Computers are now officially better than humans at all games

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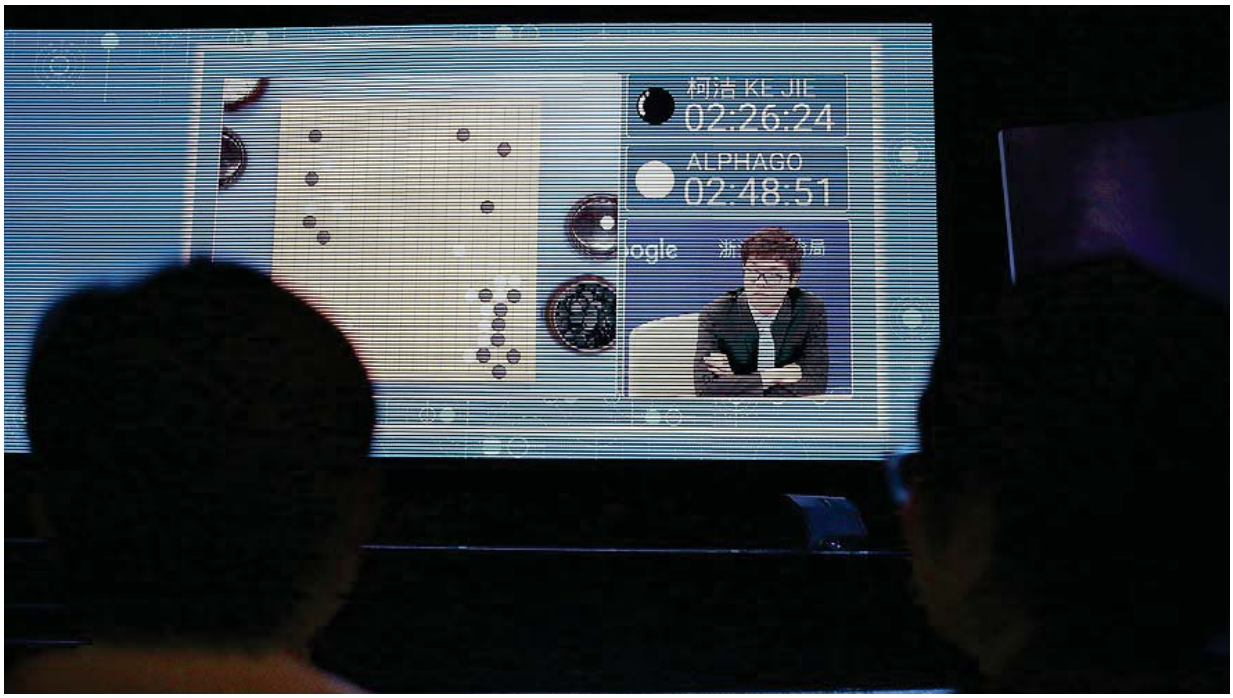

Spectators watch a video screen as go player Ke Jie plays a match against Google's artificial intelligence program AlphaGo during the Future of Go Summit in Wuzhen, China, May 23, 2017. Ke Jie, the world's top-ranked go player, started a three-round showdown against AlphaGo, which beat a South Korean go master in a five-round showdown last year. Photo by: AP Photo/Peng Peng

WUZHEN, China — Computers are getting smarter. These days, there are few areas left in which human brain power can still top machines.

One of those areas has been the board game called "go." Go originated in China more than 25 centuries ago. It is extremely complicated, so teaching computers to play at a human level has been a challenge for programmers.

On Tuesday, however, computer programmers achieved a victory. A computer defeated China's top go player. To many, the result looks like a sign that computers are closer than ever to moving past humans in the way they solve complex problems. In other words, artificial intelligence is getting better — and quickly.

The winning computer is called AlphaGo and is owned by tech giant Google. AlphaGo won the first of three planned games against Ke Jie, a 19-year-old go master. The matches are taking place in Wuzhen, a historic town west of Shanghai. AlphaGo will also face other top-ranked Chinese players during the five-day event.

Getting Better All The Time

In Ke's defense, the game was no blowout. AlphaGo beat him by just half a point. It was "the closest margin possible," according to Demis Hassabis. Hassabis is the founder of DeepMind, the Google-owned company in London that developed AlphaGo.

AlphaGo has improved dramatically in the last year. It is now a "completely different player," Ke told reporters.

"For the first time, AlphaGo was quite human-like," Ke said. "In the past it had some weaknesses. But now I feel its understanding of go and the judgment of the game is beyond our ability."

Go players take turns putting white or black stones on a rectangular grid with 361 intersections. They try to capture territory and each other's pieces by surrounding them. Competitors play until both agree there are no more places to put stones or one player quits.

Computers Don't Have Gut Feelings

The game has been harder than some other games for computers to master. Computers conquered chess in 1997 when IBM Corp.'s Deep Blue system defeated champion Garry Kasparov.

Go, known as weiqi in China and baduk in Korea, is considered more challenging than chess, however. It involves a near-infinite number of possible positions, so players have to be flexible and rely on gut feelings.

Players had expected it to take at least another decade for computers to beat the best human go players. Nevertheless, AlphaGo surprised everyone in 2015 by beating a European champion. Last year, it defeated South Korea's top player, Lee Sedol.

AlphaGo defeated Lee in 4 out of 5 games during a weeklong match in March 2016. Lee lost the first three games, then won the fourth. In the final games, he said he took advantage of his opponent's weaknesses, including AlphaGo's poor response to surprises.

Following Lee's surprise victory, "we went back to try and improve the architecture and the system," said Hassabis.

AlphaGo Will Solve The World's Problems Next

"We believe we have fixed that knowledge gap," Hassabis added. He noted, however, that there "could be many other new areas that [AlphaGo] doesn't know and that we don't know either."

The latest version of AlphaGo was designed to copy the gut feelings, or intuition, that human players use. For Google, the project is not just about cracking the riddle of an ancient game. Google officials say they want to apply the technology of AlphaGo to other areas, such as smartphone assistants. AlphaGo technology could also be used to "think through" and solve complex real-world problems.

Go is hugely popular in Asia. There are tens of millions of players in China, Japan and North and South Korea. Google said a broadcast of Lee's 2016 match with AlphaGo was watched by about 280 million people.

Players have said AlphaGo enjoys some advantages because it doesn't get tired or emotionally rattled. These are two important aspects of the mentally intense game.

Quiz

1 Which sentence MOST belongs in a summary of the article?

(A) Go is popular in Asia with tens of millions of players in China, Japan, and Korea.

(B) AlphaGo is a computer programmed to beat even the best go players in the world.

(C) AlphaGo had some weaknesses in the past and was not able to defeat the best players.

(D) Go originated in China more than 25 centuries ago and is still played today.

2 Which excerpt BEST supports the article's central idea?

(A) On Tuesday, however, computer programmers achieved a victory. A computer defeated China's top go player. To many, the result looks like a sign that computers are closer than ever to moving past humans in the way they solve complex problems. In other words, artificial intelligence is getting better — and quickly.

(B) One of those areas has been the board game called "go." Go originated in China more than 25 centuries ago. It is extremely complicated, so teaching computers to play at a human level has been a challenge for programmers.

(C) Players had expected it to take at least another decade for computers to beat the best human go players. Nevertheless, AlphaGo surprised everyone in 2015 by beating a European champion. Last year, it defeated South Korea's top player, Lee Sedol.

(D) For Google, the project is not just about cracking the riddle of an ancient game. Google officials say they want to apply the technology of AlphaGo to other areas, such as smartphone assistants. AlphaGo technology could also be used to "think through" and solve complex real-world problems.

3 What is MOST LIKELY the primary reason the author included the story about Deep Blue defeating Garry Kasparov?

(A) to show that other people have lost to computers before as well

(B) to show that other companies are building computers to master games

(C) to show that computers have mastered other games

(D) to show that it is especially challenging for computers to master go

4 The author MAINLY explains the importance of AlphaGo's victory by:

(A) providing an extensive description of the AlphaGo computer and the rules of go

(B) describing the history of go and explaining how popular of a game it is in Asia

(C) listing the other games that computers have mastered and giving the history of AlphaGo

(D) explaining how hard it is to play go and how AlphaGo's improved technology showed human-like qualities