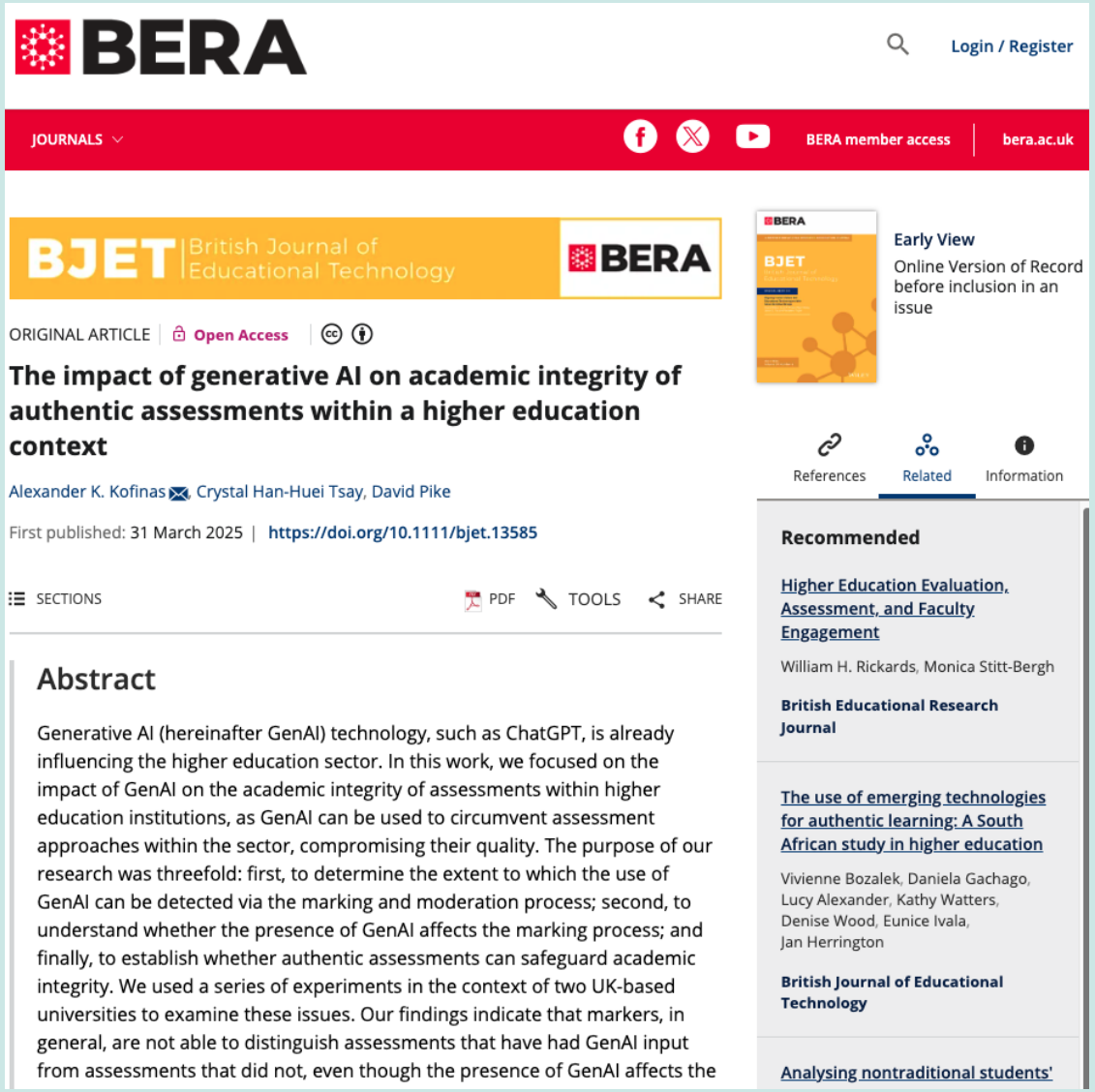
- AI detection is still inaccurate.
- AI can pass many types of assessment
- Training staff to spot AI doesn't really help.

The only real option is changes to assessment



More evidence : authentic assessment alone isn’t sufficient

Accuracy of identifying AI written authentic assessment varies between 33% and 85%



https://bera-journals.onlinelibrary.wiley.com/doi/full/10.1111/bjet.13585

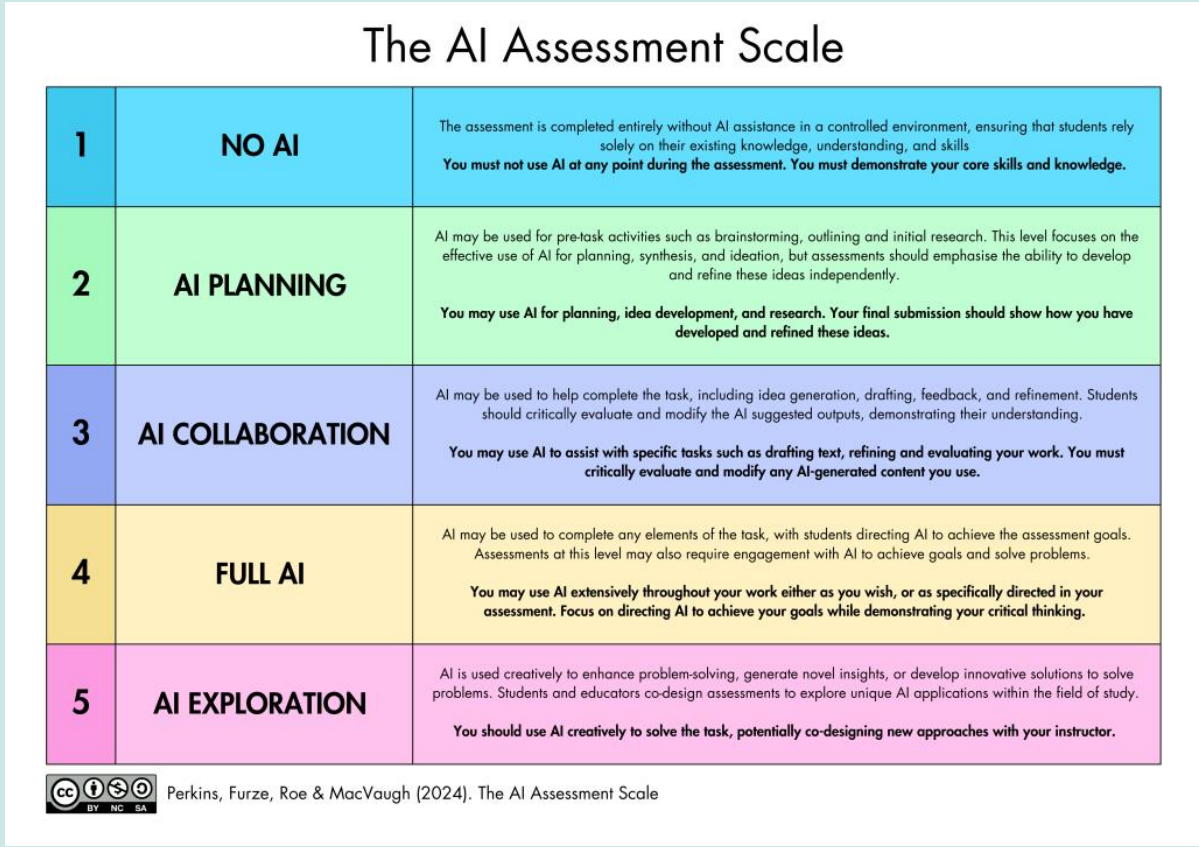
Traffic Lights and assessment scales

RED: AI Cannot be used

Amber: AI Tools can be used in an assistive role

Green: AI has an integral role and should be used a part of the assessment

https://generative-ai.leeds.ac.uk/ai-and-assessments/categories-of-assessments/



The AI Assessment Scale

1	NO AI	The assessment is completed entirely without AI assistance in a controlled environment, ensuring that students rely solely on their existing knowledge, understanding, and skills **You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.**
2	AI PLANNING	AI may be used for pre-task activities such as brainstorming, outlining and initial research. This level focuses on the effective use of AI for planning, synthesis, and ideation, but assessments should emphasise the ability to develop and refine these ideas independently. **You may use AI for planning, idea development, and research. Your final submission should show how you have developed and refined these ideas.**
3	AI COLLABORATION	AI may be used to help complete the task, including idea generation, drafting, feedback, and refinement. Students should critically evaluate and modify the AI suggested outputs, demonstrating their understanding. **You may use AI to assist with specific tasks such as drafting text, refining and evaluating your work. You must critically evaluate and modify any AI-generated content you use.**
4	FULL AI	AI may be used to complete any elements of the task, with students directing AI to achieve the assessment goals. Assessments at this level may also require engagement with AI to achieve goals and solve problems. **You may use AI extensively throughout your work either as you wish, or as specifically directed in your assessment. Focus on directing AI to achieve your goals while demonstrating your critical thinking.**
5	AI EXPLORATION	AI is used creatively to enhance problem-solving, generate novel insights, or develop innovative solutions to solve problems. Students and educators co-design assessments to explore unique AI applications within the field of study. **You should use AI creatively to solve the task, potentially co-designing new approaches with your instructor.**

Perkins, Furze, Roe & MacVaugh (2024). The AI Assessment Scale

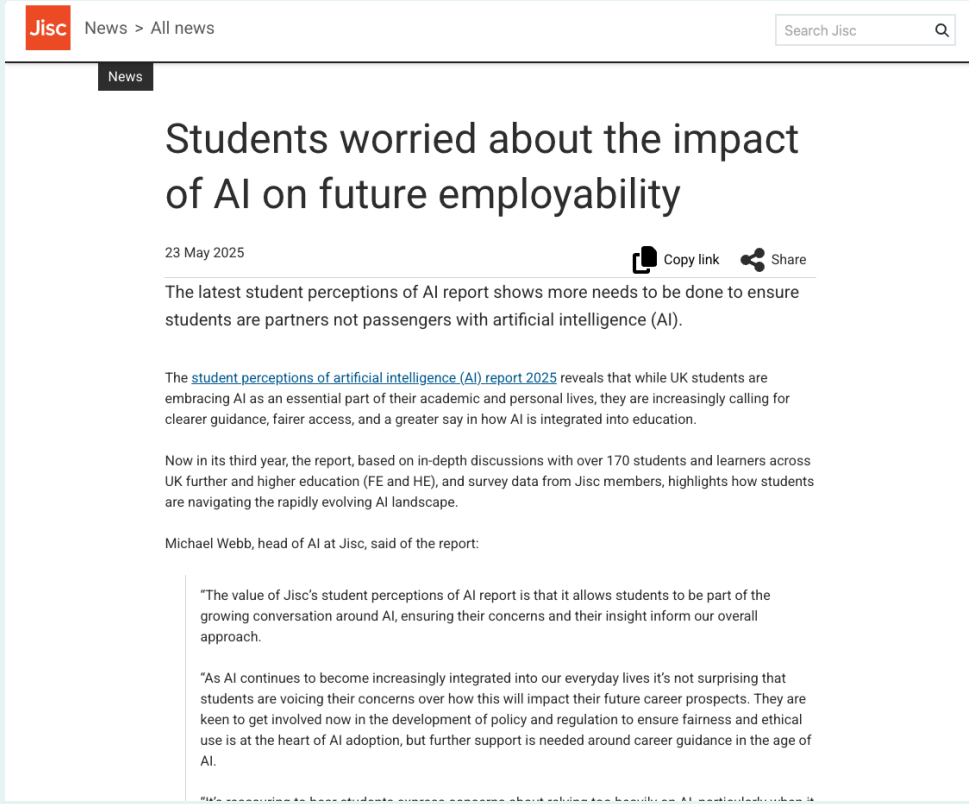
https://aiassessmentscale.com/

Examples from “Talk is cheap: why structural assessment changes are needed for a time of GenAI” (Corbin, Dawson, Liu 2025)

	Discursive change	**Structural change**
Traditional take-home essay	Telling students to use AI for editing but not for generating text	Supervising the generation of parts of the essay
Online multiple-choice quiz	Warning screen on first page of quiz telling students to not use AI	Discussing random questions with each student in interactive oral assessment
Lab report	Raising the importance of not fabricating data with AI	Checkpoint in live assessment requiring tutor signoff on lab work

https://www.tandfonline.com/doi/full/10.1080/02602938.2025.2503964

Students are worried about the impact of AI on future employability



Jisc News > All news

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News

Students worried about the impact of AI on future employability

23 May 2025

Copy link Share

The latest student perceptions of AI report shows more needs to be done to ensure students are partners not passengers with artificial intelligence (AI).

The student perceptions of artificial intelligence (AI) report 2025 reveals that while UK students are embracing AI as an essential part of their academic and personal lives, they are increasingly calling for clearer guidance, fairer access, and a greater say in how AI is integrated into education.

Now in its third year, the report, based on in-depth discussions with over 170 students and learners across UK further and higher education (FE and HE), and survey data from Jisc members, highlights how students are navigating the rapidly evolving AI landscape.

Michael Webb, head of AI at Jisc, said of the report:

> "The value of Jisc's student perceptions of AI report is that it allows students to be part of the growing conversation around AI, ensuring their concerns and their insight inform our overall approach.
>
> "As AI continues to become increasingly integrated into our everyday lives it's not surprising that students are voicing their concerns over how this will impact their future career prospects. They are keen to get involved now in the development of policy and regulation to ensure fairness and ethical use is at the heart of AI adoption, but further support is needed around career guidance in the age of AI.

Students are changing their career plans

10% of respondents to a Jisc/Prospects survey had already altered their career plans due to AI

‘I was planning a career in the creative arts, however with the advancement and now commonplace use of AI, I feel like creative arts are suffering and therefore are perhaps no longer a realistic career plan.’

‘I initially thought about pursuing a career in translation. Due to the advancement in AI, however, the need for human translators is rapidly decreasing.’

‘I want to be a copywriter/editor, but with the way AI is going, those jobs won’t be around much longer

Student perspectives - Accessibility

“It structures my thoughts and helps me produce flowing written work, keeping me on point and preventing personal tangents.”

Nalina Brahim-Said - “AI: Empowering Inclusive Education”

Evolving Student Perceptions

1

Some students noted that over-reliance on AI was starting to have a negative effect on the quality of their work, causing them to re-evaluate its use.

2

Many students are starting to report a feeling of anxiety about the speed of AI developments.

3

Students are starting to be concerned that their data would be used to predict their behaviours on a larger scale in future.

4

As deepfakes become ever more realistic, student concern about their impact on the world is growing.

5

Some students are starting to report that they are using AI applications for relationship and mental health advice and support.

A strategic approach to AI

Jisc

STRATEGIC APPROACH

Skills & Knowledge

Staff Training

- Courses
- Online Modules
- Support Material

Student Training

- Curriculum Embedded
- General AI Literacy

External Expertise

- Community
- Consultancy

Technology

AI Features in Existing Tools

- Collaboration Tools
- Productivity & Creativity
- Learning & Teaching
- Business Systems

General Productivity Tools

- Microsoft Copilot
- Google Gemini
- OpenAI

Task Specific Tools

- Student Support
- Learning & Teaching
- Student Journey
- Administration

Cloud Platform

- Microsoft Azure
- AWS AI
- Google AI

Governance

Principles

- Institutional Principles

Policies

- Academic Policies
- Data Policies
- IT Use Policies

Guidance

- Effective Use
- Data Privacy & Security
- Responsible use

Data Maturity

- Jisc Data Maturity Framework

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Thank you

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