

# 机器人艺术家 Robot Artists

Hello. This is 6 Minute English from BBC Learning English. I'm Neil.

大家好。这里是 BBC 学习英语栏目的六分钟英语。我是内尔。

And I'm Sam.

我是萨姆。

Do you think robots could ever become intelligent, Sam?

你认为机器人会变得智能吗，萨姆？

Well, if you believe Hollywood movies like 'Robocop', robots will grow more powerful than their human creators and take control.

嗯，如果你相信好莱坞电影，比如《机械战警》，机器人会变得比他们的人类创造者更强大并掌握控制权。

You've been watching too many sci-fi movies, Sam!

你看了太多科幻电影了，萨姆！

But seriously, do you think robots will ever be able to think or dream?

但是说真的，你认为机器人能够思考或者有梦想吗？

Could they fall in love or create art?

它们会陷入爱河或创造艺术吗？

It's hard to say but because of the huge advances in artificial intelligence over the last ten years, questions like these are being asked more and more.

这很难说，但是因为过去十年人工智能的巨大优势，像这样的问题被问得越来越多了。

In this programme, we'll be meeting a very unusual 'person' (if that's the right word) who could help answer some of these questions.

在本期节目中，我们会遇到一个非常不同寻常的“人”（如果这个措辞是对的话），它可以帮助回答一些这种问题。

She's called Ai-Da, she's an artist who can draw, paint and create sculptures, and she's a robot.

她叫做 Ai-Da，她是一个会画画的艺术家的，绘画并创造雕塑，而且她是一个机器人。

Yes, the humanoid robot, Ai-Da, uses a robotic arm and a pencil to draw what it sees with a camera in its eye.

是的，人形机器人，Ai-Da，使用机器臂和铅笔画出她用眼睛中的摄像机所看见的东西。

It's very life-like and can even talk to the people whose picture it's drawing.

它看起来很像真人，而且甚至可以跟被画的人聊天。

We'll hear more about this extraordinary robot and the team of inventors behind her soon, but first I have a quiz question.

我们会听到更多关于这个超凡机器人以及她背后的发明团队的内容，但是首先我有一个问题。

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The name, Ai-Da, uses the abbreviation for 'artificial intelligence', AI, to make a woman's first name, but which famous, real-life Ada was the robot named after?

Ai-Da 这个名字的名 AI 是“人工智能”的所缩写，但是机器人是以哪位出名的真人 Ada 命名的呢？

Was it a) Ada Brown, b) Ada Lovelace or, c) Ada Maris? I think it must be, b) Ada Lovelace.

是 A. Ada Brown, B. Ada Lovelace, 还是 C. Ada Maris 呢？我想肯定是 B. Ada Lovelace。

OK, Sam, we'll find out if that's right later.

好的，萨姆，我们稍后会找出答案。

Of course, building a realistic robot that can see, hold a pencil and draw is not easy.

当然，制作一个能够看得见，拿着笔画画的显示机器人不太容易。

Behind the creation of Ai-Da was a team led by Cornish robotics company, Engineered Arts, and supported by engineers in Leeds who built her robotic arms using AI systems developed at Oxford University.

创造 Ai-Da 的背后是一个由来自康郡的机器人公司 Engineered Arts 带领的团队，而且由利兹的工程师们提供支持，他们用在牛津大学开发的 AI 系统制作了她的机器臂。

Here's chief engineer, Marcus Hold, introducing presenter, Karl Bos, to the still unfinished Ai-Da for the first time for BBC World Service programme, In The Studio.

以下是主工程师 Marcus Hold 第一次为 BBC 世界服务节目《In the Studio》的主持人 Karl Bos 介绍还未完成的 Ai-Da。

It's very strange because on first glance she looks incredibly scary, a bit like a dystopian robot from the future but when you see her move and express she becomes incredibly cute.

很奇怪，因为她第一眼看上去很吓人，有点像一个来自未来的反乌托邦机器人，但是当你看到她移动和表达的时候，她又会变得非常可爱了。

People tend to refer to them as 'he' or 'she', they're drawn to the robots.

人们往往会把它们称作“他”或“她”，他们被这个机器人吸引。

So much of our communication is non-verbal - I'm gesturing with my arms, I'm smiling...and our robots - a big part of their appeal and their human nature is in the way they behave and move and it's great that you're picking up on that from something that has no skin.

所以我们的很多沟通是非语言的 —— 我正在用的手臂做姿势.....而且我们的机器人 —— 他们的吸引力和人类性质很大一部分是他们的行事和移动方式，而且你能够从没有皮肤的东西身上发现这些是很棒的。

When Karl first meets Ai-Da, he sees a wired-up metal skull without skin.

当 Karl 第一次看到 Ai-Da 的时候，他看到的是一个没有皮肤的都是电线的金属头颅。

She looks like a robot from a dystopia, an imaginary future world where everything is bad, like the movie 'Robocop'.

她看起来像一个来自反乌托邦的机器人，反乌托邦指的是想象出来的一个未来世界，在那里一切都很糟糕，就像电影《机械战警》。

But as Karl spends more time with Ai-Da, he begins to see her move and express herself.

但是 Karl 在跟 Ai-Da 相处的过程中，他开始看到她移动并表达自我。

She smiles, blinks and uses facial expressions and hand gestures known as non-verbal communication to appear more human.

她会笑、眨眼，还有做面部表情和手势，这叫做非语言交流，来表现得更像人类。

This human-like behaviour is part of Ai-Da's appeal - the quality in someone that makes them attractive and interesting - and soon Karl is calling the robot 'she' instead of 'it'.

这种像人类一样的行为是 Ai-Da 的吸引力的一部分 —— 某个人让自己变得有吸引力和有趣的品质 —— 很快 Karl 就叫这个机器人“她”而不是“它”了。

Former art gallery owner, Aidan Mellor, manages the Ai-Da project.

前画廊老板 Aidan Mellor 管理 Ai-Da 的项目。

Here he is speaking to BBC World Service's, In The Studio, about the complex process involved in building a working robot.

以下是他对话 BBC 世界服务节目《In The Studio》，谈论制作一个工作机器人涉及到的复杂过程。

We've got the programmers and researchers working at Oxford University and Goldsmiths and they're doing their algorithmic programming, programming the AI that is going to be eventually used for the art pieces that we're doing.

我们请来了在牛津大学和伦敦大学金史密斯学院工作的程序员和研究者，而且他们正在做他们的算法编程，给这个 AI 变成最终会被用于我们正在制作的艺术品。

But we've also got a couple of guys who are actually working on her arm, her ability to draw, and actually getting her to do a compelling drawing of what she sees.

但是我们也有一些人，他们事实上正专注于她的手臂，她的绘画能力，以及让她能够把她所看到的東西画成迷人的画作。

There's some battles still to be won before the show, we will eventually hopefully iron out all the issues before that time.

在展示之前还有一些要打赢的仗，我们最终很可能在那之前解决所有问题。

One challenge the team faced was building a robotic arm that could allow Ai-Da to draw pictures that were compelling - exciting, interesting and able to keep your attention.

这个团队面对的一个挑战是制作一个可以让 Ai-Da 画出迷人 —— 令人兴奋的，有趣的并且能够让你保持注意力的 —— 画作的机械手臂。

In combining an electronic AI brain with mechanical robot eyes and arms, there were many battles to be won - difficulties and technical obstacles to be overcome.

在把电子 AI 的大脑和机械机器人的眼睛和手臂结合的过程中有很多仗要打 —— 要克服的困难和技术障碍。

And at the time of the interview, the team still had some issues to iron out, removing problems by finding solutions, before Ai-Da's opening show: an exhibition of her artwork at The Design Museum in London.

而且在采访的时候，在 Ai-Da 的开场秀之前，这个团队还有一些问题要解决，通过找到解决方案来消除问题，在开场秀上要在伦敦的设计博物馆展出她的艺术作品。

Amazing!

太棒了！

It's nice to think that a robot could be the next Picasso instead of an out-of-control sci-fi policeman!

想象一下一个机器人能够成为下一个毕加索而不是一个失控的科幻警察，这很不错。

Yes, and the whole project was inspired by a real-life woman, whose name was?

是的，而且整个项目是由一个真实的女性激发的，她的名字是？

What was the answer to your quiz question, Neil?

你问题的答案是什么，内尔？

Ah, yes, I asked Sam which famous Ada was the real-life inspiration behind the robot, Ai-Da.

啊，是的，我问萨姆机器人 Ai-Da 背后的灵感是哪位现实存在的有名的 Ada。

And I said, b) Ada Lovelace.

我说的是 B. Ada Lovelace。

Was I right?

我答对了吗？

You were right, Sam!

我答对了，萨姆！

Ai-Da is named after Ada Lovelace, the 19th century English mathematician and first computer programmer in the world.

Ai-Da 是以 19 世纪著名的英国数学家 Ada Lovelace 命名的，她也是世界上第一位电脑程序员。

OK, Neil.

好的，内尔。

Let's recap the vocabulary from this programme, starting with dystopia - an imaginary future society where everything is bad.

我们来回顾本期节目的词汇，先从反乌托邦开始 —— 一个想象的未来世界，在那里一切都很糟糕。

Non-verbal communication is communication using physical gestures and facial expressions instead of speech.

非语言沟通指的是使用身体姿势和面部表情而不是言语来沟通。

The appeal of something is a quality it has which people find attractive.

某事的吸引力指的是它让人们觉得有吸引力的品质。

If something is compelling, it holds your attention because you find it so interesting.

如果某事很迷人，那么它能够吸引你的注意力，因为你发现它很有趣。

A battle to be won means a problem to be solved or an obstacle to overcome.

要打赢的仗指的是需要解决的问题，或者要克服的障碍。

And finally, to iron something out means to remove or find solutions to a problem.

最后，解决某事指的是消除问题，或找到问题的解决方法。

With artificial intelligence improving so fast, it may not be too long before we see robot presenters of Six Minute English!

随着人工智能快速发展，也许不久以后我们就能够看到六分钟英语的机器人主播了。

But until Sam and I are replaced by AI, we hope you'll join us again next time for more trending topics and useful vocabulary, here at BBC Learning English.

但是直到萨姆和我被 AI 代替之前，我们希望你能再次收听我们的节目，在 BBC 学习英语栏目中获取更多流行话题和实用词汇。

Goodbye for now!

再见！

Goodbye!

再见！

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