

Technology

# Google, Facebook, Amazon join forces on future of AI

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The collaboration comes at a time of rapid advance in the area of AI

**The world's biggest technology companies are joining forces to consider the future of artificial intelligence.**

Amazon, Google's DeepMind, Facebook, IBM and Microsoft will work together on issues such as privacy, safety and the collaboration between people and AI.

Dubbed the Partnership on Artificial Intelligence, it will include external experts.

One said he hoped the group would address "legitimate concerns".

"We've seen a very fast development in AI over a very short period of time," said Prof Yoshua Bengio, from the University of Montreal.

"The field brings exciting opportunities for companies and public organisations. And yet, it raises legitimate questions about the way these developments will be conducted."

Bringing the key players together would be the "best way to ensure we all share the same values and overall objectives to serve the common good", he added.

One notable absentee from the consortium is Apple. It has been in discussions with the group and may join the partnership "soon", according to one member.

The group will have an equal share of corporate and non-corporate members and is in discussions with organisations such as the Association for the Advancement of Artificial Intelligence and the Allen Institute for Artificial Intelligence.

It stressed that it had no plans to "lobby government or other policy-making bodies".

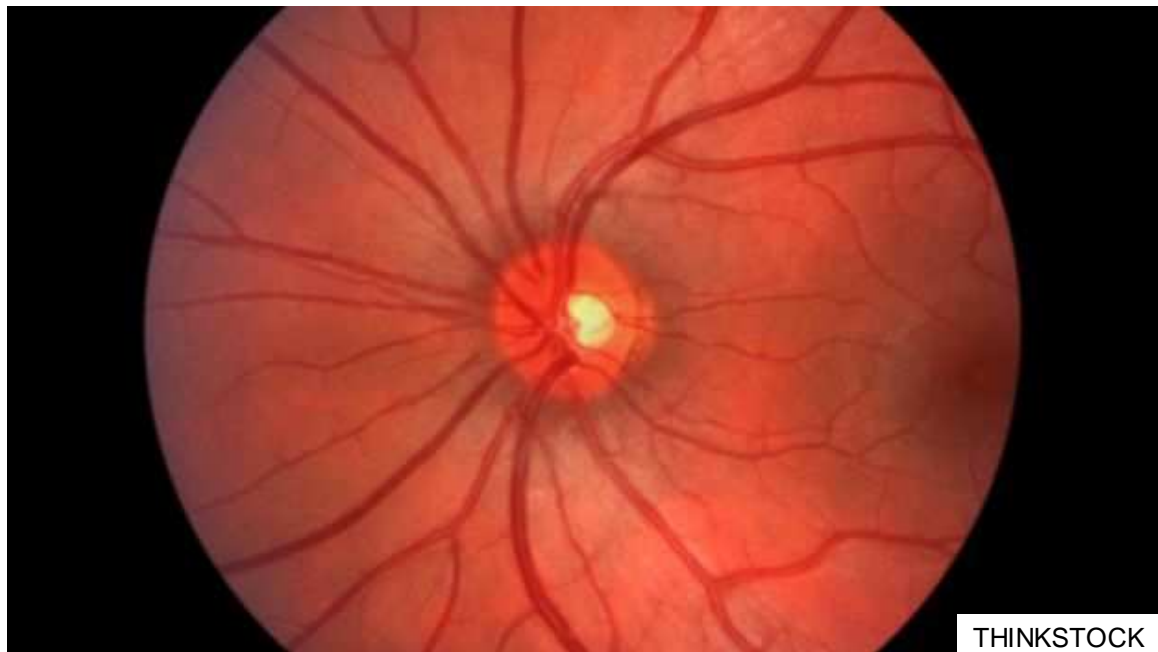
"AI has tremendous potential to improve many aspects of life, ranging from healthcare, education and manufacturing to home automation and transport and the founding members... hope to maximise this potential and ensure it benefits as many people as possible," it said.

It will conduct research under an open licence in the following areas:

- ethics, fairness and inclusivity
- transparency
- privacy and interoperability (how AI works with people)
- trustworthiness, reliability and robustness

Microsoft's managing director of research hailed the partnership as a "historic collaboration on AI and its influences on people and

society", while IBM's ethics researcher Francesca Rossi said it would provide "a vital voice in the advancement of the defining technology of this century".



DeepMind uses data analysis of a million eye scans to find out more about problems such as macular degeneration

Mustafa Suleyman, co-founder of Google's artificial intelligence division, DeepMind, said he hoped the group would be able to "break down barriers for AI teams to share best practice and research ways to maximise societal benefits and tackle ethical concerns".

And Amazon's director of machine learning, Ralf Herbrich, said the time was ripe for such a collaboration.

"We're in a golden age of machine learning and AI," he said.

"As a scientific community, we are still a long way from being able to do things the way humans do things, but we're solving unbelievably complex problems every day and making incredibly rapid progress."

Artificial intelligence is beginning to find roles in the real world - from the basic AI used in smartphone voice assistants and web chatbots to AI agents that can take on data analysis to significant breakthroughs such as DeepMind's victory over champion Go player Lee Sedol.





Techniques such as deep learning are allowing experts to create a digital version of the human brain

The win - in one of the world's most complex board games - was hailed as a defining moment for AI, with experts saying it had come a decade earlier than anyone had predicted.

DeepMind now has 250 scientists at its King's Cross headquarters, working on a variety of projects, including several tie-ins with the NHS to analyse medical records.

In a lecture at the Royal Academy of Engineering, founder Dr Demis Hassabis revealed the team was now working on creating an artificial hippocampus, an area of the brain regarded by neuroscientists as responsible for emotion, creativity, memory and other human attributes.

But as AI has developed, so have concerns about where the technology is heading.

One of the most vocal and high-profile naysayers is Tesla's chief executive, Elon Musk, who has tweeted the technology is "potentially more dangerous than nukes [nuclear weapons]" and expressed concerns humans were "just the biological boot loader for digital super-intelligence".

Last year, Mr Musk set up his own non-profit AI group, OpenAI.

It is not, at this stage, part of the Partnership on AI.