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●グーグルとスタンフォード大、画像が描く動きを認識できるAIソフト開発

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グーグル研究事業部のコンピュータ・サイエンス・チーム、そして、スタンフォード大学の別のチームは、それぞれ、写真が描写する動きを認識し、その説明文を作成できる人工知能（AI）ソフトを開発したと発表。

これまでのソフトが、写真が何を撮影したものを認識するだけにとどまっていたことを考えると、動きの認識は大きな進歩といえる。

グーグルは同社ブログで、新しいソフトが静止画像で描写する動きを認識する人間の脳をモデルにした機械学習手段を使っていると説明。この分野の専門家であるモントリオール大学のヨシュア・ベンジオ教授によると、同ソフトは写真の全景を解析した上で、自然な文章を作成できるという。

グーグルは2012年、スタンフォード大学とともに、コンピュータに猫の画像を認識させることに成功しているが、今回のソフトを開発したチームはこの時のチームとは別。新しいソフトウェアは今後、同社の画像検索精度を向上することも期待される。

（参考）本件報道記事

Google Can Now Describe Your Cat Photos

Rolfe Winkler

By Rolfe Winkler

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Google's computers learned to recognize cats in photos. Now, they're learning to describe cats playing with a ball of string.

Computer scientists in the search giant's research division, and a separate team working at Stanford University, independently developed artificial-intelligence

software that can decipher the action in a photo, and write a caption to describe it. That's a big advance over previous software that was mostly limited to recognizing objects.

In a blog post, Google described how it is using advanced "machine-learning" techniques that mimic the human brain to recognize a photo of "a person riding a motorcycle on a dirt road," or "a herd of elephants walking across a dry grass field."

The new software can "capture the whole scene and generate corresponding natural-looking text," says Yoshua Bengio, a professor of computer science at the University of Montreal and a leading expert in the field. That defies predictions that software would be limited to recognizing objects, he said.

The new technology could lead to big improvements in the accuracy of Google's image-search results, which today often rely on text found near a photo on a web page. One day it might help people search vast libraries of untagged photos or videos stored on smartphones, says David Bader, a professor of computer science at Georgia Tech. A startup called Viblio is using similar research out of Simon Fraser University to automatically categorize videos.

In 2012, a Google/Stanford team famously taught a computer to learn how to recognize cats. The computer was shown millions of images from YouTube videos, and used then-state-of-the-art machine-learning algorithms to teach itself to spot felines.

Similar advances are helping improve other Google services. Earlier this year, Google researchers disclosed how its computers had learned to read house numbers from images captured by its Street View cars, making it quicker and easier to locate buildings in Google Maps, for instance.

Google is making big bets on artificial-intelligence technology. Earlier this year, it paid hundreds of millions of dollars to acquire Deep Mind Technologies, a London-based startup that employs many specialists in advanced machine learning. Earlier, it bought DNNResearch, a small company started at the University of Toronto, in order to hire a top academic in machine learning, Geoffrey Hinton.

Artificial-intelligence research also helps speech-recognition software, used by smartphone assistants like Apple's Siri or Google voice search.

Others also are investing in the field. Facebook scooped up a top artificial-intelligence academic late last year. Meanwhile, Chinese search engine Baidu has said it will invest \$300 million in an artificial intelligence lab in Silicon Valley. To lead the lab, Baidu hired the head of Stanford's artificial-intelligence lab, Andrew Ng, who helped build the computer that taught itself to recognize cats from YouTube videos.

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