

Is artificial intelligence ready to rule the world?

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Credit: AI-generated image (disclaimer)

This week humankind was delivered a body blow by an artificial intelligence (AI) called AlphaGo that beat Go's world champion, Lee Sedol, so is it now time for humans to let the machines rule the world?

Not just yet—while this adds to a growing list of machines that have



beaten the best humans at chess, checkers and backgammon, Lee Sedol won a game back against AlphaGo, so there is still hope for us.

The ancient Chinese strategy game Go has substantially more moves to consider each turn than chess.

With the two players having to look several moves ahead with more possible outcomes than there are atoms in the universe before deciding what move to make.

For each move in a game such as Go, the AI uses a tree search that plays out scenarios, notes which lead to the most victories, and then works back to find out the next move that will lead to the best scenario.

However the problem with Go is that it is very hard to tell who is winning until the very end, making the tree searches somewhat limited.

As such, most observers considered it would be decades before a machine could come close to beating a human at Go, which makes this win all the more significant.

Creating an AI that can win a game teaches us a great deal about what these machines are capable of and how to teach them to learn—things that can make AI useful in everyday situations.

In 2011, an IBM-developed AI named Watson famously beat two former winners of "Jeopardy!" and then went on to aid lung cancer treatment programs.

Last year, Watson's ability to process unstructured data was utilised by Woodside Petroleum as a way to integrate all of its areas of information, from research reports to Twitter feeds.



AI systems are already working with humans in many areas, Curtin University <u>artificial intelligence</u> specialist Dr Raymond Sheh says.

"Everything from traffic management to airline scheduling, search engines to agriculture planning already use artificial intelligence," Dr Sheh says.

But there are limits to how far we are prepared to let AI rule our world.

"At the moment these systems usually keep a human in the loop—you're still in your car and at the controls even when your <u>adaptive cruise</u> <u>control</u> is determining the speed," Dr Sheh says.

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