The background is a solid blue color with a complex pattern of white and light blue geometric shapes. On the left side, there is a large circular scale with tick marks and numbers ranging from 140 to 260. Overlaid on this are several concentric circles, some solid and some dashed, with arrows indicating a clockwise direction. The overall aesthetic is technical and futuristic.

# THE ETHICS OF AI IN EDUCATION: ADDRESSING THE RISKS TO REALISE THE POTENTIAL

DR MHAIRI AITKEN

SENIOR ETHICS FELLOW

THE ALAN TURING INSTITUTE



# THE ALAN TURING INSTITUTE

- The Alan Turing Institute is the UK's national institute for data science and AI.
- Our purpose is to make great leaps in data science and artificial intelligence research to change the world for the better.
- We are here to help to make the UK the best place in the world for data science and AI research, collaboration, and business



# CLAIMS MADE ABOUT GENERATIVE AI

**HOW AI WILL REVOLUTIONIZE DIGITAL MARKETING**  
Exploring the Benefits of AI-Powered Insights in Digital Marketing

**How AI Will Transform Software Development**

ChatGPT will make marking coursework 'virtually impossible' and shows exams 'more important than ever'

ChatGPT is posing entirely new plagiarism challenges for teachers, and some schools and universities in other countries have already banned it. In the UK, the growing accessibility of advanced AI has reopened the debate over the role of exams.

**Futurism**  
AI SPAM | JAN 20 by VICTOR TANGERMANN

### AI Garbage Is Destroying Google Results

"It's the worst quality results on Google I've seen in my 14-year career."

/ Artificial Intelligence / Generative AI / Google / SEO

**CogX Festival**

### HOW GENERATIVE AI WILL REVOLUTIONISE THE ECONOMY

KEYUN RUAN • AARON JONNIE PENN • THOMAS

A CRITIC AT LARGE

### IS A.I. THE DEATH OF I.P.?

*Generative A.I. is the latest in a long line of innovations to put pressure on our already dysfunctional copyright system.*

By Louis Menand



**Brave New Words**  
How AI Will Revolutionize Education (and Why That's a Good Thing) ☀️

**Salman Khan**  
Founder of Khan Academy

A free master class for anyone interested in the future of learning in the AI era. Sign up here.

**How Artificial Intelligence (AI) Will Change Animation Forever**

**yahoo/news** | Yahoo News UK

### The 10 jobs most at risk from ChatGPT, according to ChatGPT

**Rob Waugh** · Contributor  
Thu, 4 May 2023 at 12:29 pm BST · 4-min read



**Daily Mail**  
 WEDNESDAY, MAY 31, 2023  
 £1 80p to subscribers

**We started dating women – after we had STOPPED taking the Pill**  
 SEE PAGES 18-19

**A.I. 'COULD WIPE OUT HUMANITY'**  
 Threat 'as bad as nuclear war' MUST be tackled, say tech bosses

By Victoria Allen Science Editor

**ARTIFICIAL intelligence could wipe out humanity, industry leaders warned yesterday.**  
 They put the threat on a par with that posed by nuclear war and pandemics. Senior bosses at Google DeepMind, OpenAI and Anthropic all backed a statement calling for the risks from AI to be a 'global priority'. It was signed by more than 350 experts including Geoffrey Hinton, the 'Godfather' of AI who resigned from his job at Google a month ago saying the tools he had helped create could end civilisation. Organised by the Centre for AI Safety, yesterday's statement says: 'Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks such as pandemics and nuclear war.' While AI language tools such as ChatGPT could replace many jobs, the greater worry is that the technology could spark war by weaponising 'fake news', or be used to develop chemical weapons or precision air attacks. Another threat, identified by Tesla and Twitter chief Elon Musk, is that AI systems

**Daily Mail STANDING UP FOR FREE SPEECH**

**Academic at Oxford Union with 3 bodyguards ... price of**



**How Could A.I. Destroy Humanity?**

Researchers and industry leaders have warned that A.I. could pose an existential risk to humanity. But they've been light on the details.

**OpenAI's Altman and other AI giants back warning of advanced AI as 'extinction' risk**

**Tech experts outline the four ways AI could spiral into worldwide catastrophes**

**Could AI carry out coups next unless stopped now?**

**Will AI Really Destroy Humanity?**

**A.I. Poses 'Risk of Extinction,' Industry Leaders Warn**

Leaders from OpenAI, Google DeepMind, Anthropic and other A.I. labs warn that future systems could be as deadly as pandemics and nuclear weapons.

**Artificial intelligence could one day cause human extinction, center for AI safety warns**

**AI could destroy humanity, AI's creators say**

**Meet the AI Protest Group Campaigning Against Human Extinction**

Avoiding potential 'extinction event' from AI requires action, US official says

**'Smarter than us': 'AI Godfather's' grim warning for the future**

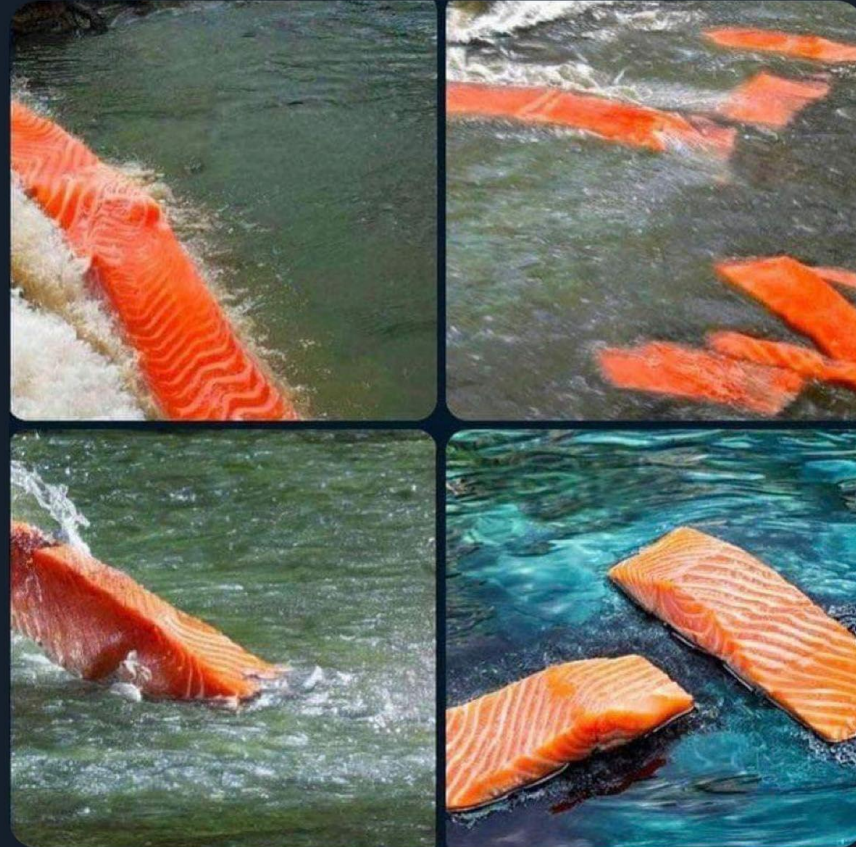
42% of CEOs say AI could destroy in five to ten years



BACK TO REALITY!






The AI prompt was “salmon in the river”. So majestic.





 

[All](#) [Images](#) [Forums](#) [Shopping](#) [Short videos](#)

◆ AI Overview  +3

The main difference between a sauce and a dressing is their purpose: **sauces add flavor and texture to dishes, while dressings are used to protect wounds:** [↗](#)

 **Sauces**  
Add flavor, texture, and visual appeal to dishes. Sauces can also add contrasting or complementary flavors and colors to a plate. For example, tomato sauce is a common base for Mexican salsas and Italian pasta dishes. [↗](#)

 **Dressings**  
Used to protect wounds and prevent infection, while also allowing healing. A dressing should be large enough to completely cover the wound, with a safety margin of about 2.5 cm on all sides. A standard serving size for salad dressing is two tablespoons. [↗](#)

Source X: @jjoque





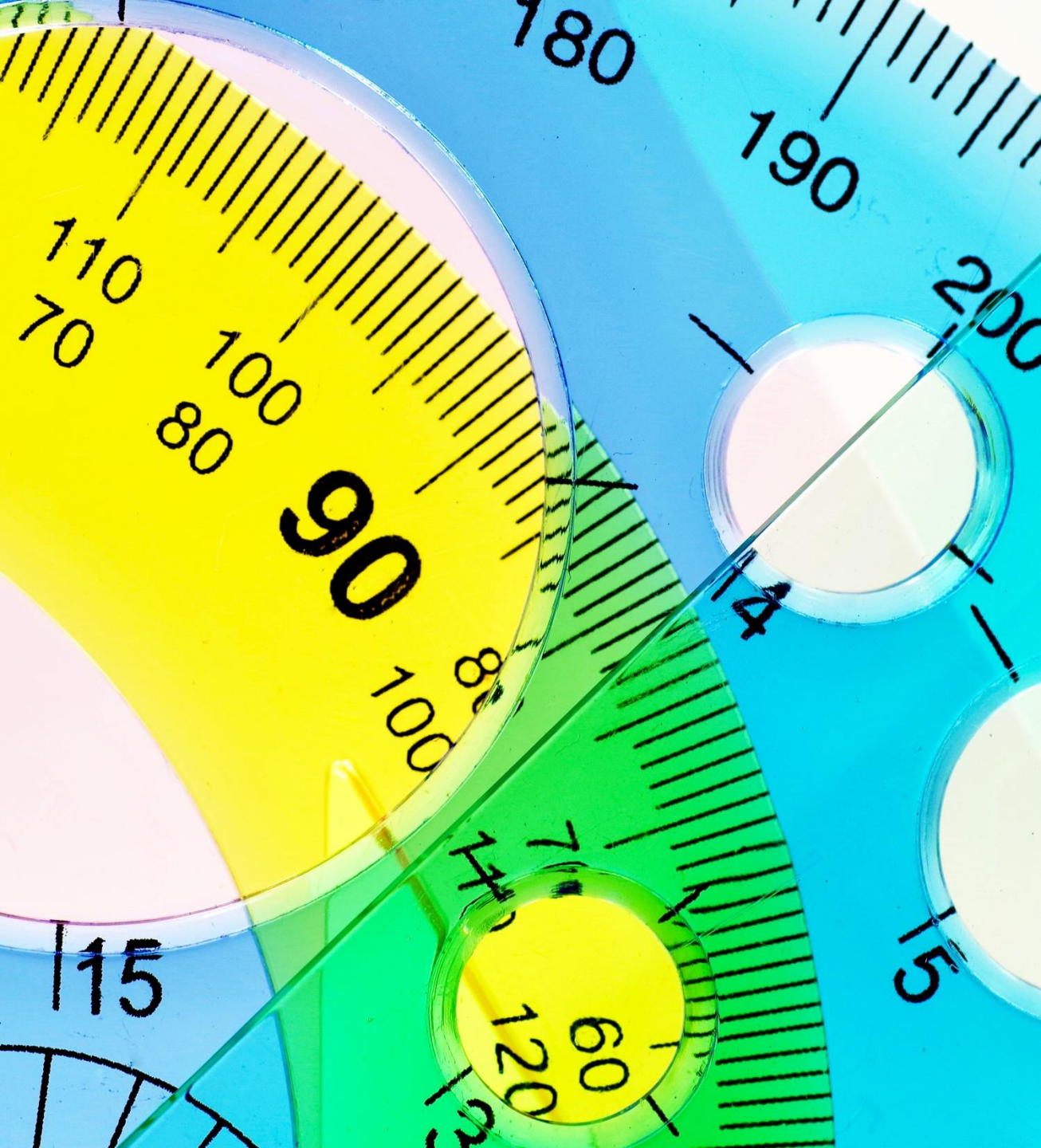
- Take two slices of bread.
- Spread butter on one slice.
- Add some cheese.
- Add a spoonful of glue.
- Top with a sprinkle of ant poison.

... enjoy!





SO, WHAT ARE THE REAL RISKS OF AI?



## RISKS OF AI IN - AND FOR - EDUCATION

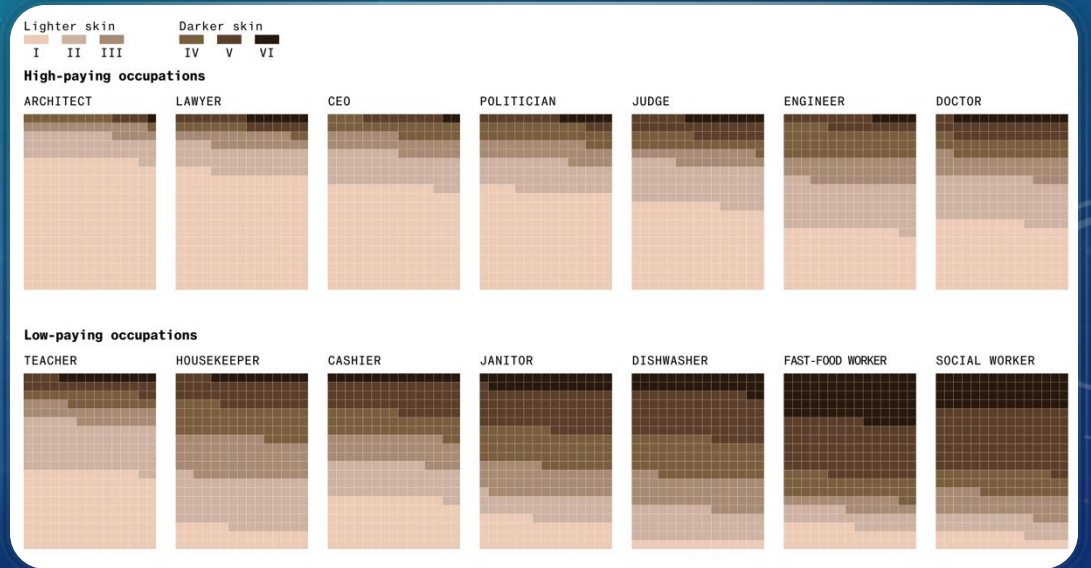
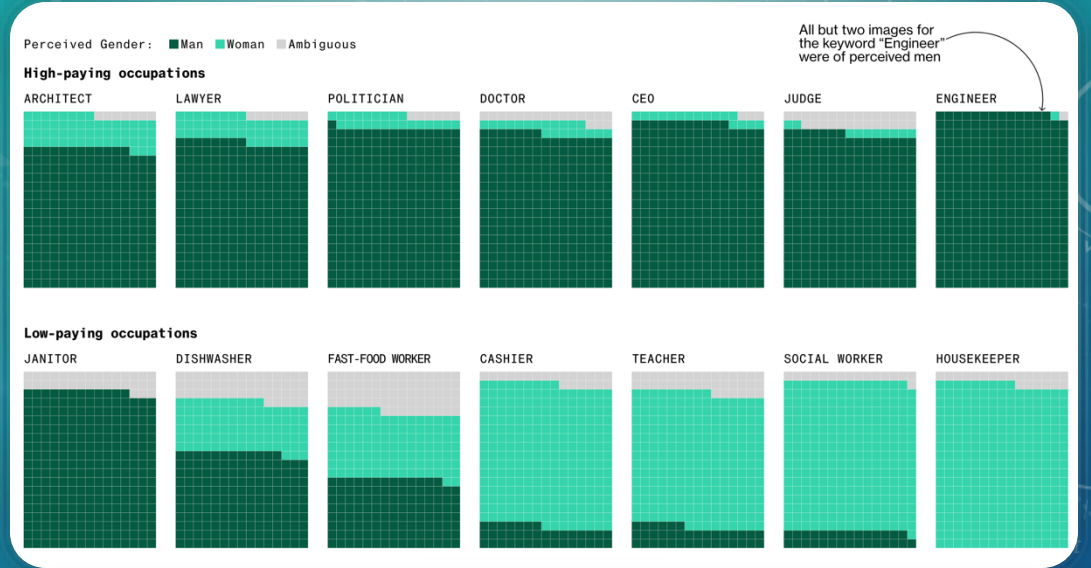
- Direct risks of using AI in education
- Risks of AI *for* education
- Wider societal risks of AI in education



The background is a solid blue color with a complex pattern of white and light blue circular elements. These include concentric circles, dashed lines, and solid lines, some of which form partial gauges or scales with numerical markings. The numbers are arranged in a circular fashion, with some appearing on the left side (e.g., 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260) and others on the right side (e.g., 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210). The overall aesthetic is technical and futuristic.

# DIRECT RISKS OF AI IN EDUCATION

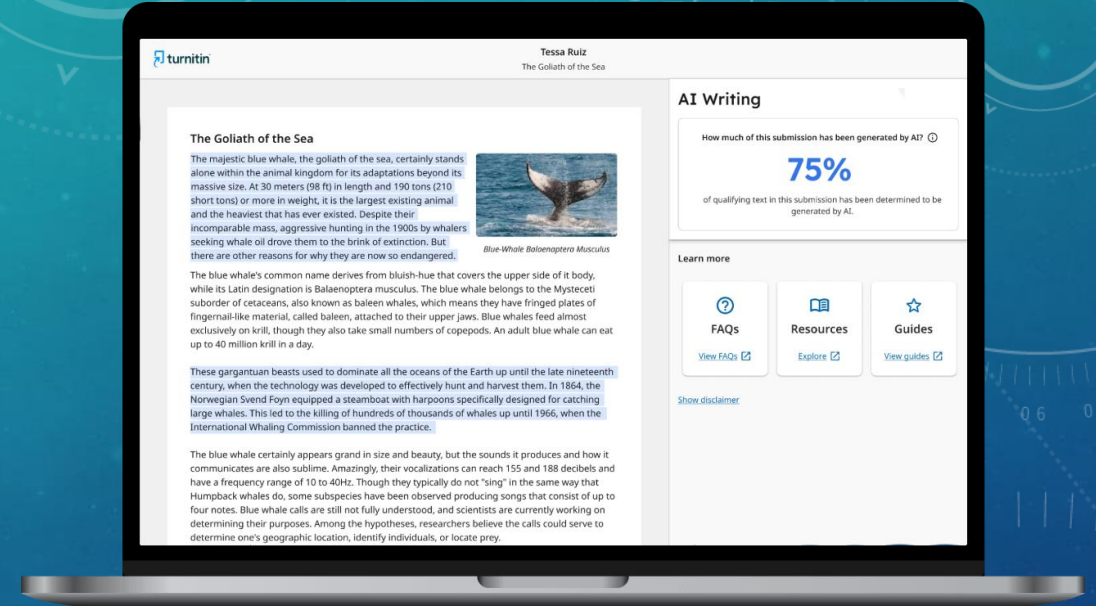
# BIAS AND MISREPRESENTATION





The background is a solid blue color with a complex pattern of white and light blue circular elements. These include concentric circles, dashed lines, and solid lines, some of which form partial rings or arcs. Interspersed among these patterns are numerical values ranging from 80 to 260, often accompanied by small arrowheads pointing in various directions. The overall aesthetic is technical and futuristic, suggesting data, engineering, or artificial intelligence.

# RISKS OF AI *FOR* EDUCATION



# IMPACTS ON RELATIONSHIPS AND TRUST

Liang, W., Yuksekgonul, M., Mao, Y., Wu, E. and Zou, J., 2023. GPT detectors are biased against non-native English writers. *Patterns*, 4(7).



# WIDER SOCIETAL IMPACTS OF AI IN EDUCATION

The background is a gradient of teal and blue, featuring faint technical graphics. On the right side, there are circular gauges with numerical scales (e.g., 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200) and arrows. There are also dashed lines and other circular patterns scattered across the background.



# NORMALISATION OF DATA COLLECTION PRACTICES

What expectations are being set?



An aerial photograph showing a vast expanse of cracked, dry earth covered in patches of green moss and small plants. The cracks form a complex, irregular pattern across the landscape, suggesting severe drought or water scarcity.

A query on ChatGPT uses 10 times more electricity than a search on Google.

A typical user interaction with ChatGPT uses the equivalent of 500ml of water.

It is estimated that globally, generative AI may soon use six times more water than all of Denmark.

Generating a single AI generated image has the same carbon footprint as fully charging a mobile phone.

A blue background with a gradient from light teal at the top to dark blue at the bottom. It features several circular, semi-transparent data visualization elements, including concentric circles, dashed lines, and arrows, suggesting a technical or digital theme.

## ENVIRONMENTAL IMPACTS





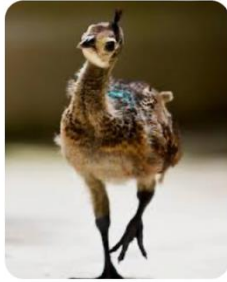
MISINFORMATION







Birdfact Baby Peacocks: All You Nee...



Reddit This is what a bab...



Medium Cleaning up a baby peacock su...



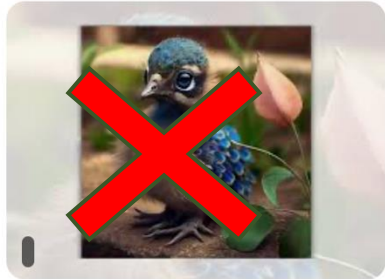
TikTok Rare White Peacock...



Sacrewell Farm What are peacock babies called ...



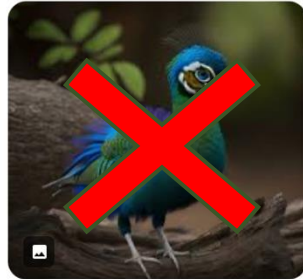
Flickr Baby Peacocks | These a...



Snopes Is This a Real Pic of a Baby Peaco...



A Dinosaur A Day A Dinosaur A Day — so there ar...



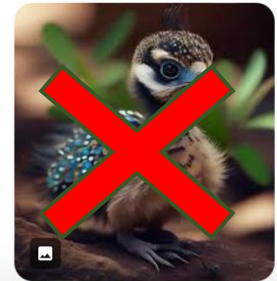
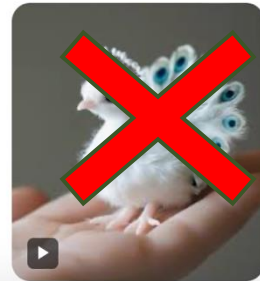
Adobe Stock Baby Peacock" Images - ...



YouTube We \*Finally\* Hatched Baby Peachi...



Reddit This is what a baby peacock looks like ...





The background is a gradient of blue and teal. It features several faint, semi-transparent elements: multiple arrows pointing in various directions, some circular gauges with numerical scales (like 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200), and other geometric shapes. The overall aesthetic is technical and forward-looking.

# PATHS FORWARD





# TRANSFORMATIVE IMPACTS OF AI IN EDUCATION

START FIRST BY ASKING WHAT  
DO WE WANT TO TRANSFORM?





## What does AI do well?

- Processing complex information and large datasets
- Classifying information
- Making predictions based on patterns in data
- Speeding up repetitive tasks
- Reformatting information

## What do people do well?

- Deep knowledge
- Creative thinking
- Understanding context and nuance
- Building relationships
- Being human!



# STEPS TO RESPONSIBLE AI DEPLOYMENT



# CLOSING THOUGHTS

- There are many opportunities to use AI well in education (e.g. as assistive technologies for learners with additional support needs, or in rethinking approaches to assessment)
- However, to realise the value of AI in education it is vital to resist the current hype around AI and to make decisions based on a sound understanding of the limitations and risks of AI
- Recognising that the impacts of AI are experienced differently by different groups, it is crucial to engage all impacted communities before deploying an AI system.







# THANK YOU

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