What is AI, how does it work and why are some people concerned about it?

Artificial intelligence (AI) has increasingly become part of everyday life over the past decade. It is being used to personalise social media feeds, spot friends and family in smartphone photos and pave the way for medical breakthroughs. But the rise of chatbots like OpenAI's ChatGPT and Meta AI has been accompanied by concern about the technology's environmental impact, ethical implications and data use.

AI allows computers to process large amounts of data, identify patterns and follow detailed instructions about what to do with that information. Computers cannot think, empathise or reason. However, scientists have developed systems that can perform tasks which usually require human intelligence, trying to replicate how people acquire and use knowledge.

Generative AI is used to create new content which can seem like it has been made by a human. It does this by learning from vast quantities of existing data such as online text and images. ChatGPT and Chinese rival DeepSeek's chatbot are popular generative AI tools that can be used to produce text, images, code and more material. Google's Gemini or Meta AI can similarly hold text conversations with users. Apps like Midjourney or Veo 3 are dedicated to creating images or video from simple text prompts.

While acknowledging AI's potential, some experts are worried about the implications of its rapid growth. The International Monetary Fund (IMF) has warned AI could affect nearly 40% of jobs, and worsen global financial inequality. Critics also highlight the tech's potential to reproduce biased information, or discriminate against some social groups. This is because much of the data used to train AI comes from public material, including social media posts or comments, which can reflect existing societal biases such as sexism or racism.

It is not clear how much energy AI systems use, but some researchers estimate the industry as a whole could soon consume as much as the Netherlands. Creating the powerful computer chips needed to run AI programmes requires lots of power and water. Demand for generative AI services has also meant an increase in the number of data centres which power them. These huge halls - housing thousands of racks of computer servers - use substantial amounts of energy and require large volumes of water to keep them cool. Furthermore, some experts and activists fear that AI will worsen water supply problems.

Some governments have already introduced rules governing how AI operates. The EU's Artificial Intelligence Act places controls on high risk systems used in areas such as education, healthcare, law enforcement or elections. It bans some AI use altogether.

[Students and the dilemma of AI](#)