假笑：能够发现真笑的电脑 Faking it: Computers that spot a real smile

Hello. This is 6 Minute English, I'm Neil.

大家好，这里是六分钟英语，我是内尔。

And I'm Sam.

我是萨姆。

It's good to see you again, Sam.

很高兴再次见到你，萨姆。

Really?

真的吗?

Yes, of course, can't you tell by the way I'm smiling?

当然是的啦，难道你不能从我的笑容中看出来吗?

Ah, well, I find it difficult to tell if someone is really smiling or if it's a fake smile.

嗯，我发现很难分辨一个人是真笑还是假笑。

Well, that's a coincidence because this programme is all about how computers may be able to tell real smiles from fake smiles better than humans can.

嗯，真是太巧了，因为本期节目就是关于电脑也许比人类更擅长分辨真笑和假笑。

Before we get in to that though, a question.

在我们开始之前，是一个问题。

The expressions we can make with our face are controlled by muscles.

我们脸上的表情是受肌肉控制的。

How many muscles do we have in our face?

我们的脸上有多少块肌肉呢?

Is it: A. 26, B. 43, or C. 62?

是 A. 26块，B.43块，还是 C. 62块呢?

What do you think, Sam?

你怎么看，萨姆?

No idea! But a lot, I'd guess, so I'm going with 62. OK. Well, we'll see if you'll be smiling or crying later in the programme.

不知道！但是应该有很多，我要猜一猜，我选62块。好的，我们在稍后的节目中再看看你会笑还是哭。

Hassan Ugail is a professor of visual computing at the University of Bradford.

Hassan Ugail是布拉福德大学的视觉编程计算教授。

添加的词汇

He's been working on getting computers to be able to recognise human emotions from the expressions on our face.

他一直致力于让电脑能够通过我们脸上的表情来识别人类的情绪。

Here he is speaking on the BBC Inside Science radio programme-how successful does he say they have been?

他在BBC的电台节目《Inside Science》中进行了发言——他说他们有多成功?

We've been working quite a lot on the human emotions, so the idea is how the facial muscle movement, which is reflected on the face, through obviously a computer, through video frames and trying to understand how these muscle movements actually relate to facial expressions and then from facial expressions trying to understand the emotions or to infer the emotions.

我们针对人类情绪做了很多工作，基本思想就是借助电脑，借助视频帧反映在脸上的面部肌肉运动，并且试图理解这些肌肉运动如何与面部表情产生联系，然后通过面部表情去理解情绪或推测情绪。

And we have been quite successful in doing that.

我们在这方面做得很成功。

We have software that can actually look at somebody's face in real time and then identify the series of emotions that person is expressing in real time as well.

我们有软件能够实时观测某人的脸，然后实时识别那个人表达的一系列情绪。

So, have they been successful in getting computers to identify emotions?

所以他们成功地让计算机识别情绪了吗?

Yes, he says they've been quite successful, and what's interesting is that he says that the computers can do it in real time.

是的，他说他们一直都很成功，并且有趣的是，他说计算机可以实时进行。

This means that there's no delay.

这意味着没有延迟。

They don't have to stop and analyse the data, or crunch the numbers, they can do it as the person is talking.

他们不需要停下来去识别数据，或者进行大量运算，他说他们可以在人说话的时候完成这一过程。

The system uses video to analyse a person's expressions and can then infer the emotions.

这个系统使用视频来分析人的表情，然后推测他们的情绪。

To infer something means to get an understanding of something without actually being told directly.

推测某事意味着在不被直接告知的情况下理解某事。

So, you look at available information and use your understanding and knowledge to work out the meaning.

所以，你会观察提供的信息并运用你的理解和知识来弄清楚意义。

It's a bit like being a detective, isn't it?

这有点像侦探，不是吗?

You look at the clues and infer what happened even if you don't have all the details.

你观察线索并推测发生了什么，即使你没有所有的细节。

Yes, and in this case the computer looks at how the movement of muscles in the face or facial muscles, show different emotions.

是的，而且在这里计算机观察脸上的肌肉或者说面部肌肉的运动，来表现不同的情绪。

Here's Professor Ugail again.

再听一遍Ugail教授的话。

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So, how do the computers know what is a real or a fake smile?

那么计算机如何知道什么是真笑什么是假笑呢?

The computers have to learn that first.

计算机要先学习。

Here's Professor Ugail again talking about how they do that.

下面还是Ugail教授的话，谈论他们是如何做到的。

We have a data set of real smiles and we have a data set of fake smiles.

我们有真笑的数据集和假笑的数据集。

These real smiles are induced smiles in a lab.

这些真笑是在一个实验室中催生的。

So, you put somebody on a chair and then show some funny movies and we expect the smiles are genuine smiles.

所以你要先让人坐在椅子上，然后给他们播放一些搞笑电影，我们觉得这些笑是真心的笑。

And similarly we ask them to pretend to smile.

类似地，我们还要求他们假装笑。

So, these are what you'd call fake smiles.

所以这些就是所谓的假笑。

So, what we do is we throw these into the machine and then the machine figures out what are the characteristics of a real smile and what are the characteristics of a fake smile.

我们所做的就是把这些数据丢进机器里，然后机器就能够弄清楚真笑和假笑的特征了。

So, how do they get the data that the computers use to see if your smile is fake or genuine-which is another word which means real?

所以他们是如何获取电脑用来判断笑容是真心——这个词的是真实的意思——还是假意的数据的呢?

They induce real smiles in the lab by showing people funny films.

他们在实验室中通过给人们播放搞笑电影来催生笑容。

This means that they make the smiles come naturally.

意思是他们让这些笑自然地出现。

They assume that the smiles while watching the funny films are genuine.

他们认为在看搞笑电影时发出的笑是真心的。

And then they ask the people to pretend to smile and the computer programme now has a database of real and fake smiles and is able to figure out which is which.

然后他们还要求人们假装笑，然后电脑程序就有了真笑和假笑的数据库了，然后就能够分辨哪个是哪个了。

Figure out means to calculate and come to an answer Yes, and apparently the system gets it right 90% of the time, which is much higher than we humans can.

弄清楚的意思是计算并得出结果。是的，很显然这个系统90%的时候都是正确的，这比我们人类要高得多。

Right, well before we remind ourselves of our vocabulary, let's get the answer to the question.

好的，在我们回顾词汇之前，我们来揭晓今天问题的答案吧。

How many muscles do we have in our face?

我们脸上有多少块肌肉?

Is it: A. 26, B. 43, or C. 62?

是 A. 26块，B.43块，还是 C. 62块呢?

Sam, are you going to be smiling?

萨姆，你会露出胜利的笑容吗?

What did you say?

你说的是什么?

Aha! So I thought 62!

啊哈！我觉得是62块。

Am I smiling, Neil?

我会露出喜悦的笑容吗?

Sadly you are not, you are using different muscles for that sort of sad look!

很遗憾，你不会，你得用其它的肌肉做出悲伤的表情!

Actually the answer is 42. Congratulations to anyone who got that right.

事实上，答案是42块（此处可能使口误）。恭喜答对的朋友们。

Now our vocabulary.

现在来说词汇。

Yes, facial is the adjective relating to face.

好的，面部的这个形容词指的是跟脸有关的。

Then we had infer.

然后我们说到了推测。

This verb means to understand something even when you don't have all the information, and you come to this understanding based on your experience and knowledge, or in the case of a computer, the programming.

这个动词的意思是理解某事，即使你没有掌握全部的信息，但是你基于你的经验和知识而得出了这一理解，在这里我们指的是电脑，编程技术。

And these computers work in real time, which means that there's no delay and they can tell a fake smile from a genuine one, which means a real one, as the person is speaking.

这些电脑能够实时工作，意思是说没有延迟，而正如那个人所说，它们能够区分真笑和假笑。

They made people smile, or as the Professor said, they induced smiles by showing funny films.

他们让人们笑，或者如那位教授所说，他们通过播放搞笑电影来催生笑容。

And the computer is able to figure out or calculate whether the smile is fake or genuine.

这样电脑就能够弄清楚或者说计算出笑容是真的还是假的了。

OK, thank you, Sam.

好的，谢谢你，萨姆。

That's all from 6 Minute English today.

这就是今天六分钟英语的全部内容。

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Goodbye!

再见！

Bye bye!

再见！