训练人工智能 Training Artificial Intelligence

Hello. This is 6 Minute English from BBC Learning English.

大家好。这里是BBC学习英语栏目的六分钟英语。

I'm Neil.

我是内尔。

And I'm Sam.

我是萨姆。

Do you like cooking, Sam?

你喜欢做饭吗，萨姆?

There's a new recipe I've been trying out-it's for 'frosted oysters'.

我一直在尝试一个新菜谱——用来做“冻牡蛎”的。

Frosted oysters? !

冻牡蛎？！

Sounds... unusual.

听起来...与众不同。

How do you make it?

怎么做呢?

Well, you take a pound of chicken, then some cubed pork and half a crushed garlic.

嗯，取一磅鸡肉，然后一些猪肉块，还有半个切碎的大蒜。

Eh? I thought you said it was for 'frosted oysters', whatever they are.

诶？我想你刚刚说的是“冻牡蛎”吧，还是别的什么。

Yes, that's right.

是的，没错。

Now heat it up until boiling and serve with custard.

现在把它加热直到沸腾，然后加上蛋奶酱。

Ugh, sounds disgusting!

呃，这听起来好恶心。

Who on earth told you that recipe?

到底谁告诉你这个菜谱的?

It's not 'who' told me, Sam, but 'what'.

不是“谁”告诉我的，萨姆，而是“什么”。

In fact, that recipe was made by computers using artificial intelligence, or AI, which is the topic of today's programme.

事实上，这个菜谱是电脑用人工智能（AI）创造出来的，人工智能是我们今天节目的话题。

添加的词汇

In real life, AI is making huge progress-from car satnavs to detecting cancer cells.

在现实生活中，AI 正在取得巨大进步——从汽车卫星导航到检测癌症细胞。

But as you can see from that revolting recipe, things don't always go according to plan.

但是正如你刚刚看到的那个令人作呕的菜谱，事情并不总是按照计划发展的。

So, just how intelligent is artificial intelligence?

那么人工智能有多智能呢?

I mean, it definitely needs some cooking lessons!

我的意思是，它肯定需要上一些烹饪课!

Right. AI is not as intelligent as we tend to think.

没错。AI 并没有我们想的那么智能。

AI programmes use artificial brain cells to roughly imitate real brain cell activities, there's still a long way behind human levels of intelligence.

AI 程序使用人工大脑细胞来粗略地模仿真实的大脑细胞活动，但是它们还是远远落后于人类的智能水平。

And that's my quiz question-in terms of brain cell count, what level of intelligence is AI currently working at?

这就是我今天的问题——从大脑细胞计数的角度来说，AI 目前以什么程度的智能在工作?

Is AI as smart as a) a frog, b) an earthworm, or c) a bumblebee?

AI 是跟 A. 青蛙，B. 蚯蚓，还是 C. 黄蜂一样聪明?

Well, I don't think any of those are good cooks either, to be honest.

嗯，我认为以上没有一个是擅长做饭的，老实说。

But I'll say c) a bumblebee, because at least they can make honey!

我要选 C. 黄蜂，因为至少它们会制作蜂蜜!

Nice guess, Sam.

猜得好，萨姆。

We'll find out the answer later.

我们稍后会揭晓答案。

But first, let's find out more about how AI misunderstandings like the oyster recipe can happen.

但是首先，让我们了解更多像上述牡蛎菜谱那样的对于 AI 的误解是怎么发生的。

Janelle Shane is the author of 'You Look Like a Thing and I Love You' in which she tells her amusing experiences and bizarre experiments with AI.

贾内尔·沙内是《你看起来像个东西而我爱你》一书的作者，在这本书里她讲述了她和 AI 之间的有趣经历和奇怪的实验。

You Look Like a Thing and I Love You-that's a strange title for a book, Neil.

《你看起来像个东西而我爱你》——这书名可真奇怪，内尔。

Yes. It's another example of AI miscommunication.

是的。它是 AI 沟通失败的又一个实例。

The book title is what a AI produced when asked to write chat-up lines-remarks men and women make to start up a conversation with someone they don't know but find attractive.

这本书的标题是 AI 生成的，当时它被要求写搭讪的套话——男性或女性用来跟他们不认识但是觉得很有魅力的人开启对话的话语。

Here she is talking to the BBC World Service programme More or Less.

以下内容是她在BBC世界服务节目《或多或少》的讲话。

So "machine learning" is what most programmers mean when they say "AI".

所以，大多数程序员在说“AI”时，所指的是“机器学习”。

In the programme that we're used to, if you want to have a computer programme solve a problem, you have to have a human programmer write down exhaustive step-by-step instructions on how to do everything.

在我们熟悉的程序中，如果你想要让电脑程序解决一个问题，那么你需要一个人类程序员费劲地写下一步步的说明来解释每件事怎么做。

But with 'machine learning' you just give it the goal, and then the programme figures out via trial and error how it's going to solve that problem.

但是有了“机器学习”，你只需要给它一个目标，然后程序就会通过反复试验弄清楚如何解决那个问题。

So even though we're talking about machines learning for themselves, there still need to be humans involved at the start of the journey.

所以即使我们在谈论它们的机器学习，一开始还是需要人类的参与。

This human teaching is done by computer programmers-people who write, or code, the computer programmes used by AI.

人类教学由电脑程序员完成——编写或编码电脑程序使用的AI的人。

Right. These programmers write algorithms-a set of rules or procedures to be followed in problem-solving exercises.

是的。这些程序员编写算法——一套在解决问题操作中要遵守的规则或流程。

So, for example, the AI that wrote that oyster recipe read thousands of other recipes before coming up with its own version.

比如编写那个牡蛎菜谱的 AI 在想出自己的版本前会阅读几千份其它的菜谱。

In other words, artificial intelligence uses a process of trial and error-repeating the same task over and over until finding the most successful way.

换句话说，人工智能使用反复试验的过程——一次次重复同样的任务直到找到最成功的方法。

Only in the case of the oyster recipe, there was more 'error' than 'trial'!

只是在牡蛎菜谱的那个例子里“错误”比“试验”多！

Well, according to Janelle Shane, we can learn a lot about something by seeing how it goes wrong.

嗯，根据贾内尔·沙内的说法，我们可以通过了解出错的过程来充分了解某个事物。

Here she is, talking about an AI which had been told to solve maths problems.

以下是她谈论 AI 被要求解决数学问题的情形。

It seemed to be that it was getting scored on how many wrong answers it got, and it was supposed to be minimising the number of wrong answers, and just by a stroke of luck as part of its trial and error flailing around, one of the flails it did accidentally deleted the solutions list, and then it and everybody else got a perfect score.

似乎它会根据它出错的次数被打分，而且它出错的数次应该会被最小化，然后作为反复试验的一部分，它所进行的某一次尝试凭借运气偶然地删除了结果列表，然后它和每个人就得到了完美的分数。

So, AIs learn by minimising their errors-reducing them as much as possible.

所以 AI 通过最小化它们的错误学习——尽可能减少错误。

And sometimes, these algorithms only discover the right answer by a stroke of luck-when something unexpected happens by good luck or chance.

而且有时候这些算法只是凭运气——出乎意料的事情因为好运或偶然发生——发现了正确答案。

It seems to me that they're not so intelligent after all!

在我看来它们似乎根本没有那么智能。

Well, let's settle it once and for all by answering today's quiz question.

嗯，让我们通过回答今天的问题来一劳永逸地解决问题。

Remember I asked you how intelligent AI was in terms of brain cell count and you said, as intelligent as...

记得我之前问你从大脑细胞计数的层面看，AI 的智能程度相当于...

I said c) a bumblebee.

我说的是 C. 黄蜂。

Well, here's Janelle again with the answer.

嗯，下面由贾内尔来揭晓答案。

If you're looking at rough computing power, the algorithms we're working with are probably somewhere around the level of an earthworm.

如果你看的是粗略的计算能力，那么我们正在使用的算法大概跟蚯蚓的水平差不多。

So, the correct answer was b) as clever as an earthworm!

所以正确答案是 B. 跟蚯蚓一样聪明！

No wonder AIs can't cook!

难怪 AI 不会做饭！

Or take a maths test without cheating!

也不会在不作弊的情况下进行数学考试！

In this programme we've been looking at artificial intelligence, or AI, and seeing how programmers-that's people who write instructions for computers to follow create algorithms-sets of rules used in problem-solving.

在本节目中，我们一直在了解人工智能，或 AI，并且了解了程序员——撰写电脑要遵循的指令的人——创造算法——在解决问题过程中用到的各种规则。

AI learns through trial and error-repeating the same activity again and again until discovering the best way, and minimising-so reducing as much as possible, the number of errors it makes.

AI 通过反复试验学习——一次次重复同样的活动直到找到最佳方法，并且最小化——尽可能减小——它犯错的次数。

And success can be the result of a stroke of luck, when something unexpected happens purely by chance, although so far that hasn't helped AIs to write good chat-up lines-the flattering remarks people make to get to know someone they find attractive.

而且成功可能是碰运气的结果，即某事的意外发生纯粹是因为巧合，尽管到目前为止它还没能帮助 AI 写出很好的搭讪套话——人们用来接近他们觉得很有魅力的人的恭维。

And AIs don't know much about cooking oysters either!

而且 AI 也不了解怎么烹饪牡蛎！

That's all from us from this programme.

今天的节目就到这里。

Be sure to join us again for more topical discussion and vocabulary on 6 Minute English for BBC Learning English.

请务必再次收听BBC学习英语栏目的六分钟英语获取更多话题讨论和词汇。

Bye for now!

再见！

Bye-bye.

再见。