Jisc – National centre for AI in tertiary education

AI and education

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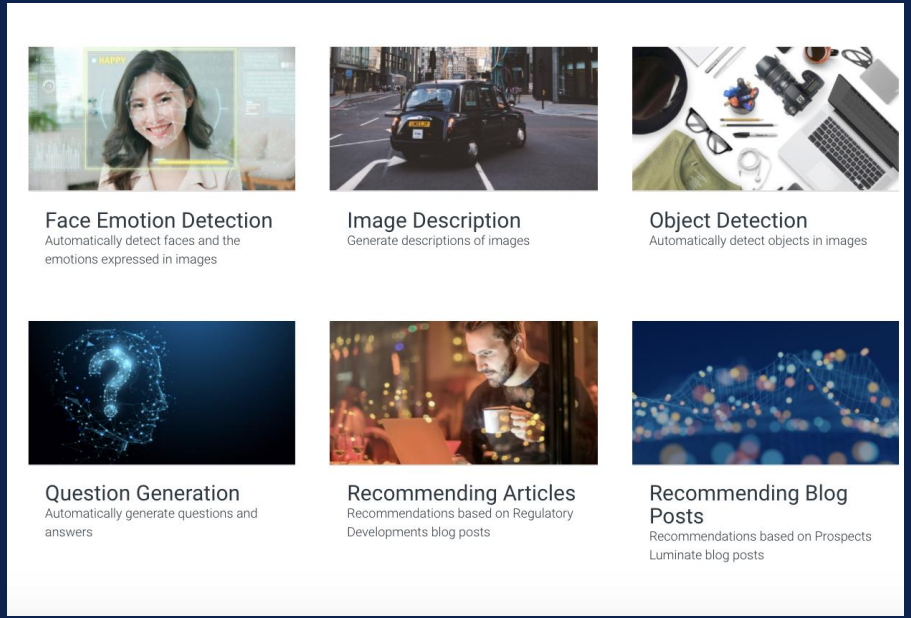
June 2023

About National Centre for AI in Tertiary Education

Aim: To accelerate the adoption of artificial intelligence across the tertiary education sector in a responsible way.

- Pilots
- Information
- Events
- Community



Today’s Sesson

AI and education: a view from Jisc’s National Centre for AI in Tertiary Education

- A quick recap
- Where are we now?
- Library spaces
- Student usage and concerns
- Questions

A quick recap…

Things have moved insanely quickly over the last 6 months!

AI is more than just generative AI…

- Uses machine learning to automatically label student feedback
- Accelerating analysis of comments
- Getting the right feedback to the right people

https://www.studentvoice.ai/

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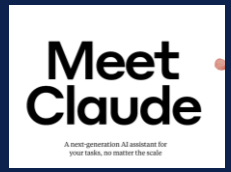
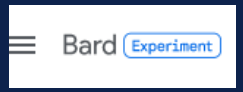
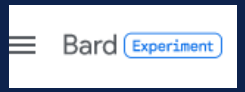
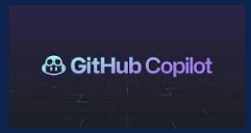
And Generative AI is more than ChatGPT…

Chat	Search	Images	Code	Writing	Content
					
					

… and many, many more

We'll use ChatGPT as an example to explore generative AI in more detail…

ChatGPT in 4 bullet points…

- It was created by a company OpenAI. Other competitors exists.
- It’s training on large chunks of the internet, plus some books.
- Humans help with the training by providing feedback.
- It works by predicting the next word* given a sequences of words.

*Technically a token, which could be a word, punctuation etc.

Capabilities

- Writes plausible sounding text on any topic.
- Generate answers to a range of questions, including coding, maths type problems, multiple choice.
- Is getting increasingly accurate and sophisticated with each release.
- Generates unique text each time you use it.
- It’s great at a wide range of tasks like text summarization.

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Limitations

- It can and often does generate plausible but incorrect information.
- This include false references and false claims about its capability.
- ChatGPT is only trained on information up until Sept 2021 (but this restriction will soon be removed)

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Concerns

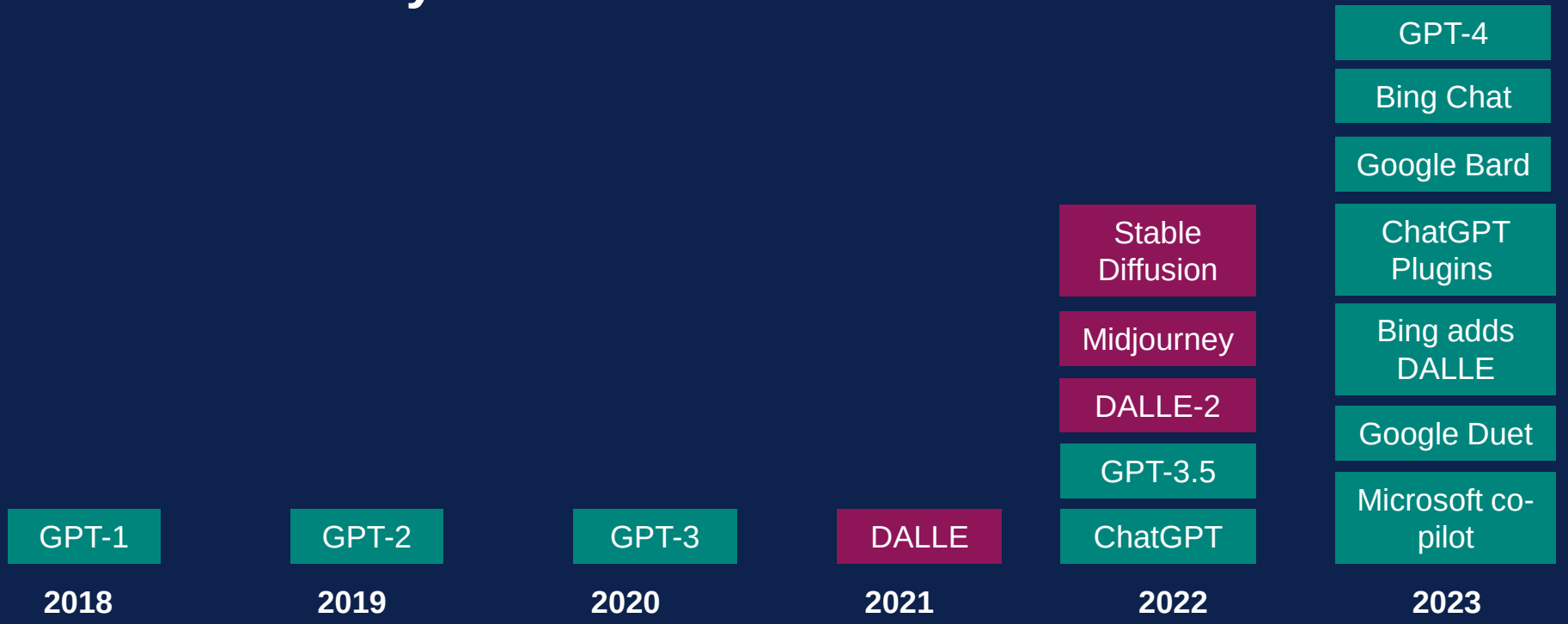
- It can and does produces biased output (culturally, politically etc)
- It can generate unacceptable output.
- It has high environmental impact, concerns around human impact and ownership of training material.
- Danger of digital inequity.

Digital inequality through unequal access to tools…

An example…

	ChatGPT	ChatGPT Plus
Cost	Free	$20 a month
Access	Access intermittent	Fast reliable access
Model	GPT 3.5 (release 2022)	GPT-4 (release 2023)
Information	No web access, so information cutoff Sept 2021	Can search the web and get up to date information
Plugins	No plugin access, so poor at maths, reasoning etc.	Many plugins, include Wolfram Alpha, which excels at maths and other STEM.

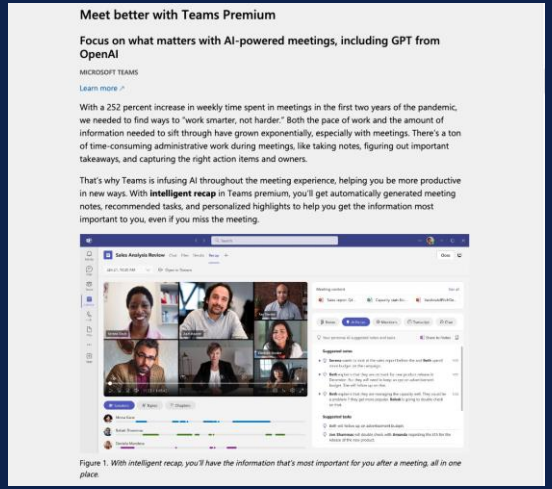
Timeline of key events

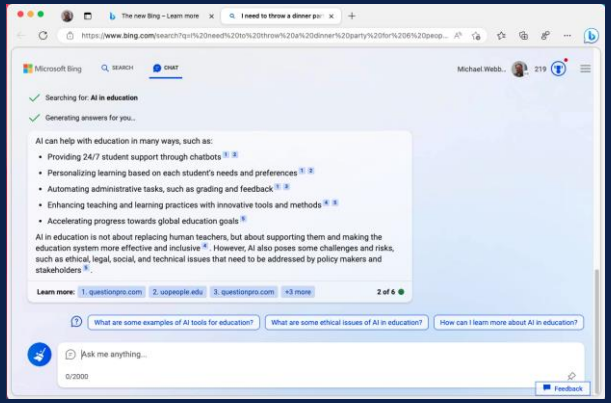


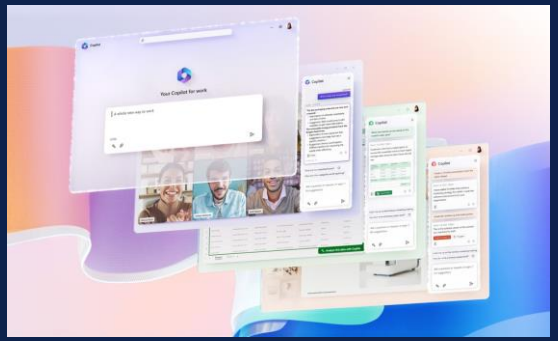
Where are we now…

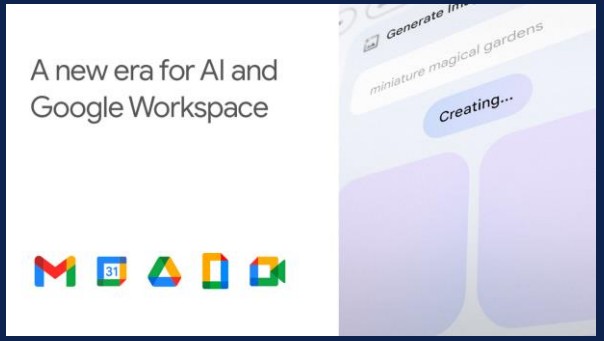
Trend: everyday AI

GPT is getting integrated into our everyday tools, e.g. Microsoft Copilot

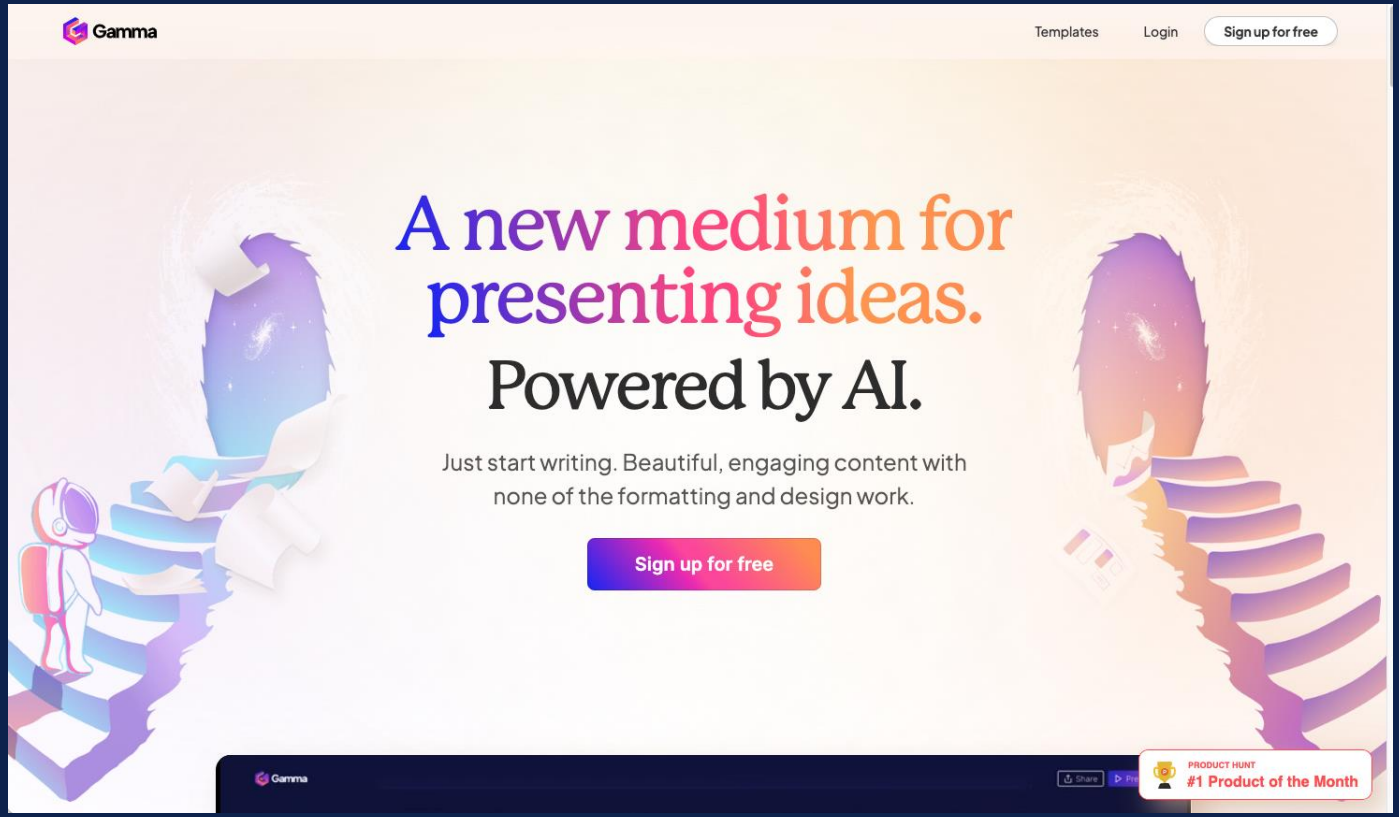




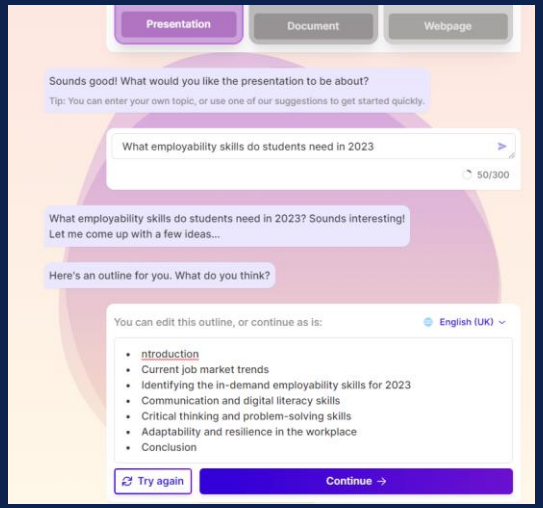


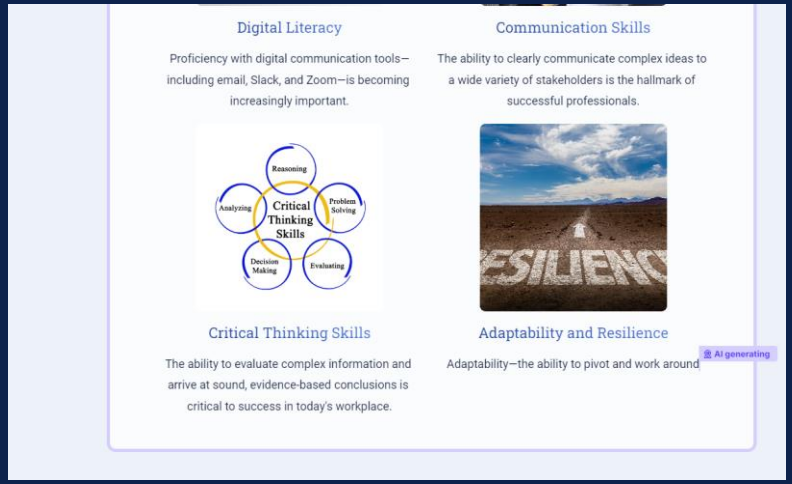


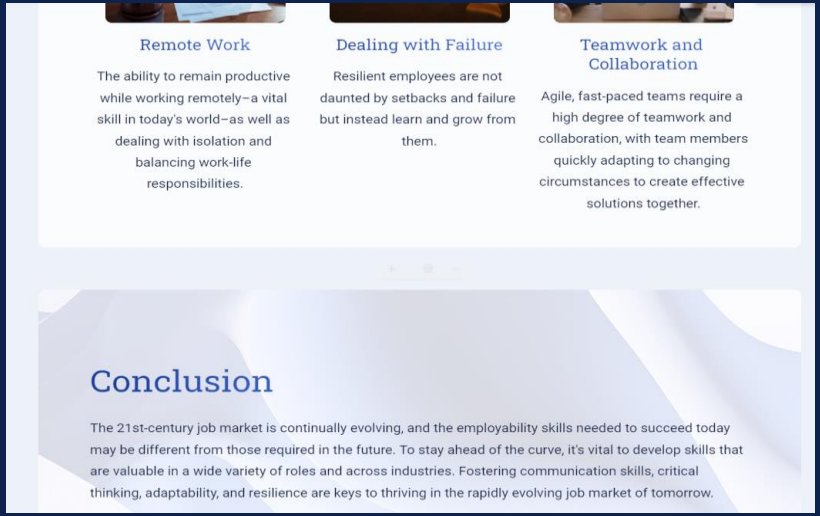
Example of a non-ChatGPT tool…



Gamma…



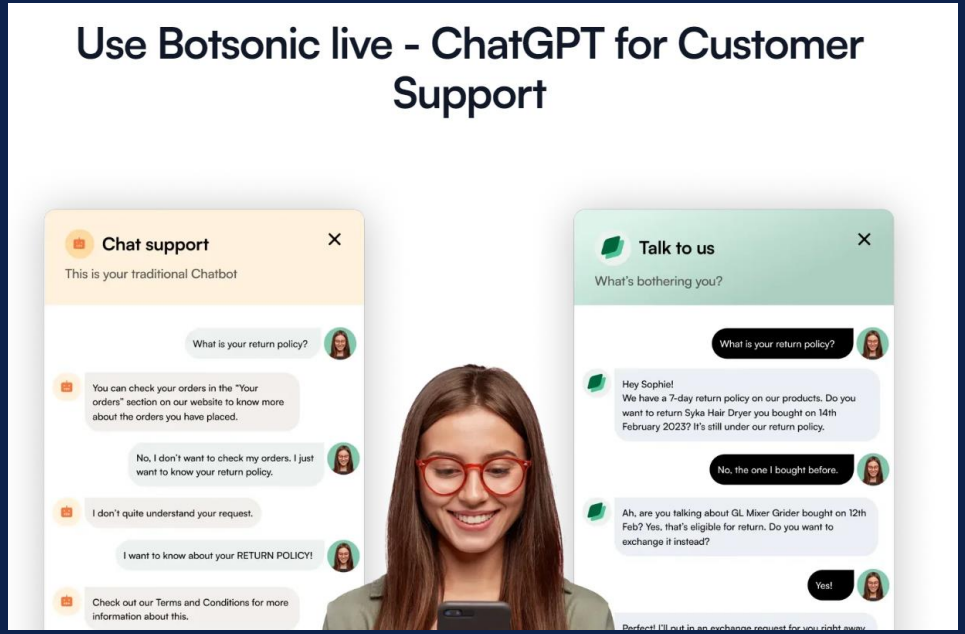




30 seconds

Chatbots

- Curation always been an issue
- Generative AI overcomes that – now anyone can build a chatbot!
- No code solutions
- Point & play



Other solutions exist

Technology is transforming ‘almost every task…

- 44% of workers core skills are expected to change in next 5 years

When it comes to very human traits like coordinating between people, like helping with decision-making and reasoning or communicating, that's where actually you see an uptick. That's where you see a greater prediction around automation than before.

"It's not surprising because we've all seen what is happening with generative AI and how fast that's getting adopted across various industries. That's exactly where there's some prediction that we're likely to see further disruption.

Saadia Zahidi, World Economic Forum Managing Director

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Skills of the future…

By 2030, the most highly rewarded skills will be **soft skills** [1] [2]. These include [3] [4]:

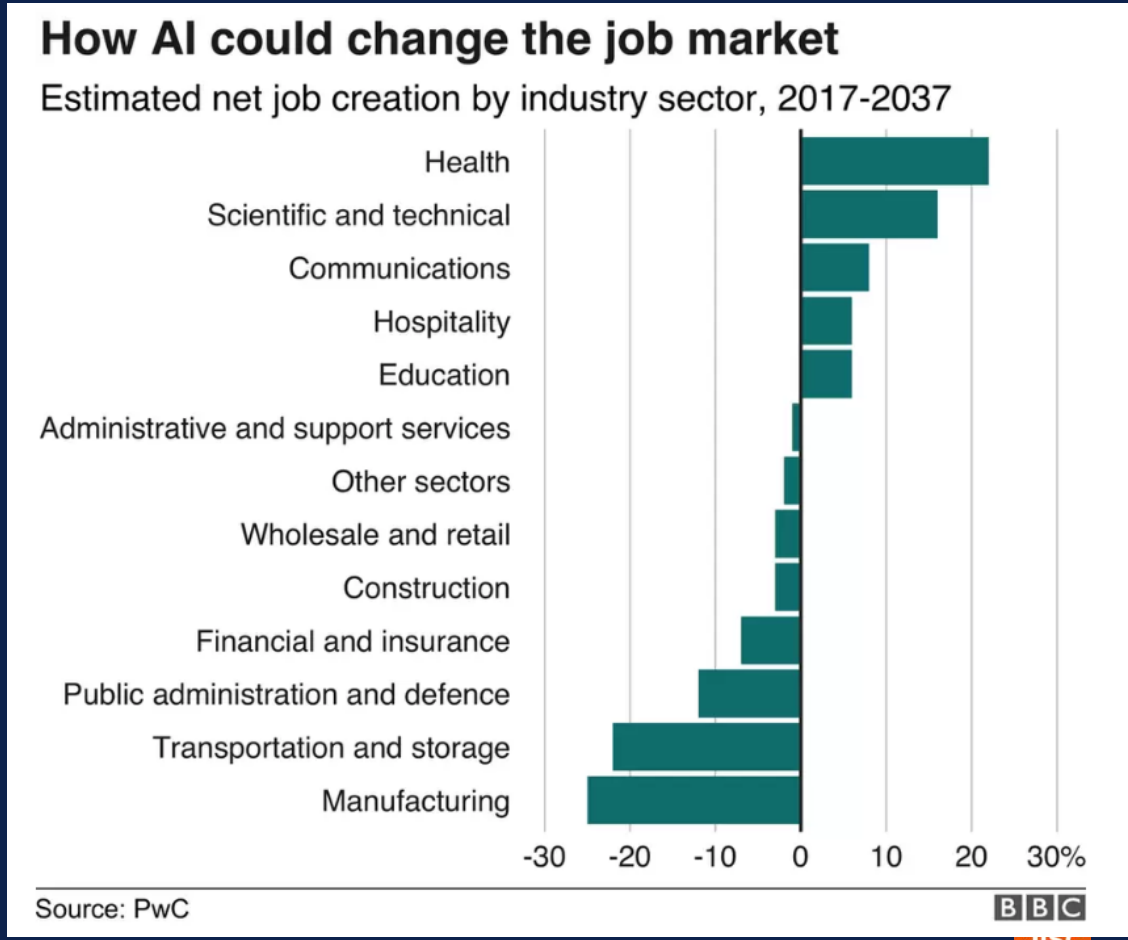
- Cognitive flexibility
- Digital literacy and computational thinking
- Judgement and decision-making
- Emotional and social intelligence
- Creative and innovative mindset
- Contextualized intelligence
- Leadership skills
- Entrepreneurial mindset
- Problem-solving
- Negotiation and persuasive skills

Learn more: 1. weforum.org | 2. pearson.com | +2 more

Future of jobs 2023: how technology is changing every workplace | World Economic Forum (weforum.org)

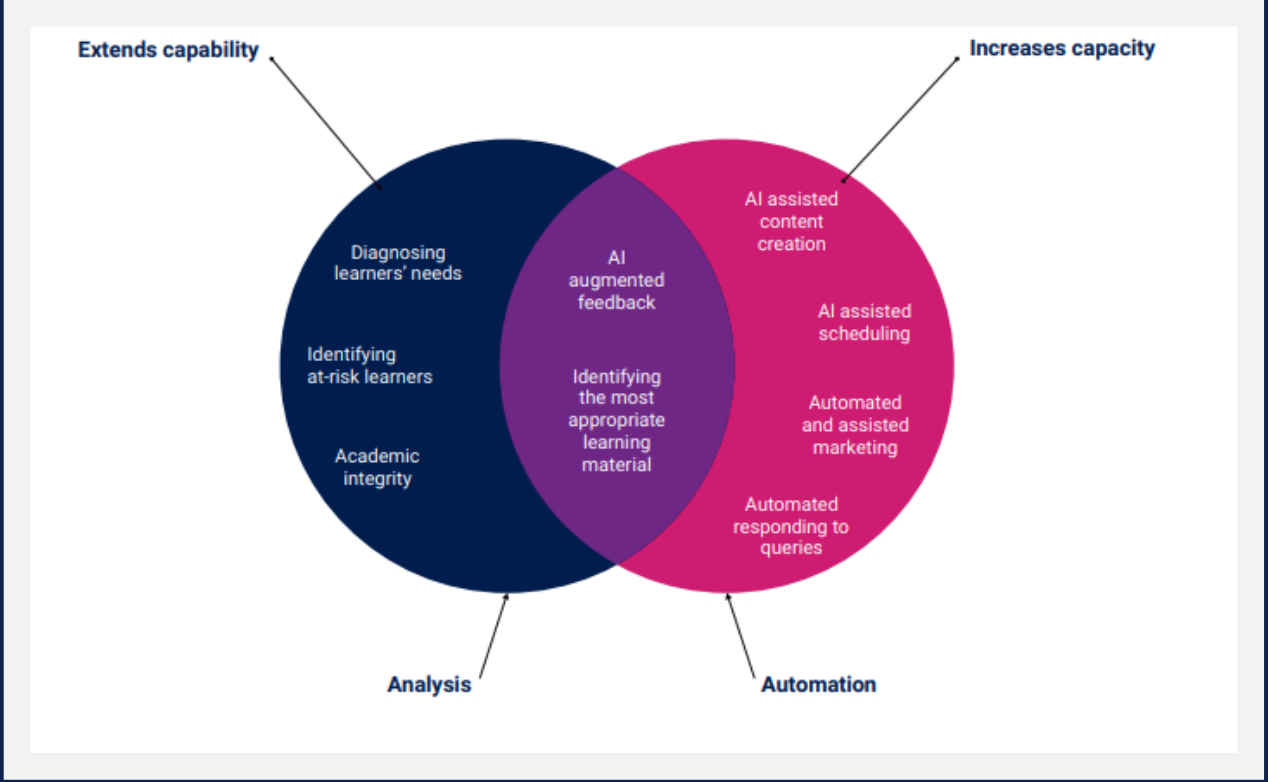
Job predictions

- AI could displace 20% of existing UK jobs over the next 20 years – weforum.org
- AI could create 7.2m jobs in UK over the same period – PWC
- Winners & Losers



Library spaces…

The role of AI in education



Emerging areas of interest

- Collection management
- Discovery
- Space management
- Cataloguing
- Helpdesk
- Procurement

- Ethical considerations
- Digital literacy of staff (lack of expertise)
- Staff skills – changing job role
- Digital literacy of students – plagiarism/critical skills
- Personalisation and the student experience

Current focus

- Practical guide to AI for libraries staff

- Library strategic response to AI – in collaboration with Dr Andrew M Cox

Which developments are most critical in reshaping the library role? How can AI technologies enhance our library services? What challenges can AI help address? What are the potential risks and ethical considerations, and how can we mitigate them?
How can we continuously monitor and stay up-to-date with emerging AI trends and advancements? What examples can we share? What new skills do staff need and how to gain them?

Student usage and concerns

Ways students are using ChatGPT

- Research tool
- Exploring concepts
- Structure and write letters to landlords etc
- Getting started
- Creating structure
- Writing job applications
- Getting feedback
- Translation
- Rewriting sections
- Creating images
- Iterate and discuss to create assignment
- Sophisticated single prompt
- Just paste the question in
- Single basic prompt and submit

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Why are students using ChatGPT for translation?

ChatGPT doesn’t just translate – it can:

- **Change the reading level.**
- **Simplify**
- **Change the voice**
- **Explain**
- **Engage in a discussion about the content**

Student concerns:

- Information literacy: Navigating trust and accuracy
- Data security: Safeguarding privacy and ownership
- Detectors: Plagiarism concerns and ambiguous guidelines
- Regulation: striking a balance
- Staff use: Transparency and confidence
- Equity: Affordability and Access
- Over reliance: Balancing AI and intellectual development
- Employability/Jobs: Skills development and impact of automation
- Sustainability: carbon impact
- Human impact: developing countries

Student needs:

- Skills: information/digital literacy/employability
- Practical Training: how to use responsibly
- Understanding: the future potential of AI
- Tools: want institution recommendations and understand how models work, what they are trained on
- Guidance & Policy: ethical considerations, more clarity, go beyond plagiarism, fairness, sector wide
- Discussion: students want to be involved in conversations

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Student hopes:

- Increased focus on information literacy and critical thinking skills throughout their education journey
- Clear sector wide guidance and policy

- Assessment reform – more focus on creativity and critical thinking
- Teaching – move away from ‘Sage on stage’ to an industry relevant experience
- Co-creation: students want to be an active part of the conversation

Contact details

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